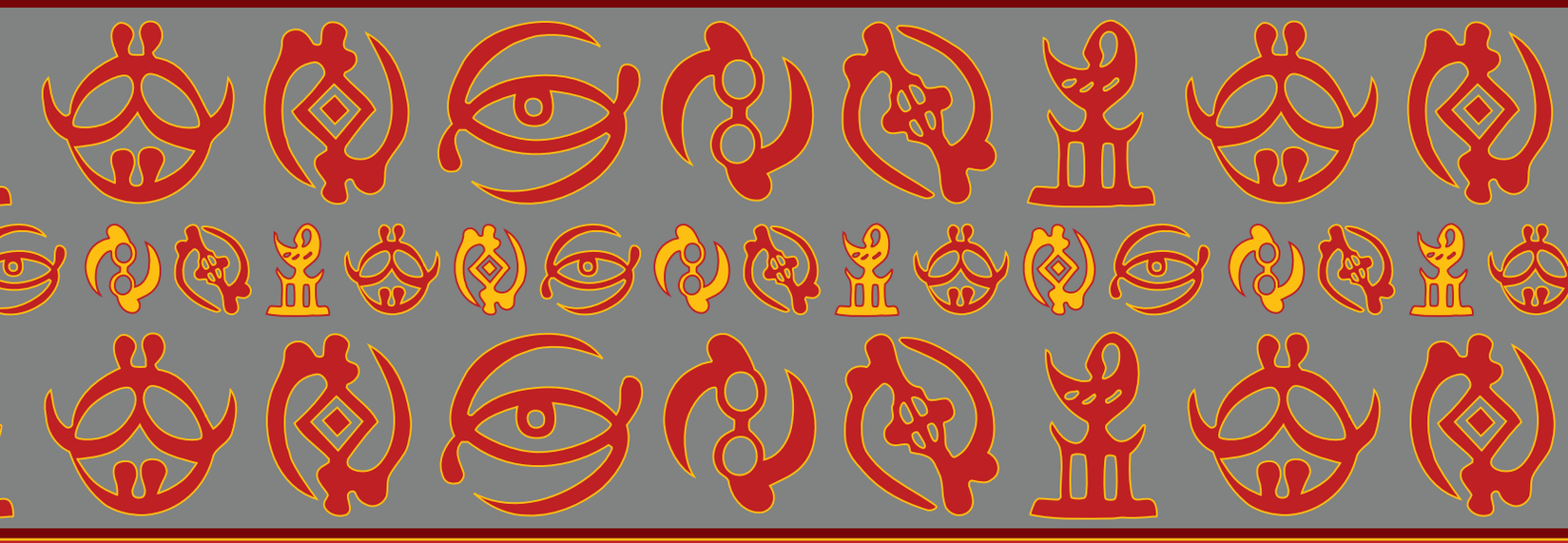
Ghana



Demographic and Health Survey

2008

Ghana
Demographic and Health Survey
2008

Ghana Statistical Service
Ghana Health Service
Accra, Ghana

ICF Macro
Calverton, Maryland, U.S.A.

September 2009

USAID
FROM THE AMERICAN PEOPLE

Ghana Statistical Service

Ghana Health Service

Ghana AIDS Commission

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Danida

This report summarises the findings of the 2008 Ghana Demographic and Health Survey (GDHS) carried out by the Ghana Statistical Service and the Ghana Health Service. ICF Macro provided financial and technical assistance for the survey through the USAID-funded MEASURE DHS programme, which is designed to assist developing countries to collect data on fertility, family planning, and maternal and child health. Local costs for the survey were partially funded by the Ministry of Health (MOH), the Ghana Statistical Service (GSS), the Ghana AIDS Commission (GAC), UNICEF, UNFPA, and DANIDA. The opinions expressed in this report are those of the authors and do not necessarily reflect the views of USAID or donor organisations.

Additional information about the 2008 GDHS may be obtained from the Ghana Statistical Service (GSS), P.O. Box 1098, Accra, Ghana (Telephone: 233-21-671-732; Fax: 233-21-671-731).

Additional information about the MEASURE DHS programme may be obtained from MEASURE DHS, ICF Macro, 11785 Beltsville Drive, Suite 300, Calverton, MD 20705, U.S.A. (Telephone: 1-301-572-0200; Fax: 1-301-572-0999; Email: reports@macrointernational.com).

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FOREWORD

The 2008 Ghana Demographic and Health Survey (GDHS) is a national survey covering all ten regions of the country. The survey was designed to collect, analyse, and disseminate information on housing and household characteristics, education, maternal health and child health, nutrition, family planning, gender, and knowledge and behaviour related to HIV/AIDS. It included, for the first time, a module on domestic violence as one of the topics of investigation.

The 2008 GDHS is the fifth DHS survey to be undertaken in Ghana since 1988. All five surveys have been implemented by the Statistical Service of Ghana, in close collaboration with other stakeholders in various sectors of government, researchers, civil society organisations, and international organisations.

The planning and implementation of the survey was carried out jointly by the Statistical Service and the Ministry of Health/Ghana Health Service management team.

The Statistical Service is grateful to the Ministry of Health and the Ghana Health Service for their valuable partnership and especially for providing vehicles for the monitoring exercises during the fieldwork; and the ethical committee for the ethical clearance that allowed us to perform the anaemia testing. The Service is also grateful to USAID, UNFPA, DANIDA, UNICEF, and the Ghana AIDS Commission for co-funding the survey.

The Statistical Service further acknowledges the technical assistance provided by ICF Macro during preparation and finalisation of the survey instruments, training of fieldworkers, and monitoring of field data collection.

We also extend our appreciation to all who participated directly or indirectly in this study: the authors, who are cited at the beginning of this report, the field staff, and other survey personnel whos names appear in Appendix D.

Above all, we appreciate the co-operation of all the survey respondents for making the 2008 GDHS a success.

It is our hope that this report will be useful for advocacy, results-oriented decision-making, and inform service delivery. This report provides only a snapshot of the analysis that can be done with the data that have been collected. It is our sincere hope that researchers will deepen our understanding of the topics covered in the survey by undertaking further research with the survey dataset.

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SUMMARY OF FINDINGS

The 2008 Ghana Demographic and Health Survey (2008 GDHS) is the fifth in a series of national-level population and health surveys conducted in Ghana as part of the global Demographic and Health Surveys (DHS) programme. The survey is designed to provide information to monitor the population and health situation in Ghana as a follow-on to the 1988, 1993, 1998 and 2003 GDHS surveys. The survey used a two-stage sample based on the 2000 Population and Housing Census to produce separate estimates for key indicators for each of the ten regions in Ghana. The GDHS 2008 household sample of more than 12,000 households was large enough to provide a sampling frame for conducting case-specific child mortality surveillance for children under five years using a Verbal Autopsy Questionnaire. Each household selected for the GDHS was eligible for interview with the Household Questionnaire, and a total of 11,778 households were interviewed. In half of the households selected for the survey, all eligible women age 15-49 and all eligible men age 15-59 were interviewed with the Women's and Men's Questionnaires, respectively. A total of 4,916 women age 15-49 and 4,568 men age 15-59 from 6,141 households were interviewed. Data collection took place over a three-month period, from early September to late November 2008.

The survey obtained detailed information on fertility, marriage, sexual activity, fertility preferences, awareness and use of family planning methods, breastfeeding practices, nutritional status of women and young children, childhood mortality, maternal and child health, awareness and behaviour regarding HIV/AIDS, and other sexually transmitted infections (STIs). In addition, the 2008 GDHS collected information on domestic violence, malaria and use of mosquito nets, and carried out anaemia testing and anthropometric measurements for women and children. Data on causes of child mortality based on verbal autopsy reports are not included to this report and will be presented as a separate publication.

The 2008 GDHS was implemented by the Ghana Statistical Service (GSS) in collaboration with the Ghana Health Service. Technical assistance was provided by ICF Macro through the MEASURE DHS programme. Financial support for the survey was provided by the U.S. Agency for International Development (USAID), the Government of Ghana, UNICEF, UNFPA and Danish International Development Agency (DANIDA).

FERTILITY

Fertility Levels and Trends. Comparison of the results from the 2008 GDHS with the four earlier DHS surveys indicates that the total fertility rate (TFR) has declined dramatically over the past 20 years, from 6.4 children per woman in 1988 to 4.4 children per woman in 1998. It stabilised at that level until 2003 and then declined again to 4.0 in 2008. Women in all age groups have shared in the declining fertility rates. The decline in fertility was especially rapid during the period between 1988 and mid-1998. With a TFR of 4.0 in 2008, Ghana is seen as having achieved its fertility target of 4.0 children per woman two years before the target year (2010). This TFR is also considered as one of the lowest in sub-Saharan Africa

Fertility Differentials. There are substantial variations in fertility by background characteristics. The TFR for rural areas (4.9 births) is higher than the TFR for urban areas (3.1 births). Over the five-year period preceding the 2008 GDHS there was a decline in fertility among women in rural areas from 5.6 births per woman in 2003 to 4.9 births currently, while the TFR for women in urban areas remained the same. The total fertility rate is highest in the Northern region (6.8 children per woman) and lowest in the Greater Accra region (2.5 children per woman). As expected, women's education is strongly associated with lower fertility, decreasing from 6.0 children among women with no education to 2.1 children among women with at least secondary education. Similar differentials are seen by wealth quintile, with the TFR decreasing from 6.5 children among women in the lowest wealth quintile to 2.3 children among women in the highest wealth quintile.

Unplanned Fertility. Despite a steady rise in the level of contraceptive use over the past

twenty years, the 2008 GDHS data indicate that unplanned pregnancies are still common in Ghana. Overall, 14 percent of births in Ghana are unwanted, while 23 percent are mistimed (wanted later). The proportion of unplanned births declined slightly from 42 percent in 1993 to 36 percent in 1998, but rose again to 40 percent in 2003 before declining to 37 percent in 2008. The proportion of births that are unwanted increased substantially from 9 percent in 1993 to 16 percent in 2003, but dropped slightly to 14 percent by 2008.

Fertility Preferences. There is considerable desire among currently married Ghanaians to control the timing and number of births. Thirty-six percent of currently married women would like to wait two or more years before the next birth, and 36 percent do not want to have another child, or are sterilised. About one-fifth (19 percent) of currently married women would like to have a child soon (within two years). A comparison of the results over the five DHS surveys show that the desire to space births among currently married women has declined in the past 20 years, from 45 percent in 1988 to 36 percent in 2008. However, the desire to limit births has increased from 23 percent in 1988 to 35 percent in 2008.

There has been a decline in ideal family size among currently married women over time, from a mean of 5.5 children in 1988 to 4.6 children in 2008.

FAMILY PLANNING

Knowledge of Contraception. Knowledge of family planning is nearly universal, with 98 percent of all women and 99 percent of all men age 15-49 knowing at least one modern method of family planning. Among all women, the most widely known methods of family planning are the male condom (94 percent), the pill (87 percent), injectables (86 percent), the female condom (81 percent), and rhythm (70 percent). About six in ten women have heard of female sterilisation, implants, and withdrawal, while 43 percent of all women have heard of the IUD and 35 percent have heard about emergency contraception. The lactational amenorrhoea method (LAM) is the least known method of family planning among both women and men

There has been an increase in the level of awareness of contraceptive methods over time. The proportion of all women who know any method of contraception has risen from 76 percent in 1988 to 98 percent in 2003 and 2008. The proportion of women who know about implants has risen steeply from 4 percent in 1993 to 64 percent in 2008. A similar trend is seen among men.

Use of Contraception. At the time of the 2008 GDHS, 24 percent of currently married women were using a method of contraception. The most commonly used modern method of contraception among married women is injectables (6 percent), followed by the pill (5 percent). Male condoms and female sterilisation are used by 2 percent each, while implants are used by 1 percent of married women. The most commonly used traditional method is rhythm, which is used by 5 percent of married women.

Trends in Contraceptive Use. Overall contraceptive use among married women in Ghana has nearly doubled over the past 20 years. The survey results indicate a relatively large increase in the late 1980s and 1990s, from 13 to 22 percent of married women currently using family planning. However, there has been only a small increase in contraceptive use over the past ten years. The contraceptive prevalence rate increased from 22 percent among currently married women in 1998 to 25 percent in 2003 and has remained steady over the past five years (24 percent in 2008). Similarly, the use of modern methods nearly doubled over the past 15 years from 10 percent in 1993 to 19 percent in 2003, before declining slightly to 17 percent in 2008. Overall, there has been only a small decrease in use of traditional methods over the past 20 years. While there was an increase in the use of traditional methods from 8 percent in 1988 to 10 percent in 1993, use of these methods decreased to 9 percent in 1998 and to 7 percent in 2003, and remained at this level in 2008.

Differentials in Contraceptive Use. Women in urban areas are more likely to use contraceptive methods (27 percent) than their rural counterparts (21 percent). The highest contraceptive prevalence rate by region is in the Greater Accra region (33 percent), followed by the Brong-Ahafo and Volta regions (29 percent each). The Northern region reports the lowest level of contraceptive use (6 percent). Women with at least some secondary education are more than twice as likely to use contraception as women with no education. Household wealth status is

related to the use of contraception; 14 percent of currently married women in the lowest wealth quintile are using a contraceptive method, compared with 31 percent of their counterparts in the highest wealth quintile.

Source of Modern Methods. In Ghana, both the public and private sectors are important sources of supply for users of modern methods (39 and 51 percent, respectively). Government hospitals or polyclinics are the most common public source (20 percent), followed by government health centres (14 percent). In addition, 5 percent combined obtain their methods from government health posts or community-based health and planning services (CHPS) compounds, and family planning clinics.

In the past 20 years, there has been a shift in the source of modern contraceptive methods from the public to the private sector. The proportion of current users relying on private medical sources has increased from 43 percent in 1988 to 51 percent in 2008, although there was a slight decline over the past five years from 54 percent in 2003. The reliance on public sources for all modern methods decreased from 47 percent in 1998 to 39 percent in 2008.

Unmet Need for Family Planning. Thirty-five percent of married women have an unmet need for family planning. Unmet need for spacing births is higher than unmet need for limiting births (23 and 13 percent, respectively), and is unchanged since 2003. Only 40 percent of the demand for family planning is currently being met, implying that the needs of more than one in two Ghanaian women are currently not being met.

MATERNAL HEALTH

Antenatal Care. The survey shows that over nine in ten mothers (95 percent) received antenatal care from a health professional (doctor, nurse, midwife, or community health officer). The results indicate that there has been a marked improvement in antenatal care coverage in Ghana over the past 20 years. In 1988, 82 percent of mothers received antenatal care for their most recent birth in the five years preceding the survey, compared with 95 percent of mothers in 2008. The proportion of women receiving no antenatal care declined slightly from 6 percent in 2003 to 4 percent in 2008. In the Volta region, however, about one in ten pregnant women did not receive any antenatal care in the five years preceding the survey (the same as in 2003).

Neonatal tetanus is a leading cause of neonatal death in developing countries where a high proportion of deliveries occur at home or in places where hygienic conditions may be poor. Tetanus toxoid (TT) vaccinations are given to pregnant women to prevent neonatal tetanus. The survey results show that, for the most recent live birth in the five years preceding the survey, more than half (56 percent) of women in Ghana received two or more tetanus injections during pregnancy and 72 percent of births are protected against neonatal tetanus. A comparison between the 2003 and 2008 surveys on the percentage of women who had two or more TT injections during their last pregnancy that ended in a live birth shows that there has been an increase from 50 percent in 2003 to 56 percent in 2008. The largest increases were seen in the Upper East region (46 percent in 2003, compared with 62 percent in 2008) and the Greater Accra region (52 percent in 2003, compared with 66 percent in 2008).

With regard to anti-malarial indicators, the results show that 32 percent of pregnant women and 26 percent of all women slept under a mosquito net the night before the survey interview; 28 and 24 percent, respectively, slept under an ever-treated net, and 27 and 24 percent, respectively, slept under an insecticide-treated net (ITN). There has been a substantial increase in the use of nets by women and children, consistent with the overall increase in the ownership of ITNs. For example, the proportion of pregnant women who slept under an ITN the night before the survey increased from 3 percent in 2003 to 27 percent in 2008.

The Ministry of Health and the Ghana National Malaria Control Programme recommend that pregnant women take at least two doses of SP/Fansidar during pregnancy as intermittent preventive treatment (IPT) against malaria. Over half (56 percent) of women with a birth in the two years preceding the survey who used IPT received SP/Fansidar during an antenatal visit. Only 44 percent of women said they received 2 or more doses, and at least one during an ANC visit.

Delivery Care. Nationally, 57 percent of births in the five years preceding the survey occurred in health facilities, with 48 percent in public health facilities and 9 percent in private health facilities. Forty-two percent of births take place

at home. The results also show that medically trained providers assisted 59 percent of deliveries, TBAs assisted 30 percent of deliveries, and relatives or friends assisted 8 percent of deliveries. There has been an increase in access to professional assistance during delivery over the past five years, from 47 percent in 2003 to 59 percent in 2008; over the same period, there has been a decrease in the use of relatives or no assistance at delivery, from 21 to 11 percent. Despite these improvements, medically assisted deliveries continue to be low in Ghana, with 41 percent not benefiting from professional delivery assistance over the past five years.

Postnatal Care. Two in three women who had a live birth in the five years preceding the survey received postnatal care within two days of delivery (67 percent) and one in fourteen received postnatal care 3-41 days after delivery (7 percent). About one in five women who had a birth in the five years preceding the survey did not receive postnatal care at all (23 percent).

CHILD HEALTH

Childhood Mortality. Results from the five GDHS surveys show a marked decline in childhood mortality over the past 20 years. This decline appears to have halted briefly during the period 1999-2003, and then continued a further decline between 2003 and 2008. For example, the under-five mortality rate decreased from 111 per 1,000 live births for the period 0-4 years preceding the 2003 GDHS to 80 per 1,000 during the same period prior to the 2008 GDHS. Despite this decline, the results show that one in every thirteen Ghanaian children dies before reaching the age of five. Over two-thirds of these deaths occur in the first year of life—infant mortality is 50 deaths per 1,000 live births and child mortality is 31 deaths per 1,000 children age one. Neonatal mortality is 30 deaths per 1,000 live births in the most recent five-year period, while postneonatal mortality is 21 deaths per 1,000 live births. Neonatal deaths account for 60 percent of the deaths in infancy.

Childhood Vaccination Coverage. Seventy-nine percent of Ghanaian children age 12-23 months are fully immunised at any time before the survey, while only 1 percent received no vaccinations at all. At least 96 percent of children have received the BCG and first dose of DPT and polio vaccines. While the coverage for the first dose of DPT and polio is high, coverage declines for subsequent doses of DPT and polio, with about 86 to 88 percent of children receiving the recommended three doses of these vaccines. Nine in ten children received the measles vaccine and have also been vaccinated against yellow fever. The percentage of children age 12-23 months who have been fully vaccinated has increased over the past twenty years, from 47 percent in 1988 to 79 percent in 2008.

Child Illness and Treatment. Among children under five years of age, 6 percent were reported to have had symptoms of acute respiratory illness (ARI) in the two weeks preceding the survey. Of these, half were taken to a health facility or provider for treatment. Twenty percent of children under five years had diarrhoea in the two weeks preceding the survey and 41 percent of these children were taken to a health provider. Less than half of children with diarrhoea (45 percent) were given a solution made from oral rehydration salts (ORS), 13 percent received recommended home fluids (RHF), and 38 percent were given increased fluids. Overall, 67 percent received ORS, RHF, or increased fluids, compared with 63 percent in 2003.

One in five children under five years (20 percent) had a fever in the two weeks preceding the survey. Of these, 43 percent of children took an anti-malarial drug. Only 24 percent of children took the anti-malarial drug on the same or the next day after the onset of the illness. Artemisinin Combination Therapy (ACT) was the most common anti-malarial drug given for fever in 2008 (22 percent), followed by chloroquine (9 percent), Fansidar (4 percent), and Camoquine (2 percent). Quinine, reserved for treatment of severe and complicated malaria cases in health facilities, is taken by less than 2 percent of children with a fever. Four percent of children were given other anti-malarial drugs.

NUTRITION

Breastfeeding Practices. The results indicate that almost all (98 percent) Ghanaian children are breastfed for some period of time. Over half of infants were put to the breast within one hour of birth, and 82 percent started breastfeeding within the first day. Exclusive breastfeeding is recommended by the World Health Organisation through the age of 6 months, but in Ghana only 63 percent of children under 6 months are exclusively breastfed. Overall, the median duration of breastfeeding in Ghana is 20 months and

the median duration of exclusive breastfeeding is 3 months.

The findings show that over the past five years there has been little change in the percentage of children ever breastfed; however, the percentage who started breastfeeding within one day of birth increased from 46 percent in 2003 to 52 percent in 2008, and the percentage who started breastfeeding within 1 day of birth increased from 75 to 82 percent over the same five-year period. The proportion of children who received a prelacteal feed decreased slightly from 20 percent in 2003 to 18 percent in 2008.

The percentage of young children bottle-fed has not changed over the past five years, in the 2008 GDHS, 11 percent of children under six months were given a feeding bottle with a nipple, compared with 12 percent of children in the 2003 GDHS. Bottle-feeding peaks at age 6-8 months (21 percent).

Intake of Vitamin A. Ensuring that children age 6-59 months receive enough vitamin A may be the single most effective child survival intervention. Deficiencies in this micronutrient can cause blindness and can increase the severity of infections such as measles and diarrhoea. Fifty-six percent of children age 6-59 months were reported to have received a vitamin A supplement in the 6 months preceding the survey—a considerable decline from 78 percent in 2003. However, in 2008, twice as many children under three who live with their mother consumed fruits and vegetables rich in vitamin A, compared with their counterparts in 2003 (81 and 41 percent, respectively).

Sixty percent of mothers with a birth in the past five years reported receiving a vitamin A dose postpartum, an increase from 43 percent in 2003. Fourteen percent of interviewed women reported night blindness during pregnancy. However, after adjusting for blindness not attributed to vitamin A deficiency during pregnancy, the results showed that only 2 percent of women experienced night blindness during their last pregnancy.

Prevalence of anaemia. Iron-deficiency anaemia is a major threat to maternal health and child health. Overall, 78 percent of Ghanaian children age 6-59 months have some level of anaemia, including 23 percent of children who are mildly anaemic, 48 percent who are moderately anaemic, and 7 percent who are severely anaemic. Children in the Upper East and Upper West regions are the most likely to be anaemic (88-89 percent). The prevalence of anaemia in children has increased slightly over the past five years, from 76 percent in 2003 to 78 percent in 2008.

The prevalence of anaemia is less pronounced among women than among children. Fifty-nine percent of Ghanaian women age 15-49 are anaemic, with 39 percent mildly anaemic, 18 percent moderately anaemic, and 2 percent severely anaemic. Anaemia is lowest among women is in the Upper East region (48 percent) and highest in the Western region (71 percent). The level of anaemia among women age 15-49 in Ghana has increased over the past five years from 45 percent in 2003 to 59 percent in 2008, with the most noticeable increase occurring in the prevalence of moderate anaemia (9 percent in 2003 and 18 percent in 2008).

Nutritional Status of Children. According to the 2008 GDHS, 28 percent of children under five are stunted and 10 percent are severely stunted. Nine percent of children under five are wasted and 2 percent are severely wasted. Weight-for-age results show that 14 percent of children under five are underweight, with 3 percent severely underweight. Children whose biological mothers were not in the household are more likely to be stunted (33 percent) than children whose mothers were interviewed (28 percent).

Data from the 1988, 1993, 1998, 2003, and 2008 GDHS surveys were all re-calculated according to the new WHO child growth reference standards, but restricted to children living with their mother and the mother was interviewed with the Women's Questionnaire. Overall, the proportion of children under five who are stunted decreased from 34 percent in 1988, to 31 percent in 1998, and then rose to 35 percent in 2003 before decreasing to 28 percent in 2008. The proportion of underweight children decreased from 23 percent in 1988 and 1993 to 14 percent in 2008. The proportion of children who are wasted decreased over the past 15 years from 14 percent in 1993 to 9 percent in 2008, with no marked change over the past five years.

Infant and Young Child Feeding (IYCF). Infant and young child feeding (IYCF) practices include timely introduction of solid and semi-

solid foods beginning at age six months, and thereafter increasing the amount and variety of foods and the frequency of feeding as the child gets older, while still maintaining frequent breastfeeding. Guidelines have been established with respect to IYCF practices for children age 6-23 months. Overall, only 36 percent of Ghanaian children age 6-23 months are fed in accordance with IYCF practices.

Nutritional Status of Women. Only 1 percent of Ghanaian women are below 145 centimetres in height. The mean BMI for women age 15-49 in Ghana is 23.6, and falls in the normal range (18.5-24.9) for all categories of background characteristics. Nine percent of women were found to be chronically malnourished (BMI less than 18.5), while 30 percent were overweight or obese. Over the past fifteen years (from 1993 to 2008), there has been little change in the percentage of mothers whose height is below 145 centimetres, and little change in the mean BMI. The proportion of women who are obese or overweight has increased somewhat from 25 percent in 2003 to 30 percent in 2008

HIV/AIDS

Awareness of AIDS. Knowledge of AIDS is universal in Ghana: 98 percent of women and 99 percent of men have heard of AIDS. Nevertheless, the 2008 GDHS results indicate that only one in four women (25 percent) and one in three men (33 percent) have a comprehensive knowledge of HIV/AIDS prevention and transmission, i.e., know that consistent use of condoms during sexual intercourse and having just one faithful, HIV-negative partner can reduce the chances of getting HIV/AIDS, knowing that a healthy-looking person can have HIV (the virus that causes AIDS), and rejecting two of the most common local misconceptions about the transmission of AIDS in Ghana—namely, that AIDS can be transmitted through mosquito bites and by supernatural means.

General knowledge of HIV transmission during breastfeeding is high: 85 percent among women and 78 percent among men. However, only half of women and 44 percent of men know that the risk of mother-to-child-transmission (MTCT) of HIV can be reduced if a mother takes special drugs during pregnancy. Although low, these levels of knowledge about the special drugs that can prevent transmission of HIV to babies, are a substantial increase from the 16 percent for both sexes in 2003.

Attitudes towards People Living with HIV/AIDS. It is encouraging to see that 75 percent of women and 79 percent of men age 15-49 are willing to care for a family member with HIV in their own household, and that nearly half of women and 58 percent of men do not want to keep secret that a family member is HIV positive. Approximately two-thirds of women and men also believe that an HIV-positive female teacher should be allowed to continue teaching. However, only one in three women and two in five men say that they would buy fresh vegetables from a vendor with AIDS.

HIV-Related Behavioural Indicators. One of the strategies for reducing the risk of contracting an STI is for young people to delay the age at which they become sexually active. Eight percent of women and 4 percent of men reported that they had sexual intercourse by age 15. Forty-four percent of women and 28 percent of men said that they first had sexual intercourse by age 18.

Sexual intercourse with a non-marital, non-cohabiting partner is associated with an increased risk of contracting sexually transmitted diseases. The GDHS results on higher-risk sexual behaviour indicate that the proportion of women engaging in higher-risk sexual intercourse has increased slightly from 21 percent in the 2003 GDHS to 23 percent in the 2008 GDHS. At the same time, the proportion of women who used a condom during their last higher-risk sexual intercourse decreased from 28 percent in the 2003 GDHS to 25 percent in the 2008 GDHS.

As with women, the proportion of men who engage in higher-risk sexual intercourse has increased slightly from 38 percent in the 2003 GDHS to 42 percent in 2008 GDHS; however, the proportion using condoms during their last higher-risk sexual intercourse has not changed (45 percent in the 2003 GDHS and 2008 GDHS).

The mean number of lifetime sexual partners reported in the 2008 GDHS was two for women and five for men.

Millennium Development Goal Indicators

Goal		Indicator	Value		
			Male	Female	Total
1. Eradicate extreme poverty and hunger	4.	Prevalence of underweight children under five years[1]	15.4	12.4	13.9
2. Achieve universal primary education	6.	Net attendance ratio in primary education[2]	73.4	74.2	73.8
	7.	Percentage of pupils starting grade 1 who reach grade 5[3]	83.5	84.2	83.9
	7a.	Primary completion rate[4]	0.9	0.9	0.9
	8.	Literacy rate for those age 15-24 years[5]	78.3	68.0	na
3. Promote gender equality and empower women	9.	Ratio of girls to boys in primary, secondary, and tertiary education[6]	na	na	93.3
	10.	Ratio of literate women to men age 15-24 years[5]	na	na	86.9
	11.	Share of women in wage employment in the non-agricultural sector[7]	na	na	48.7
4. Reduce child mortality	13.	Under-five mortality rate[8]	na	na	80.0
	14.	Infant mortality rate[8]	na	na	50.0
	15.	Percentage of children age one year immunised against measles[9]	88.5	91.7	90.2
5. Improve maternal health	16.	Maternal mortality ratio	na	na	na
	17.	Percentage of births attended by skilled health personnel[10]	na	na	58.7
6. Combat HIV/AIDS, malaria and other diseases	19.	Percentage of current users of contraception using condoms[11]	29.6	11.3	na
	19A.	Condom use at last higher-risk sex[12]	46.4	28.2	na
	19B.	Percentage of population age 15-24 years with comprehensive correct knowledge of HIV/AIDS[13]	34.2	28.3	na
	19C.	Contraceptive prevalence rate[14]	na	23.5	na
	20.	Ratio of school attendance of orphans to school attendance of non-orphans age 10-14 years[15]	0.7	na	0.8
	22.	Percentage of population in malaria-risk areas using effective malaria prevention and treatment measures[16]	na	na	48.8
	22A.	Percentage of children under five sleeping under ITN	37.5	40.0	38.7
	22B.	Percentage of children under five with fever appropriately treated with anti-malarial drugs	43.7	42.1	43.0
			Urban	Rural	Total
7. Ensure environmental sustainability	29.	Percentage of population using solid fuels[17]	74.9	96.8	87.2
	30.	Percentage of population with sustainable access to an improved water source, urban and rural[18]	93.0	76.6	83.8
	31.	Percentage of population with access to improved sanitation, urban and rural[19]	17.9	8.1	12.4
	32.	Percentage of households with access to secure tenure	na	na	na

na = Not applicable
[1] Based on children who slept in the household the night before the interview (de facto).
[2] Based on de facto population. Numerator is children age 6-11 currently attending school; denominator is children age 6-11 years.
[3] Based on de facto population. This indicator is calculated using rates of promotion, dropout, and repetition for a given school year. The rates are used to project an estimate for the percentage of students attending grade 1 who are expected to reach grade 5, with or without repetition.
[4] Ratio of the total number of students completed grade 6 of primary school to the total number of children of official graduation age (11-13 years).
[5] Literacy rate for those age 15–24 is the percentage of the population age 15–24 who can read a short simple statement on everyday life and is not equivalent to literacy rate in the DHS report. The ratio of literate women to men age 15–24 is the ratio of the female literacy rate to the male literacy rate for the age group 15–24.
[6] Based on de facto population age 6-24 years
[7] Numerator is all women working in the non-agricultural sector who received payment in cash, or in cash and in kind; denominator is all women and all men with non-agricultural occupation.
[8] Mortality rates refer to a 5-year period before the survey.
[9] In Ghana, the measles vaccinations are given at the age of 9 months. The values presented in the table are for children age 12-23 months who have been vaccinated at any time against measles.
[10] Skilled health personnel includes: doctor, nurse, midwife, auxiliary midwife, and community health officer.
[11] The number of women age 15-49 in marital or consensual unions who report they are using a condom to avoid pregnancy (regardless of whether they are also using additional methods) is divided by the total number of women age 15-49 in union who are practicing, or whose sexual partners are practicing, contraception. The indicator is not equivalent to condom use prevalence as a main method of contraception.
[12] Based on de facto population age 15-24. Higher-risk sex is sexual intercourse with a non-marital, non-cohabiting partner.
[13] Respondents with "comprehensive correct knowledge" of AIDS are those who say that using a condom every time for sexual intercourse and having just one HIV-negative and faithful partner can reduce the chances of getting the AIDS virus, and furthermore, say that a healthy-looking person can have the AIDS virus, and who reject the common misconception that HIV can be spread by mosquito bites and by sharing food with someone with AIDS.
[14] Based on women age 15-49 in marital or consensual unions
[15] Ratio of the percentage with both parents deceased to the percentage with both parents alive and living with a parent. Note that these indicators do not take into account children who live outside of households, e.g., in institutions or on the street, because the GDHS includes only households in its sample.
[16] Based on de facto *population* with at least one insecticide-treated bednet (ITN) and *is not* equivalent to the percentage of households with at least one ITN in the DHS report
[17] Solid fuel includes: coal, charcoal, wood, straw, crops, animal dung and other.
[18] Improved drinking water sources include: water from pipe/tap, public tap, borehole or pump, protected well, protected spring or rainwater. Improved water sources do not include: vendor-provided water, bottled water, tanker trucks or unprotected wells and springs.
[19] Improved sanitary means of excreta disposal includes: facilities that hygienically separate human excreta from human, animal and insect contact. Facilities such as sewers or septic tanks, pour-flush latrines and simple pit or ventilated improved pit (VIP) latrines are assumed to be adequate, provided that they are not public (not shared)

GHANA


Upper East
Upper West
Burkina Faso
Northern
Togo
Cote d'Ivoire
Brong-Ahafo
Volta
Ashanti
Eastern
Western
Central
Greater
Accra
Gulf of Guinea
0 30 60 120 Kilometers

INTRODUCTION 1

1.1 GEOGRAPHY, HISTORY, AND ECONOMY

1.1.1 Geography

The Republic of Ghana is centrally located on the West African coast and has a total land area of 238,537 square kilometres. It is bordered by three French-speaking countries: Togo on the east, Burkina Faso on the north and northwest, and Côte d'Ivoire on the west. The Gulf of Guinea on the south forms a coastline extending 560 kilometres.

Ghana is a lowland country except for a range of hills on the eastern border and Mt. Afadjato—the highest point above sea level (884 metres)—which is west of the Volta River. Ghana can be divided into three ecological zones: the sandy coastline backed by a coastal plain, which is crossed by several rivers and streams; the middle belt and western parts of the country, which are heavily forested and have many streams and rivers; and a northern savannah, which is drained by the Black and White Volta rivers. The Volta Lake, created by the hydroelectric dam in the east, is one of the largest artificial lakes in the world.

Ghana has a tropical climate with temperatures and rainfall varying according to distance from the coast and elevation. The average annual temperature is about 26ºC (79ºF). There are two distinct rainy seasons, April to June and September to November. In the north, however, the rainy season begins in March and lasts until September. Annual rainfall ranges from about 1,015 millimetres (40 inches) in the north to about 2,030 millimetres (80 inches) in the southwest. The *harmattan*, a dry desert wind, blows from the northeast between December and March, lowering the humidity and creating very warm days and cool nights in the north. In the south, the effects of the harmattan are felt mainly in January.

1.1.2 History

Ghana gained independence from British rule on 6 March 1957, and became a republic in the British Commonwealth of Nations on 1 July 1960. Its administrative and political capital is Accra, with a population of 1.7 million (GSS, 2002). Ghana operates a multi-party democratic presidential system of government with an Executive Presidency elected for four years with a maximum of two terms. There is a parliament elected every four years, an independent judiciary, and a vibrant media.

There are 10 administrative regions, Western, Central, Greater Accra, Volta, Eastern, Ashanti, Brong Ahafo, Northern, Upper East, and Upper West. The regions are sub-divided into 170 districts to ensure equitable resource allocation and efficient and effective administration at the local levels.

The distribution of Ghana's population by urban-rural residence shows that the proportion of the population living in urban areas has increased substantially since 1960. In that year, only 23 percent of the population lived in the urban areas. This proportion increased to 29 percent in 1970 and then 32 percent in 1984. In 2000, the proportion of the population living in urban areas reached 44 percent.

The population is made up of several ethnic groups. The Akans constitute the largest ethnic group (49 percent) followed by the Mole-Dagbon (17 percent), Ewe (13 percent), and Ga/Dangme (8 percent) (GSS, 2002).

1.1.3 Economy

The structure of the economy has seen marginal changes over the past two decades. Agriculture is still the most important area of economic activity, followed by services, and then industry. Agriculture contributes 34 percent of the gross domestic product (GDP) (GSS, 2008) and it employs about 50 percent of the population (GSS, 2002). Within the agriculture sector, crops and livestock are the most important sub-sector, contributing 66 percent to the sector's growth. Between 2003 and 2008, however, there was a slight decline in the growth rate of the agriculture sector, from 6 to 5 percent. The service sector, with a growth rate of 10 percent, is the fastest growing sector of the economy and it contributes one-third of the country's GDP. Wholesale and retail trade is the most important sub-sector, accounting for one-quarter of the sector's growth. The industrial sector contributes a little over one-quarter (26 percent) to the country's GDP. The construction sub-sector has the greatest impact on the sector's contribution to the GDP as well as sector growth.

The leading export commodities of the country are cocoa, gold, and timber. In recent times, the economy has diversified to include exports of non-traditional commodities such as pineapples, bananas, yams, and cashew nuts. Tourism is fast gaining prominence as a foreign exchange earner.

Over the past decade the Government of Ghana has embarked on various economic and poverty-reduction programmes with the aim of improving the living conditions of its citizenry. In 2007, the Livelihood Empowerment Against Poverty Programme (LEAP) was introduced, and in 2008 individuals identified as poor started receiving monthly allowances.

There have been many changes in the education sector over the past decade. At the Basic Education Level, pre-school education has officially been incorporated into the education system and all primary schools are required to have nurseries or kindergartens. In the 2005/2006 academic year, the Capitation Grant was introduced countrywide and the government absorbed school fees of all pupils in government basic schools (Darko et al., 2009). As a result, all pupils in government basic schools now have free education. During the same period, the School Feeding Programme was introduced on a pilot basis, and it has since been extended to all basic schools. While the feeding programme aims at improving the nutritional status of school pupils, it has also resulted in increased enrolment in schools. At the secondary level, the three-year Senior Secondary School System was changed to the four-year Senior High School after the 2007/2008 academic year[1]. The introduction of the Ghana Education Trust Fund (GETFUND) has brought many improvements to the education system. The fund provides educational infrastructure such as buildings to the country's tertiary institutions and, as a result, has improved teaching and learning in educational institutions.

1.2 Demographic Profile

There are a variety of sources that provide demographic information about the Ghanaian population, including censuses, administrative/routine data, and surveys. Population censuses provide more comprehensive demographic information than all the other sources.

Ghana has undertaken four censuses since independence in 1957. The first post-independence census was conducted in 1960, reporting a population of 6.7 million. This was followed by the 1970 Census, reporting a population 8.6 million, giving an inter-censual growth rate of 2.4 percent. The 1984 and 2000 censuses recorded populations of 12.3 million and 18.9 million, respectively, with an average growth rate of 2.7 percent between the two census periods. The population density per square kilometre has more than doubled from 36 persons in 1970 to 79 persons in 2000.

The sex ratio over the past 30 years has fallen slightly from 98.5 males per 100 females in 1970 to 97.9 in 2000. The proportion of the population under 15 years however has decreased from 47

[1] The change in name from Senior Secondary to Senior High School and the change from three years to four years have not affected the results of the 2008 GDHS.

percent in 1970 to 41 percent in 2000, while the proportion 65 years and older increased from less than 4 percent to a little more than 5 percent over the same period. Life expectancy at birth has increased from 50 years among males in 1984 to 55 years in 2000 and among females from 54 years to 60 years over the same period. (GSS, 1979; 1985; 2002).

Because population censuses are resource intensive, expensive to implement, and generally take place at intervals of ten years, sample surveys are important for informing demographic profiles. During inter-censual periods, sample surveys are conducted to collect a wide range of data to complement the census data. Because sample surveys are cheaper and can be implemented more quickly, they are conducted at regular intervals. The Ghana Demographic and Health Survey (GDHS), which is a household survey, is an example of the collection of sample survey data.

One other important but often neglected data source in Ghana is administrative (or routine) data. These data are generated as a by-product of events and processes and they provide relatively up-to-date information to fill the data gaps in both censuses and surveys. Vital registration systems (birth and death registration), health systems (immunisations), and education data (enrolment) are examples of administrative data.

1.3 Population Policy and Reproductive Health Programmes

The 1969 National Population Policy was revised in 1994 after 25 years of implementation. The revision took into account emerging issues such as HIV/AIDS, population and the environment, concerns about the elderly and children, and the development of new strategies to ensure achievement of the revised policy objectives. The revision of population policy also entailed concerted effort to systematically integrate population variables in all areas of development planning.

The major goals of the revised population policy include:

- Reducing the total fertility rate from 5.5 in 1993 to 5.0 by the year 2000, 4.0 by 2010, and 3.0 by 2020. Accordingly, the policy aims at achieving a contraceptive prevalence rate (CPR) of 15 percent for use of modern methods by the year 2000, 28 percent by 2010, and 50 percent by the year 2020;

- Reducing the population growth rate from about 3 percent per annum to 1.5 percent by the year 2020; and

- Increasing life expectancy from the current level of 58 years, to 65 years by 2010, and to 70 years by 2020 (NPC, 1994).

The attainment of these population goals is recognised as an integral component of the national strategy to accelerate economic development, eradicate poverty, and enhance the quality of life of all Ghanaians.

The National Population Council and its Secretariat were established in 1992 as the highest statutory body to advise the government on population related issues as well as to facilitate, monitor, coordinate, and evaluate the implementation of population programmes.

In collaboration with the United Nations Population Fund (UNFPA), the United States Agency for International Development (USAID), the World Bank, and other development partners, Ghana has implemented several projects aimed at reducing reproductive health problems in the population. Support from these agencies has targeted policy coordination, implementation, and service delivery.

The government is committed to improving access and equity of access to essential health care services. The priority areas identified include addressing the problems of HIV/AIDS and other sexually transmitted infections (STIs), malaria, tuberculosis, guinea worm disease, poliomyelitis,

reproductive health, maternal and child health, accidents and emergencies, non-communicable diseases, oral health and eye care, and specialised services. Emphasis is also being placed on preventive as well as community-based health care services. This has necessitated the introduction of the Community-based Health Planning and Services (CHPS) programme in which trained nurses are stationed in selected communities to provide health care services to the people of the community.

The scare associated with the spread of HIV/AIDS attracted considerable attention from the government and its development partners. The government set up the National AIDS Commission to oversee the implementation of HIV/AIDS programmes using a multi-sectoral approach. This was to ensure that HIV/AIDS prevention education, treatment, care and support reached every corner of the country. The Ghana Health Service (GHS) also set up the National AIDS Control Programme (NACP) to offer HIV/AIDS prevention education and services. The combined efforts of all stakeholders ensured the implementation of the Ghana HIV/AIDS Strategic Framework: 2001-2005 (World Bank, 2003). This collaborative effort had a positive impact and in 2003 only 2 percent of Ghanaian adults had contracted HIV (GSS, 2004). This level is expected to decline. Roll back malaria, tuberculosis (TB-DOTS), and Integrated Management of Childhood Illnesses (IMCI) are still priority areas under the country's health care system.

Other health interventions instituted as part of government's efforts to make health care accessible and affordable to all include the introduction of the National Health Insurance Scheme (NHIS) and the free maternal care programme (United Nations, 2008).

1.4 OBJECTIVES AND ORGANISATION OF THE SURVEY

The 2008 GDHS is designed to provide data to monitor the population and health situation in Ghana. This is the fifth round in a series of national level population and health surveys conducted in Ghana under the worldwide Demographic and Health Surveys programme. Specifically, the 2008 GDHS has the primary objective of providing current and reliable information on fertility levels, marriage, sexual activity, fertility preferences, awareness and use of family planning methods, breastfeeding practices, nutritional status of women and young children, childhood mortality, maternal and child health, domestic violence, and awareness and behaviour regarding AIDS and other sexually transmitted infections (STIs). The information collected in the 2008 GDHS will provide updated estimates of basic demographic and health indicators covered in the earlier rounds of 1988, 1993, 1998, and 2003 surveys.

The long-term objective of the survey includes strengthening the technical capacity of major government institutions, including the Ghana Statistical Service (GSS). The 2008 GDHS also provides comparable data for long-term trend analysis in Ghana, since the surveys were implemented by the same organisation, using similar data collection procedures. It also adds to the international database on demographic and health–related information for research purposes.

The 2008 GDHS was carried out by the Ghana Statistical Service (GSS) and the Ghana Health Service (GHS). ICF Macro, an ICF International Company, provided technical support for the survey through the MEASURE DHS programme. Funding for the survey came from the United States Agency for International Development (USAID), through its office in Ghana, and the Government of Ghana, with support from the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), the Ghana AIDS Commission (GAC), and the Danish Development Agency (DANIDA).

The survey was conducted from 8 September to 25 November 2008 on a nationally representative sample of 12,323 households.[2] Each of these households was visited to obtain information about the household using the Household Questionnaire. The Household Questionnaire

[2] The GDHS 2008 sample was designed to be large enough to provide a sampling frame to conduct case-specific child mortality surveillance for children under five years of age using a Verbal Autopsy Questionnaire.

was also used to identify deaths of children under five years occurring in the household since January 2005. Based on this information, a Verbal Autopsy Questionnaire was administered in each household with identified deaths. Data on causes of childhood mortality based on the verbal autopsy are not included in this report and will be presented later as a separate publication.

1.5 SAMPLE DESIGN

The 2008 GDHS was a household-based survey, implemented in a representative probability sample of more than 12,000 households selected nationwide. This sample was selected in such a manner as to allow for separate estimates of key indicators for each of the 10 regions in Ghana, as well as for urban and rural areas separately.

The 2008 GDHS utilised a two-stage sample design. The first stage involved selecting sample points or clusters from an updated master sampling frame constructed from the 2000 Ghana Population and Housing Census. A total of 412 clusters were selected from the master sampling frame. The clusters were selected using systematic sampling with probability proportional to size. A complete household listing operation was conducted from June to July 2008 in all the selected clusters to provide a sampling frame for the second stage selection of households.

The second stage of selection involved the systematic sampling of 30 of the households listed in each cluster. The primary objectives of the second stage of selection were to ensure adequate numbers of completed individual interviews to provide estimates for key indicators with acceptable precision and to provide a sample large enough to identify adequate numbers of under-five deaths to provide data on causes of death.

Data were not collected in one of the selected clusters due to security reasons, resulting in a final sample of 12,323 selected households. Weights were calculated taking into consideration cluster, household, and individual non-responses, so the representations were not distorted.

1.6 QUESTIONNAIRES

Each household selected for the GDHS was eligible for interview with the Household Questionnaire. In half of the households selected for the survey, all women age 15-49 and all men age 15-59 were eligible to be interviewed if they were either usual residents of the households or visitors present in the household on the night before the survey. Height and weight measurements of female respondents and children under the age of five years were done only in the households selected for the individual interview. Eligible women and children age 6 to 59 months in the households selected for individual interview were also tested for anaemia.

Three questionnaires were used for the 2008 GDHS: the Household Questionnaire, the Women's Questionnaire and the Men's Questionnaire. The content of these questionnaires was based on model questionnaires developed by the MEASURE DHS programme and the 2003 GDHS Questionnaires.

A questionnaire design workshop organised by GSS was held in Accra to obtain input from the Ministry of Health and other stakeholders on the design of the 2008 GDHS Questionnaires. Based on the questionnaires used for the 2003 GDHS, the workshop and several other informal meetings with various local and international organisations, the DHS model questionnaires were modified to reflect relevant issues in population, family planning, domestic violence, HIV/AIDS, malaria and other health issues in Ghana. These questionnaires were translated from English into three major local languages, namely Akan, Ga, and Ewe. The questionnaires were pre-tested in July 2008. The lessons learnt from the pre-test were used to finalise the survey instruments and logistical arrangements.

The Household Questionnaire was used to list all the usual members and visitors in the selected households. Some basic information was collected on the characteristics of each person listed, including age, sex, education, and relationship to the head of the household. The main purpose of the Household Questionnaire was to identify women and men who were eligible for the individual interview. The Household Questionnaire collected information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, materials used for the floor and roof of the house, ownership of various durable goods, and ownership and use of mosquito nets. The Household Questionnaire was also used to record height and weight measurements, consent for, and the results of, haemoglobin measurements for women age 15-49 and children under five years. The haemoglobin testing procedure is described in detail in the next section.

The Household Questionnaire was also used to record all deaths of household members that occurred since January 2003. Based on this information, in each household that reported the death of a child under age five years since January 2005,[3] field editors administered a Verbal Autopsy Questionnaire. Data on child mortality based on the verbal autopsy will be presented in a separate publication.

The Women's Questionnaire was used to collect information from all women age 15-49 in half of selected households. These women were asked questions about themselves and their children born in the five years since 2003 on the following topics: education, residential history, media exposure, reproductive history, knowledge and use of family planning methods, fertility preferences, antenatal and delivery care, breastfeeding and infant and young child feeding practices, vaccinations and childhood illnesses, marriage and sexual activity, woman's work and husband's background characteristics, childhood mortality, awareness and behaviour about AIDS and other sexually transmitted infections (STIs), awareness of TB and other health issues, and domestic violence.

The Women's Questionnaire included a series of questions to obtain information on women's exposure to malaria during their most recent pregnancy in the five years preceding the survey and the treatment for malaria. In addition, women were asked if any of their children born in the five years preceding the survey had fever, whether these children were treated for malaria and the type of treatment they received.

The Men's Questionnaire was administered to all men age 15-59 living in half of the selected households in the GDHS sample. The Men's Questionnaire collected much of the same information found in the Women's Questionnaire, but was shorter because it did not contain a reproductive history or questions on maternal and child health or nutrition.

1.7 HAEMOGLOBIN TESTING

In half of households selected for the 2008 GDHS survey, consenting women age 15-49 and children age 6-59 months were tested for anaemia. The protocol for haemoglobin testing was approved by the ICF Macro Institutional Review Board (IRB) in Calverton, Maryland, USA and the Ghana Health Service Ethical Review Committee in Accra, Ghana.

Haemoglobin testing is the primary method of anaemia diagnosis. Testing was done using the HemoCue system. A consent statement was read to the eligible respondent or to the parent or responsible adult for young children and unmarried women age 15-17. This statement explained the purpose of the test, indicated that the results would be made available as soon as the test was completed, and requested permission for the test to be carried out. In the case of persons whose haemoglobin level was lower than the cut-off point, a referral form was provided to the respondent to be taken to a doctor or a health facility.

[3] Data were collected for all members of the household who had died in the five years preceding the survey (January 2003-November 2008). However, the verbal autopsy questionnaire was only administered for children under age five at the time of death, who died in the three years preceding the survey (between January 2005-November 2008).

Before the blood was taken, the finger was wiped with an alcohol prep swab and allowed to air-dry. Then, the palm side of the end of a finger (in the case of adults and children six months of age and older) was pricked with a sterile, non-reusable, self-retractable lancet and a drop of blood collected on a HemoCue microcuvette, which serves as a measuring device, and placed in a HemoCue photometer which displays the result. For children under six months of age (or for children under one year of age who were particularly undernourished and bony) a heel puncture was made to draw a drop of blood. The results were recorded in the Household Questionnaire, as well as on a brochure, which was given to each woman, parent, or responsible adult, that explained what the results meant. For each person whose haemoglobin level was lower than the cut-off point and who agreed to have their condition reported, a referral form was given to be taken to a local health personnel or health facility.

1.8 PRE-TEST, TRAINING, AND FIELDWORK

1.8.1 Pre-test

Pre-test training and practice fieldwork were conducted from 23 June to 12 July 2008 for 14 participants: seven women and seven men. Training entailed classroom discussions and practice focusing on the three questionnaires: Household Questionnaire, Women's Questionnaire, and Men's questionnaire. Two trainers assigned by the GSS conducted the training with support from ICF Macro. Guest speakers from the MOH were invited to make short presentations on family planning, child health, and nutrition programmes in place in Ghana. The participants, most of whom had been involved in the previous DHS survey, actively discussed the questionnaires and made suggestions for modifications. Based on these suggestions, all versions of the questionnaires (English, Akan, Ewe, and Ga) were updated for the pre-test fieldwork.

Pre-test fieldwork was done in several stages. Interviewers were divided into four teams and during the period July 7-11 all teams worked in three urban areas and two rural areas. A total of 68 women's interviews, 66 men's interviews, and 79 household interviews were completed. Interviews were conducted in English, Akan, Ewe, and Ga. By the end of the pre-test, a few errors in skip patterns and translation were identified and corrected.

1.8.2 Training and Fieldwork

Fieldwork training began on 11 August 2008 at Winneba Sports College, located about 35 miles west of Accra. Three weeks of training on the GDHS were followed by three days of training on the Verbal Autopsy Questionnaire for deaths of children under five years. A total of 160 persons were trained on the GDHS at one training location. The first week of training also included 10 data entry personnel. Most of the trainees had prior experience as interviewers in previous GDHS surveys. The trainees were also recruited on the basis of language skills. Interviewer training was conducted mostly in English by senior staff from GSS, with technical input from ICF Macro. In addition, resource persons from other agencies made presentations on family planning, Ghana's programme on Integrated Management of Childhood Illnesses (IMCI), nutrition and anthropometric measurements, and malaria. All participants were trained on interviewing techniques and the contents of the GDHS questionnaires. The training was conducted following the standard DHS training procedures, including class presentations, mock interviews, and written tests. All of the participants were trained on how to complete the Household Questionnaire, the Women's Questionnaire and the Men's Questionnaire, and how to collect anthropometric measurements. In addition to interviewer training, all female interviewers were trained in anaemia testing and in informed consent procedures. Training included four days of field practice, three days implementing the Household and Individual Questionnaires, and one day implementing the Verbal Autopsy Questionnaires. Trainees also practiced interviewing (mock interviews) in English as well as in the local languages. During training, it was emphasised that only female interviewers interview respondents for the Women's Questionnaire and only male interviewers interview respondents for the Men's Questionnaire. Trainees selected as supervisors and field editors were given an additional two days of training on

how to supervise fieldwork and edit questionnaires, followed by three days of training on the Verbal Autopsy Questionnaire for deaths of children under five years.

At the end of the main training 23 teams were designated to carry out the fieldwork. Each team was composed of one supervisor, one editor, two female interviewers, two male interviewers, and a driver. A standby list of 22 people was kept for replacement in cases of interviewer attrition. Interviewers were selected on the basis of in-class participation, field practice, fluency in the Ghanaian languages, and an assessment test. The most experienced trainees, those who had participated in the pre-test and those who did extremely well during the training were selected to be supervisors and editors.

Senior staff from GSS coordinated and supervised the fieldwork activities. ICF Macro participated in field supervision of interviews, weight and height measurements, and blood sample collection. Data collection took place over a two and half-month period, from early September to late November 2008.[4]

1.9 DATA PROCESSING

The processing of the GDHS results began shortly after the fieldwork commenced. Completed questionnaires were returned periodically from the field to the GSS office in Accra, where they were entered and edited by data processing personnel who were specially trained for this task. Data were entered using CSPro, a programme specially developed for use in DHS surveys. All data were entered twice (100 percent verification). The concurrent processing of the data was a distinct advantage for data quality, because GSS had the opportunity to advise field teams of problems detected during data entry. The data entry and editing phase of the survey was completed in February 2009.

1.10 RESPONSE RATES

Table 1.1 shows response rates for the 2008 GDHS. A total of 12,323 households were selected in the sample, of which 11,913 were occupied at the time of the fieldwork. This difference between selected and occupied households occurred mainly because some of the selected structures were found to be vacant or destroyed. The number of occupied households successfully interviewed was 11,778, yielding a household response rate of 99 percent.

In the households selected for individual interview in the survey (50 percent of the total 2008 GDHS sample), a total of 5,096 eligible women were identified; interviews were completed with 4,916 of these women, yielding a response rate of 97 percent. In the same households, a total of 4,769 eligible men were identified and interviews were completed with 4,568 of these men, yielding a response rate of 96 percent. The response rates are slightly lower among men than women.

The principal reason for non-response among both eligible women and men was the failure to find individuals at home despite repeated visits to the household. The lower response rate for men reflects the more frequent and longer absences of men from the household.

[4] Several weeks before the start of training, GSS decided to increase the number of field teams from the originally planned 15 to a total of 23. The increase in field teams was done in order to conclude all data collection prior to national elections held on 7 December 2008. The increase in the number of field teams reduced the period of data collection from 120 to 79 days.

Table 1.1 Results of the household and individual interviews

Number of households, number of interviews, and response rates, according to residence (unweighted), Ghana 2008

Result	Residence		Total
	Urban	Rural	
Household interviews			
Households selected	5,458	6,865	12,323
Households occupied	5,252	6,661	11,913
Households interviewed	5,175	6,603	11,778
Household response rate[1]	98.5	99.1	98.9
Interviews with women age 15-49			
Number of eligible women	2,239	2,857	5,096
Number of eligible women interviewed	2,162	2,754	4,916
Eligible women response rate[2]	96.6	96.4	96.5
Interviews with men age 15-59			
Number of eligible men	2,014	2,755	4,769
Number of eligible men interviewed	1,914	2,654	4,568
Eligible men response rate[2]	95.0	96.3	95.8

[1] Households interviewed/households occupied
[2] Respondents interviewed/eligible respondents

HOUSEHOLD POPULATION AND HOUSING CHARACTERISTICS 2

Presented in this chapter are descriptive summaries of the social, economic, and demographic characteristics of households sampled for the survey. The basic characteristics of the sampled population, that is, age, sex, education, and place of residence and the socio-economic conditions of the households, form the basis of the background information by which most key demographic and health indices are analysed throughout this report. This information is crucial for the interpretation of key demographic and health indicators from which to draw meaningful policies and programmes for intervention, and for measuring the representativeness of the survey.

One focus of this chapter is to describe the environment in which men, women, and children live. This description presents the general characteristics of the population, such as the age-sex structure, literacy and education, household arrangements (headship, size), and housing facilities (sources of water supply, sanitation facilities, dwelling characteristics and household possessions). A distinction is made between urban and rural areas because many of these indicators differ by urban-rural residence.

In the 2008 GDHS, a household is defined as a person or a group of persons, related or unrelated, who live together in the same house or compound, share the same housekeeping arrangements, and eat together as a unit. The Household Questionnaire was used to collect information on all usual residents and visitors who spent the night preceding the survey in the household. This mode of data collection allows the analysis of either the de jure (usual) residents of the household or the de facto household population (including visitors who spent the night preceding the interview in the household and who were present at the time of the interview).

2.1 HOUSEHOLD POPULATION BY AGE AND SEX

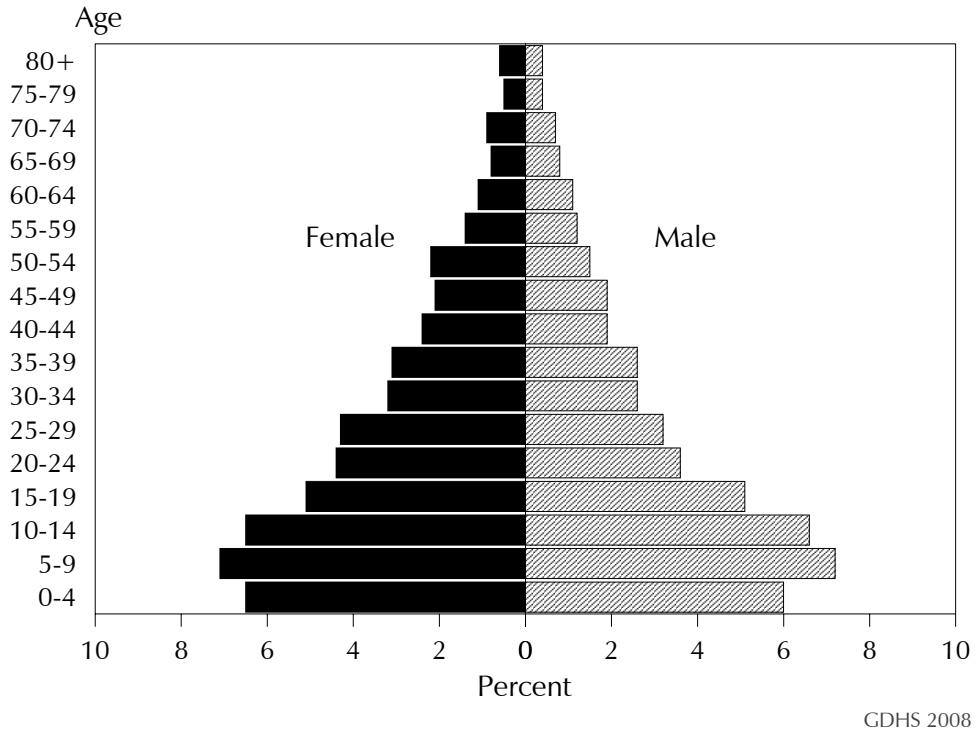
Age and sex are important variables in analysing demographic trends. Table 2.1 and Figure 2.1 present the distribution of the de facto household population in the 2008 GDHS survey by five-year age groups, according to sex and urban-rural residence. The age structure is typical of a young population characterised by high fertility. This type of population structure imposes a heavy burden on the social and economic assets of a country. However, while the results of the 2008 GDHS indicate that 41 percent of the population is under 15 years, this is an improvement since the 2003 survey in which 44 percent of the population was under 15 years. Five percent of the population is in the older age groups (65 years and above), and this has not changed much since 2003.

Table 2.1 Household population by age, sex, and residence

Percent distribution of the de facto household population by five-year age groups, according to sex and residence, Ghana 2008

	Urban			Rural			Total		
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	13.0	10.8	11.8	15.2	13.8	14.5	14.3	12.5	13.3
5-9	13.2	11.7	12.4	16.6	15.0	15.7	15.2	13.5	14.3
10-14	12.7	12.3	12.5	14.7	12.4	13.5	13.8	12.4	13.1
15-19	10.7	10.3	10.5	10.8	9.1	9.9	10.7	9.7	10.2
20-24	9.1	9.6	9.4	6.3	7.4	6.8	7.5	8.4	7.9
25-29	7.9	9.3	8.7	5.7	7.5	6.6	6.7	8.3	7.5
30-34	6.4	6.9	6.7	4.9	5.6	5.3	5.5	6.2	5.9
35-39	5.8	6.3	6.0	5.3	5.7	5.5	5.5	6.0	5.7
40-44	4.2	4.7	4.5	3.9	4.5	4.2	4.0	4.6	4.3
45-49	4.1	4.3	4.2	3.9	4.0	3.9	4.0	4.1	4.0
50-54	3.6	4.4	4.1	3.0	4.0	3.5	3.3	4.2	3.7
55-59	2.8	2.6	2.7	2.2	2.7	2.5	2.4	2.7	2.5
60-64	2.3	2.0	2.1	2.3	2.3	2.3	2.3	2.1	2.2
65-69	1.5	1.3	1.4	1.7	1.8	1.8	1.6	1.6	1.6
70-74	1.2	1.6	1.4	1.6	1.8	1.7	1.5	1.7	1.6
75-79	0.7	0.9	0.8	0.9	0.9	0.9	0.8	0.9	0.9
80+	0.7	1.0	0.8	1.0	1.4	1.2	0.9	1.2	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	8,706	10,144	18,850	11,920	12,510	24,430	20,626	22,654	43,280

Figure 2.1 **Population Pyramid**



2.2 HOUSEHOLD COMPOSITION

The size and composition of households and the sex of the head of household are important factors affecting the welfare of the household. Table 2.2 shows the information collected in the 2008 GDHS on the sex of the head of household and the mean household size. In Ghana, the mean household size is 3.7 persons, with households in rural areas being larger (4.0 persons) than those in urban areas (3.4 persons).

Table 2.2 Household composition

Percent distribution of households by sex of head of household and by household size; mean size of household, and percentage of households with orphans and foster children under 18, according to residence, Ghana 2008

Characteristic	Residence		Total
	Urban	Rural	
Household headship			
Male	63.2	69.2	66.3
Female	36.8	30.8	33.7
Total	100.0	100.0	100.0
Number of usual members			
1	24.7	19.3	21.9
2	16.1	13.8	14.9
3	16.1	14.8	15.4
4	14.0	14.0	14.0
5	12.1	12.2	12.1
6	7.4	9.8	8.7
7	4.5	6.4	5.5
8	2.1	4.0	3.1
9+	2.7	5.6	4.2
Total	100.0	100.0	100.0
Mean size of households	3.4	4.0	3.7
Percentage of households with orphans and foster children under 18 years of age			
Foster children[1]	18.0	19.0	18.6
Double orphans	1.0	0.7	0.9
Single orphans	6.5	7.7	7.1
Foster and/or orphan children	20.9	22.5	21.7
Number of households	5,627	6,150	11,777

Note: Table is based on de jure household members, i.e., usual residents.
[1] Foster children are those under 18 years of age living in households where neither their mother nor their father is a de jure resident.

Two-thirds (66 percent) of households are headed by males, while one-third (34 percent) are headed by females. The percentage of female-headed households is higher in urban areas (37 percent) than in rural areas (31 percent).

Single-person households are more common in urban areas (25 percent) than rural areas (19 percent). This may be due to an influx of unmarried young persons migrating to urban areas in search of employment or to further their education.

2.2.1 Children's Living Arrangements and Orphanhood

Information on households with foster children and orphans was collected in the 2008 GDHS. Foster children are defined here as children under age 18 living in households with neither their mother nor their father present; orphans are children with one or both parents dead. Foster children and orphans are of concern because they may be at increased risk of neglect or exploitation when their mothers or fathers are not present to assist them. Table 2.3 shows the distribution of foster children and children with one or both parent dead, according to background characteristics. The table is based on de jure household members. Eighteen percent of children under age 18 are foster children and 8 percent are orphan children. The percentage of foster and orphan children is higher in urban areas (20 and 8 percent, respectively) than rural areas (16 and 7 percent, respectively).

Table 2.3 Children's living arrangements and orphanhood

Percent distribution of de jure children under age 18 by living arrangements and survival status of parents; the percentage of children not living with a biological parent, and the percentage of children with one or both parents dead, according to background characteristics, Ghana 2008

Background characteristic	Living with both parents	Living with mother but not with father		Living with father but not with mother		Not living with either parent					Total	Percentage not living with a biological parent	Percentage with one or both parents dead	Number of children
		Father alive	Father dead	Mother alive	Mother dead	Both alive	Only father alive	Only mother alive	Both dead	Missing information on father/ mother[1]				
Age														
0-4	65.2	23.9	1.3	2.0	0.2	6.4	0.4	0.2	0.2	0.2	100.0	7.2	2.3	5,832
<2	69.1	27.0	0.7	0.7	0.1	2.0	0.3	0.0	0.2	0.1	100.0	2.4	1.2	2,243
2-4	62.8	21.9	1.6	2.9	0.3	9.1	0.6	0.3	0.3	0.4	100.0	10.2	3.0	3,589
5-9	54.4	18.3	3.3	5.3	0.7	15.1	1.1	1.1	0.4	0.3	100.0	17.6	6.6	6,261
10-14	47.3	16.8	5.0	6.4	1.0	18.9	1.4	2.0	1.0	0.2	100.0	23.4	10.5	5,717
15-17	41.4	16.5	6.4	6.5	1.5	19.8	1.7	3.9	1.6	0.7	100.0	27.0	15.1	2,727
Sex														
Male	55.5	18.5	3.6	5.6	0.8	12.8	0.9	1.3	0.6	0.4	100.0	15.6	7.2	10,378
Female	52.0	19.9	3.6	4.0	0.7	15.9	1.3	1.6	0.7	0.3	100.0	19.5	8.0	10,159
Residence														
Urban	48.2	22.0	3.9	4.6	0.7	16.5	1.2	1.6	0.9	0.3	100.0	20.2	8.4	8,224
Rural	57.5	17.3	3.4	5.0	0.8	12.9	1.0	1.3	0.5	0.3	100.0	15.7	7.0	12,313
Region														
Western	59.7	15.8	2.7	5.2	0.6	12.8	1.0	1.5	0.3	0.2	100.0	15.7	6.2	1,969
Central	43.0	27.8	3.4	4.7	0.7	17.0	1.2	1.4	0.4	0.4	100.0	20.0	7.0	2,047
Greater Accra	52.6	19.4	4.8	4.5	1.1	13.9	1.1	1.4	1.2	0.1	100.0	17.5	9.5	2,483
Volta	48.7	22.6	2.1	3.5	0.5	18.4	1.6	1.7	0.4	0.5	100.0	22.1	6.3	1,830
Eastern	49.7	20.7	2.3	7.3	0.9	16.7	0.9	0.5	0.5	0.4	100.0	18.6	5.1	2,052
Ashanti	43.9	26.3	3.8	5.1	0.4	16.9	1.3	1.8	0.4	0.1	100.0	20.4	7.7	3,673
Brong Ahafo	50.7	21.7	5.0	3.7	0.8	15.1	1.4	0.9	0.5	0.3	100.0	17.8	8.7	2,015
Northern	75.5	5.9	1.7	4.4	0.9	8.1	0.5	0.7	1.7	0.7	100.0	11.0	5.5	2,580
Upper East	63.6	9.7	7.6	5.0	1.2	8.5	0.6	3.4	0.3	0.1	100.0	12.9	13.1	1,289
Upper West	61.7	10.9	4.9	4.4	1.1	12.2	1.6	2.4	0.4	0.3	100.0	16.7	10.5	598
Wealth quintile														
Lowest	68.6	10.0	3.9	5.1	1.2	8.0	0.6	1.4	0.8	0.2	100.0	10.9	8.0	4,654
Second	51.5	21.9	3.4	4.2	0.5	15.3	1.2	1.1	0.6	0.4	100.0	18.2	6.8	4,405
Middle	41.0	27.9	4.1	5.2	0.6	17.1	1.7	1.3	0.5	0.5	100.0	20.7	8.3	4,161
Fourth	49.9	21.1	4.0	4.6	0.6	16.6	1.0	1.5	0.5	0.3	100.0	19.6	7.6	3,886
Highest	56.5	15.4	2.5	5.1	0.8	15.7	0.8	2.1	1.0	0.1	100.0	19.5	7.2	3,431
Total <15	55.7	19.6	3.2	4.6	0.7	13.5	1.0	1.1	0.5	0.3	100.0	16.1	6.4	17,810
Total <18	53.8	19.2	3.6	4.8	0.8	14.3	1.1	1.5	0.7	0.3	100.0	17.5	7.6	20,537

Note: Table is based on de jure children who usually live in the household.
[1] Includes children with father dead, mother dead, both dead and one parent dead but missing information on survival status of the other parent.

Detailed information on living arrangements and orphanhood for children under age 18 is presented in Table 2.3. Of the 20,537 children under age 18 reported in the 2008 GDHS, about 54 percent live with both parents, 19 percent live with their mother only, although their father is alive, 5 percent live with their father only, although their mother is alive, and 14 percent live with neither of their natural parents, although both parents are alive. Table 2.3 also provides data on the extent of orphanhood, that is, the proportion of children who have lost one or both parents. Less than one percent of children under age 18 have both parents dead while 8 percent have one or both parents dead.

The percentage of children living with both biological parents decreases with increasing age of the child. Children in rural areas are more likely than those in urban areas to live with both parents. The highest proportion of children living with both parents is in the Northern region (76 percent), followed by the Upper East and Upper West regions (64 and 62 percent, respectively). By wealth status, the proportion of children under age 18 living with both parents shows a U-shaped pattern with increasing wealth quintile. The highest proportions are among children in the lowest and highest wealth quintiles (69 and 57 percent, respectively) and the lowest proportion is in the middle wealth quintile (41 percent).

2.2.2 School Attendance by Survivorship of Parents

Children who are orphaned or live in a house with chronically ill adults may be at a greater risk of dropping out of school because of lack of money to pay school fees or the need to stay at home to care for the sick relative. The GDHS included information to monitor such situations and collected information on school attendance of children age 10-14 by parental survival. The proportion of children age 10-14 attending school whose parents are both dead is 67 percent and the proportion whose parents are both living and the child is residing with at least one parent is 88 percent (data not shown separately). The overall ratio of school attendance of children whose parents are dead to those whose parents are living, and the child resides with at least one parent, is 0.76. Further breakdown by background characteristics was not possible due to the low number of orphans (60 unweighted cases).

2.3 Educational Attainment of Household Members

Education is important because it helps individuals make informed decisions that impact their health and well-being. Ghana's educational system has undergone several stages of restructuring over the past 25 years (Sedgwick, 2000). The current system of formal education was introduced in 1989. It is based on a three-tier system: six years of primary education, followed by three years of junior secondary school (JSS), and a further three years at the senior secondary school (SSS) level. From the mid-1970s until the introduction of the current system of education, the six years of primary education were followed by five years of secondary education—three years of JSS and two years of SSS. Prior to the mid-1970s, students who completed six years of primary education had a choice. They could attend four years of middle school or attend five years of secondary school with a small group having the further option to pursue an additional two years of pre-university education. Upon completion of formal schooling, a student could choose to further his or her education at the tertiary level. In addition to university education, there are many institutions offering vocational, technical, and professional training that may be tertiary or non-tertiary.

Over the past decade there have been many changes in the education sector. At the Basic Education Level, pre-school education has officially been incorporated into the education system and all primary schools are required to have nurseries or kindergarten. At the secondary level, since the 2007/2008 academic year, the three-year Senior Secondary School System has been changed to the four-year Senior High School.[1] The different systems of formal education have been taken into account in tabulating the educational attainment of women and men interviewed in the 2008 GDHS.

Table 2.4.1 shows the percent distribution of the de facto female household population age six years and over by highest level of education attended or completed, according to background characteristics. Thirty-one percent of women have never been to school, about 31 percent have some primary or have completed primary school, 36 percent have some secondary or have completed secondary school, and about 3 percent have more than secondary school education.

The data show that the proportion of women with no education is higher among older women, suggesting some improvement in education over the years. This may be due to the impact of the Free Compulsory Universal Basic Education (FCUBE) programme, which was introduced in 1996. Education varies by place of residence. Urban women are more likely to be educated than rural women. For instance, 21 percent of urban females have no education, compared with 40 percent of rural females. The proportion of urban females with some secondary education or higher (52 percent) is almost twice as high as that of rural females (27 percent).

[1] The change in name from Senior Secondary to Senior High School and the change from three years to four years have not affected the results of the GDHS.

It is notable that females in the northern half of the country (the Northern, Upper East, and Upper West regions) are seriously disadvantaged. More than half to two-thirds of women in these three regions have never been to school, compared with less than one-fifth in the Greater Accra and Ashanti regions. In addition, 21 percent of females in Greater Accra have completed secondary education or higher, compared with 4 percent or less in the Northern, Upper East and Upper West regions.

It is worth noting that the proportion of female household members who have never attended school decreases with higher wealth status. Sixty-two percent of women in the lowest wealth quintile have no education, compared with only 10 percent in the highest quintile.

Table 2.4.1 Educational attainment of the female household population

Percent distribution of the de facto female household population age six and over by highest level of schooling attended or completed and median years completed, according to background characteristics, Ghana 2008

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Don't know/ missing	Total	Number	Median years completed
Age										
6-9	48.2	51.3	0.1	0.1	0.0	0.0	0.2	100.0	2,506	0.0
10-14	7.9	67.7	9.7	14.6	0.0	0.0	0.1	100.0	2,806	3.4
15-19	10.1	15.8	9.4	58.7	5.7	0.3	0.0	100.0	2,189	6.9
20-24	16.8	11.3	5.7	41.6	19.8	4.8	0.0	100.0	1,897	8.3
25-29	23.1	12.5	5.3	39.2	12.9	6.9	0.0	100.0	1,876	8.1
30-34	30.0	13.3	5.6	37.6	9.2	4.2	0.2	100.0	1,400	6.2
35-39	33.3	13.6	4.8	39.0	6.3	2.8	0.3	100.0	1,353	5.6
40-44	36.1	12.4	5.1	38.3	5.4	2.6	0.0	100.0	1,046	5.3
45-49	38.9	12.3	3.6	35.0	5.8	4.3	0.0	100.0	928	4.5
50-54	42.1	11.7	4.0	32.7	4.4	4.7	0.4	100.0	945	3.6
55-59	50.5	9.8	2.9	26.1	5.1	5.1	0.4	100.0	603	0.0
60-64	65.0	7.8	0.7	18.7	3.1	4.6	0.0	100.0	482	0.0
65+	79.9	6.9	1.2	9.4	1.1	1.3	0.1	100.0	1,233	0.0
Residence										
Urban	20.5	22.2	5.4	36.6	10.4	4.8	0.2	100.0	8,830	6.2
Rural	40.3	28.0	5.0	23.4	2.4	0.8	0.1	100.0	10,453	1.6
Region										
Western	24.9	28.1	5.5	32.0	5.9	3.5	0.1	100.0	1,738	4.5
Central	30.6	29.6	5.4	29.5	3.5	1.4	0.1	100.0	1,965	3.3
Greater Accra	15.7	19.2	5.6	38.2	14.8	6.6	0.0	100.0	2,904	8.1
Volta	33.3	27.5	7.2	26.1	4.0	1.8	0.2	100.0	1,817	3.0
Eastern	24.8	25.1	7.1	36.4	4.7	1.6	0.3	100.0	1,966	5.0
Ashanti	19.0	28.1	4.0	39.1	6.9	2.7	0.2	100.0	3,629	5.5
Brong Ahafo	33.6	26.6	6.6	28.7	3.6	1.1	0.0	100.0	1,727	3.0
Northern	67.5	17.9	2.7	7.9	2.7	1.0	0.2	100.0	1,886	0.0
Upper East	55.0	27.5	2.9	10.1	2.5	1.9	0.1	100.0	1,136	0.0
Upper West	54.0	27.4	2.9	12.2	2.6	0.8	0.1	100.0	515	0.0
Wealth quintile										
Lowest	62.1	25.3	3.3	8.5	0.6	0.1	0.1	100.0	3,506	0.0
Second	39.0	30.4	5.5	23.6	1.2	0.1	0.1	100.0	3,816	1.6
Middle	29.9	28.2	6.3	31.9	3.1	0.5	0.2	100.0	4,051	3.6
Fourth	19.2	24.6	5.8	40.4	7.9	2.0	0.1	100.0	3,892	5.9
Highest	10.1	18.5	4.6	40.0	16.6	10.0	0.1	100.0	4,019	8.5
Total	31.3	25.4	5.2	29.4	6.1	2.6	0.1	100.0	19,283	3.7

Note: Total includes females with information missing on age who are not shown separately.
[1] Completed grade 6 at the primary level
[2] Completed grade 12 at the secondary level

Table 2.4.2 shows that 22 percent of males have never been to school, 30 percent have had some primary or have completed primary education, 42 percent have had some secondary or have completed secondary education, and nearly 6 percent have more than secondary education. Twenty-nine percent of males in rural areas have no education, compared with 13 percent in urban areas. There is a marked urban-rural differential in secondary and higher education: 25 percent of males in urban areas have completed secondary or higher education, compared with only 8 percent in rural areas.

Across regions, the pattern for males is similar to the pattern for females. Males in the three northern regions are disadvantaged because 41 to 51 percent have never been to school, compared with less than 20 percent in the other regions, except Brong Ahafo region (26 percent). Variation in education among males according to household wealth status shows a pattern similar to that observed for the female population. Males in households in the upper wealth quintiles are less likely to have no education than those in other quintiles. For example, only 5 percent of males in the highest wealth quintile have no education, compared with 48 percent of those in the lowest quintile.

Table 2.4.2 Educational attainment of the male household population

Percent distribution of the de facto male household population age six and over by highest level of schooling attended or completed and median years completed, according to background characteristics, Ghana 2008

Background characteristic	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Don't know/ missing	Total	Number	Median years completed
Age										
6-9	49.9	49.7	0.1	0.2	0.0	0.0	0.1	100.0	2,584	0.0
10-14	8.3	69.6	8.4	13.6	0.0	0.0	0.1	100.0	2,848	3.2
15-19	6.8	17.9	9.5	59.7	5.8	0.4	0.1	100.0	2,215	7.1
20-24	10.0	7.3	3.9	43.4	27.8	7.5	0.1	100.0	1,542	8.7
25-29	13.7	7.2	4.6	40.7	19.5	14.2	0.2	100.0	1,374	8.6
30-34	16.0	6.1	4.8	43.6	18.5	10.9	0.1	100.0	1,143	8.6
35-39	22.5	9.8	3.2	42.2	14.0	8.0	0.3	100.0	1,133	8.9
40-44	24.2	6.8	3.8	44.9	10.8	9.3	0.2	100.0	834	9.2
45-49	25.5	5.6	2.4	43.0	13.2	10.4	0.0	100.0	815	9.3
50-54	20.4	9.1	2.2	42.5	11.3	14.2	0.3	100.0	671	9.4
55-59	21.5	5.0	2.1	44.1	12.8	14.3	0.3	100.0	499	9.4
60-64	37.1	6.6	2.7	34.6	7.9	11.1	0.0	100.0	476	9.0
65+	53.2	7.0	2.2	26.9	3.9	6.5	0.3	100.0	985	0.0
Residence										
Urban	13.3	21.2	4.1	36.2	15.4	9.7	0.1	100.0	7,385	8.2
Rural	29.1	28.5	4.9	29.8	4.9	2.7	0.1	100.0	9,743	3.5
Region										
Western	15.7	22.6	5.4	38.9	9.2	8.2	0.0	100.0	1,712	7.0
Central	18.0	29.1	4.6	37.3	6.6	4.3	0.2	100.0	1,581	5.6
Greater Accra	9.2	18.7	3.7	35.7	20.8	11.8	0.2	100.0	2,476	8.9
Volta	19.6	26.4	6.1	36.4	7.1	4.3	0.1	100.0	1,541	5.6
Eastern	15.0	25.6	5.9	42.8	6.7	3.9	0.1	100.0	1,756	6.6
Ashanti	13.3	25.8	3.7	40.7	10.5	6.0	0.0	100.0	2,991	7.0
Brong Ahafo	26.4	29.0	5.4	28.2	7.2	3.6	0.1	100.0	1,559	3.8
Northern	51.1	23.6	3.0	13.2	5.4	3.3	0.3	100.0	1,956	0.0
Upper East	43.0	31.7	5.0	12.9	4.2	3.2	0.0	100.0	1,080	0.8
Upper West	41.1	31.2	4.1	15.1	5.3	2.9	0.3	100.0	477	1.0
Wealth quintile										
Lowest	48.2	29.5	4.6	15.4	1.8	0.3	0.1	100.0	3,518	0.1
Second	25.8	30.3	5.4	32.7	4.2	1.4	0.1	100.0	3,353	3.8
Middle	19.7	27.9	5.7	37.5	6.7	2.3	0.1	100.0	3,276	5.4
Fourth	12.1	22.7	4.0	42.9	12.5	5.7	0.1	100.0	3,440	8.1
Highest	5.4	16.7	3.1	34.9	21.3	18.4	0.2	100.0	3,541	9.4
Total	22.3	25.4	4.5	32.6	9.4	5.7	0.1	100.0	17,128	5.4

Note: Total includes males with information missing on age who are not shown separately.
[1] Completed grade 6 at the primary level
[2] Completed grade 12 at the secondary level

Males are more likely to be educated than females at all levels of education; thus females continue to lag behind males in education. The median number of years of schooling completed is higher for males (5.4 years) than females (3.7 years). There has been some improvement in the proportion of the population with no education since the last GDHS survey. The proportion of females with no education dropped from 37 percent in 2003 to 31 percent in 2008 and the median number of years of schooling for females nearly doubled from 2.1 to 3.7 years. Similarly, the proportion of males with no education dropped from 26 to 22 percent, with the median years of schooling increasing from 3.9 to 5.4 years. Thus, the male-female gap in educational attainment has narrowed slightly over the period.

The 2008 GDHS collected information on school attendance for the population age 3-24 years that allows the calculation of net attendance ratios (NARs) and gross attendance ratios (GARs). The NAR for primary school is the percentage of the primary-school-age (6-11 years) population that is attending primary school. The NAR for secondary school is the measure of the secondary-school-age (12-17 years) population that is attending secondary school. By definition, the NAR cannot exceed 100 percent. The GAR however, measures participation at each level of schooling among persons age 6-25. The GAR is almost always higher than the NAR for the same level because the GAR includes participation by those who may be older, because they may have started school late, may have repeated one or more grades in school, or may have dropped out of school and later returned, or may be younger than the official age range for that level.

Table 2.5 presents data on the NAR and GAR for the de facto household population by level of schooling and sex, according to place of residence, region and wealth quintile. Seventy-four percent of children age 6-11, who should be attending primary school, are currently doing so. At the same time, the GAR at the primary school level is 108 percent. The distribution shows that both the NAR and GAR are much lower at the secondary school level: 42 percent of students age 12-17 who should be attending secondary school are in school (NAR). The GAR for secondary school is 57 percent.

The 2008 GAR was calculated based on the de facto secondary-school-age (12-17) population; however, the 2003 GAR was calculated based on the de jure secondary-school-age (12-18) population. To enable comparison, the 2008 data were re-calculated using the de jure secondary-school-age (12-18) population. The resulting GAR was 49 percent, which indicates that there has been an increase (improvement) in the proportion of underage or overage youths in secondary school since 2003 (41 percent).

The results show slightly higher NARs for females than males at both the primary and secondary school levels, which indicates that that there is not much of a gender gap in school attendance for the Ghanaian school-age population who should be attending school at a given level. However, the GARs at primary and secondary school levels are slightly higher for males than females, indicating relatively higher overage or underage attendance among males than females.

School attendance ratios at both the primary and secondary levels are lower in rural than in urban areas. For instance, the NAR at the primary school level in rural areas is 70 percent compared with 80 percent in urban areas. Similarly, the GAR at the secondary school level is 48 percent in rural areas, compared with 68 percent in urban areas. Regional differences are obvious for the NAR and GAR with attendance ratios notably lower in the Northern and Upper West regions, compared with all other regions, and especially in the case of the GAR at the primary school level for the Northern region (76 percent, compared with the overall GAR of 108 percent).

There is a strong relationship between household economic status and school attendance that can be seen at both the primary and secondary levels and among males and females. For example, the NAR increases from 59 percent among students from poorer households (lowest wealth quintile) in primary school to 86 percent among pupils from richer households (highest wealth quintile). Similarly, the GAR rises from 34 percent among secondary school attendees in the lowest wealth quintile to 76 percent among those in the highest wealth quintile.

Table 2.5 School attendance ratios

Net attendance ratios (NAR) and gross attendance ratios (GAR) for the de facto household population by sex and level of schooling; and the gender parity index (GPI), by background characteristics, Ghana 2008

Background characteristic	Net attendance ratio[1]				Gross attendance ratio[2]			
	Male	Female	Total	Gender Parity Index (GPI)[3]	Male	Female	Total	Gender Parity Index (GPI)[3]
PRIMARY SCHOOL								
Residence								
Urban	81.0	79.5	80.3	0.98	110.2	108.9	109.5	0.99
Rural	68.8	70.8	69.8	1.03	107.1	105.9	106.6	0.99
Region								
Western	72.0	71.3	71.6	0.99	105.7	102.7	104.2	0.97
Central	74.3	76.1	75.2	1.02	105.0	114.3	109.6	1.09
Greater Accra	82.7	77.7	80.3	0.94	111.4	106.9	109.2	0.96
Volta	67.9	75.5	71.7	1.11	114.7	120.2	117.4	1.05
Eastern	75.9	74.8	75.4	0.99	116.5	104.3	110.3	0.90
Ashanti	86.8	85.7	86.2	0.99	118.4	113.9	116.1	0.96
Brong Ahafo	73.9	77.4	75.6	1.05	115.4	115.7	115.6	1.00
Northern	55.7	50.4	53.3	0.90	78.4	72.3	75.6	0.92
Upper East	68.5	75.9	71.9	1.11	115.2	120.9	117.8	1.05
Upper West	62.1	67.5	64.7	1.09	105.9	103.8	104.9	0.98
Wealth quintile								
Lowest	58.2	60.1	59.1	1.03	97.7	93.7	95.8	0.96
Second	72.3	71.6	71.9	0.99	111.5	106.6	109.1	0.96
Middle	74.8	78.1	76.5	1.04	112.0	115.5	113.7	1.03
Fourth	82.1	81.5	81.8	0.99	113.5	113.9	113.7	1.00
Highest	87.6	84.4	85.9	0.96	109.2	108.0	108.6	0.99
Total	73.4	74.2	73.8	1.01	108.3	107.1	107.7	0.99
SECONDARY SCHOOL								
Residence								
Urban	53.0	50.9	51.9	0.96	72.8	63.6	67.8	0.87
Rural	34.3	34.9	34.5	1.02	51.1	44.6	48.1	0.87
Region								
Western	49.1	43.7	46.6	0.89	66.5	58.0	62.6	0.87
Central	43.3	36.5	39.6	0.84	64.5	43.3	53.0	0.67
Greater Accra	52.0	52.2	52.1	1.00	69.5	64.6	66.8	0.93
Volta	37.9	40.6	39.3	1.07	63.6	57.2	60.4	0.90
Eastern	41.1	44.5	42.8	1.08	51.2	56.7	53.8	1.11
Ashanti	52.6	52.8	52.7	1.00	68.8	59.7	64.1	0.87
Brong Ahafo	38.8	38.7	38.8	1.00	58.2	50.9	54.6	0.87
Northern	25.1	26.2	25.6	1.05	46.8	37.0	42.2	0.79
Upper East	28.0	33.3	30.5	1.19	42.4	44.1	43.2	1.04
Upper West	26.6	26.0	26.3	0.98	44.6	44.5	44.6	1.00
Wealth quintile								
Lowest	24.4	19.3	22.2	0.79	38.5	27.9	33.9	0.72
Second	33.9	36.0	34.9	1.06	52.2	45.7	49.1	0.88
Middle	43.4	39.9	41.7	0.92	60.8	52.6	56.7	0.86
Fourth	50.5	52.0	51.3	1.03	72.1	64.6	68.0	0.90
Highest	62.8	59.1	60.7	0.94	82.7	70.8	76.1	0.86
Total	41.8	42.4	42.1	1.01	59.8	53.6	56.7	0.90

[1] The NAR for primary school is the percentage of the primary-school-age (6-11 years) population that is attending primary school. The NAR for secondary school is the percentage of the secondary-school-age (12-17 years) population that is attending secondary school. By definition the NAR cannot exceed 100 percent.

[2] The GAR for primary school is the total number of primary school students, expressed as a percentage of the official primary-school-age population. The GAR for secondary school is the total number of secondary school students, expressed as a percentage of the official secondary-school-age population. If there are significant numbers of overage and underage students at a given level of schooling, the GAR can exceed 100 percent.

[3] The Gender Parity Index for primary school is the ratio of the primary school NAR (GAR) for females to the NAR (GAR) for males. The Gender Parity Index for secondary school is the ratio of the secondary school NAR (GAR) for females to the NAR (GAR) for males.

The Gender Parity Index (GPI) represents the ratio of the NAR (or GAR) for females to the NAR (or GAR) for males. It is presented in Table 2.5 at both the primary and secondary levels and offers a summary measure of gender differences in school attendance rates. A GPI of less than 1 indicates that a smaller proportion of females than males attend school. In Ghana, the GPI is almost 1 (0.99) for primary school attendance and slightly lower than 1 (0.90) for secondary school attendance, indicating that the gender gap is relatively small. There are no differences in the GPI by urban-rural residence. The Eastern and Northern regions showed the widest gap for primary school attendance, and the Central and Northern regions showed the widest gap for secondary school attendance.

2.3.1 Grade Repetition and Dropout Rates

Table 2.6 presents school repetition and dropout rates for the de facto household population age 5-24 who attended primary school in the previous school year, by school grade and background characteristics. Repetition and drop-out rates describe the flow of pupils through the educational system in Ghana. Repetition rates indicate the percentage of pupils who attended a particular class during the previous school year who are repeating that grade in the current school year, that is, those who were in a particular grade in the 2006/2007 academic year who attended the same grade during the 2007/2008 academic year. Drop-out rates show the percentage of pupils who attended class during the 2006/2007 academic year but did not attend school the following year. Repetition and drop-out rates approach zero when pupils nearly always progress to the next grade at the end of the school year. They often vary across grades, indicating points in the school system where pupils are not regularly promoted to the next grade or they decide to drop out of school.

For both sexes the repetition rate declines from grade 1 to grade 4, rises in grade 5 and then declines again in grade 6. The repetition rates are higher for males in grades 1, 2, and 5. In grade 1 the repetition rate is 4 percent for males, compared with 3 percent for females, but in grade 6 the repetition rate for females (2 percent) is higher than that for males (1 percent). There are small variations by urban-rural residence in almost all grades, except for grade 1 where rural residents have a higher repetition rate (4 percent) than their urban counterparts (2 percent). Larger differentials are observed by region, especially in grade 1. While as high as 12 percent and 13 percent of pupils in the Upper West and Northern region, respectively, repeat grade 1, only 1 percent of pupils repeat grade 1 in the Eastern and Central regions. In the Greater Accra region no pupils repeat grades 4 through grade 6.

In general, dropout rates are higher than repetition rates in all grades. Dropout rates across grades are similar (4 percent), except for grade 3, which is 5 percent. Males have higher dropout rates than females in almost all grades. From grades 3 through 6, dropout rates are higher for pupils in urban areas than those in rural areas. There are wide regional variations in dropout rates. The regions with worse rates are the Upper West, Northern, and Central regions. Almost one-fifth (17 percent) of grade 6 pupils in the Upper West region drop out of school. Dropout rates are lower for pupils in the Volta, Ashanti, and Upper East regions.

Table 2.6 Grade repetition and dropout rates for primary school

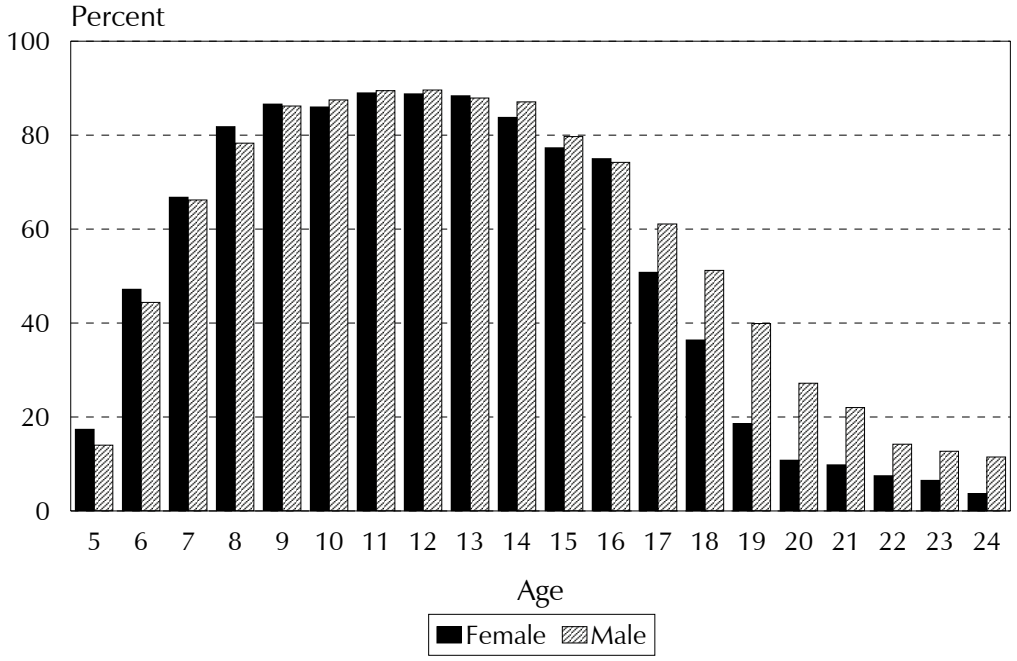
Repetition and dropout rates for the de facto household population age 5-24 who attended primary school in the previous school year, by school grade and background characteristics, Ghana 2008

Background characteristic	School grade					
	1	2	3	4	5	6
REPETITION RATE[1]						
Sex						
Male	4.0	2.3	1.4	1.3	1.8	0.8
Female	2.7	1.8	1.8	1.5	1.7	1.5
Residence						
Urban	1.6	2.5	1.2	0.8	2.5	0.8
Rural	4.3	1.7	1.8	1.9	1.2	1.5
Region						
Western	2.5	2.5	2.3	4.9	3.5	0.8
Central	1.3	5.2	5.4	0.9	2.4	2.7
Greater Accra	2.2	2.0	1.6	0.0	0.0	0.0
Volta	2.0	0.0	0.4	1.5	1.4	3.1
Eastern	0.8	1.4	1.1	2.6	1.5	0.0
Ashanti	1.7	1.3	1.1	1.1	1.4	1.3
Brong Ahafo	1.5	1.3	0.0	0.0	1.2	1.5
Northern	13.0	3.2	1.1	1.5	3.6	0.0
Upper East	1.6	1.5	0.9	1.5	0.9	0.0
Upper West	12.4	2.0	2.6	0.6	1.8	3.1
Total	3.3	2.0	1.6	1.4	1.7	1.1
DROPOUT RATE[2]						
Sex						
Male	4.2	4.4	4.1	4.3	3.4	4.9
Female	3.1	3.7	5.9	3.5	3.8	3.5
Residence						
Urban	3.3	3.9	5.5	4.6	3.8	4.5
Rural	3.9	4.1	4.6	3.4	3.6	3.9
Region						
Western	5.2	5.0	5.8	5.8	3.5	3.7
Central	7.3	8.2	10.7	8.5	8.6	6.2
Greater Accra	3.1	4.3	5.5	4.6	4.9	5.8
Volta	0.0	0.0	1.4	1.0	3.1	1.6
Eastern	5.0	1.3	4.5	6.7	2.0	3.0
Ashanti	0.0	2.4	2.8	0.6	0.7	0.9
Brong Ahafo	0.8	1.4	2.1	0.7	0.8	5.5
Northern	9.6	10.0	8.7	7.7	8.2	8.4
Upper East	1.6	0.5	0.0	0.0	0.0	0.0
Upper West	11.3	13.5	12.9	9.4	8.8	17.3
Total	3.7	4.0	4.9	3.9	3.7	4.2

[1] The repetition rate is the percentage of students in a given grade in the previous school year who are repeating that grade in the current school year.
[2] The dropout rate is the percentage of students in a given grade in the previous school year who are not attending school.

Figure 2.2 shows the age-specific attendance rates (ASAR) for the de facto household population age 5-24 by sex. The ASAR shows participation in schooling at any level, from primary through higher education. The closer the ASAR is to 100, the higher the participation of a given age population at that level. A little over 66 percent of children age seven are attending school. School attendance rises markedly up to age 11, remains high up to age 13, and then gradually declines. There are no marked differences in the proportion of males and females attending school up to age 16, after which there are substantially higher proportions of males than females attending school.

Figure 2.2 Age-Specific School Attendance Rates



GDHS 2008

2.4 HOUSING CHARACTERISTICS

There is a strong correlation between the socio-economic condition of households and the vulnerability of its members, especially children, to common diseases. The amenities and assets available to households are important in determining the general socio-economic status of the population. The 2008 GDHS included questions on the household's access to electricity, source of drinking water, type of sanitation facilities, flooring materials, and ownership of durable goods.

The availability of and accessibility to improved drinking water may, to a large extent, minimise the prevalence of water-borne diseases among household members, especially young children. The source of drinking water is important because potentially fatal diseases, such as diarrhoeal diseases, guinea worm, bilharzia, typhoid, cholera, schistosomiasis, trachoma, and dysentery, are common in Ghana. Table 2.7 shows the percent distribution of main sources of drinking water, time to collect drinking water, and person who usually collects drinking water and treatment of water according to residence.

Overall, 77 percent of households obtain drinking water from an improved source. Fourteen percent of households have access to piped water in their dwelling, yard, or plot, while 29 percent access drinking water from a public tap. Thirty-three percent of households get their drinking water from a tube well or borehole, or a protected dug well. Thirteen percent of households use non-improved sources of drinking water and about 9 percent use either bottled or sachet water. Surprisingly, there is little difference between urban and rural households in access to improved sources of drinking water (79 and 76 percent, respectively).

Table 2.7 Household drinking water

Percent distribution of households and de jure population by source of drinking water, time to obtain drinking water, and person who usually collects drinking water; and percentage of households and the de jure population that treat water before drinking, according to residence, Ghana 2008

Characteristic	Households			Population		
	Urban	Rural	Total	Urban	Rural	Total
Source of drinking water						
Improved source	78.6	76.2	77.3	81.0	75.4	77.9
Piped water into dwelling/yard/plot	27.0	2.5	14.2	27.0	2.2	13.1
Public tap/standpipe	39.2	19.7	29.0	40.0	17.9	27.6
Tube well or borehole	6.4	47.8	28.0	7.4	49.6	31.2
Protected dug well	5.7	5.1	5.4	6.2	4.9	5.5
Protected spring	0.0	0.1	0.1	0.1	0.1	0.1
Rainwater	0.2	1.0	0.6	0.1	0.7	0.5
Non-improved source	4.6	21.5	13.4	5.4	23.1	15.4
Unprotected dug well	0.9	3.4	2.2	1.2	3.7	2.6
Unprotected spring	0.1	0.9	0.6	0.2	1.1	0.7
Tanker truck/cart with small tank	1.8	0.2	1.0	2.0	0.3	1.0
Surface water	1.7	17.0	9.7	2.0	18.2	11.1
Bottled/sachet water, improved source for cooking/washing[1]	15.2	1.8	8.2	12.0	1.1	5.9
Bottled/sachet water, non-improved source for cooking/washing[1]	1.6	0.4	1.0	1.6	0.3	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage using any improved source of drinking water	93.8	78.0	85.5	93.0	76.6	83.8
Time to obtain drinking water (round trip)						
Water on premises	41.6	6.1	23.1	40.2	5.5	20.7
Less than 30 minutes	50.5	72.4	61.9	50.5	69.9	61.4
30 minutes or longer	7.2	21.2	14.5	8.7	24.3	17.5
Don't know/missing	0.7	0.4	0.5	0.7	0.3	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Person who usually collects drinking water						
Adult female 15+	31.1	56.0	44.1	33.9	60.6	49.0
Adult male 15+	12.8	15.0	14.0	7.8	8.0	7.9
Female child under age 15	5.3	8.2	6.8	6.5	9.5	8.2
Male child under age 15	3.1	5.1	4.1	4.1	5.6	5.0
Female age 15-17	3.3	5.1	4.2	4.0	5.8	5.0
Male age 15-17	1.7	2.8	2.3	2.0	3.3	2.7
Other	1.1	1.6	1.3	1.4	1.5	1.4
Water on premises	41.6	6.1	23.1	40.2	5.5	20.7
Missing	0.0	0.1	0.1	0.0	0.1	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Water treatment prior to drinking[2]						
Boiled	2.6	1.9	2.3	2.6	1.8	2.1
Bleach/chlorine added	1.3	1.4	1.4	1.2	1.4	1.3
Strained through cloth	1.8	5.1	3.5	2.2	6.9	4.8
Ceramic, sand or other filter	1.0	0.8	0.9	1.4	0.8	1.1
Other	2.4	1.4	1.9	2.2	1.2	1.7
No treatment	91.3	90.3	90.8	90.9	88.9	89.8
Percentage using an appropriate treatment method[3]	6.2	8.6	7.5	6.8	10.2	8.7
Number	5,627	6,150	11,777	19,262	24,818	44,080

[1] Because the quality of bottled water is not known, households using bottled water for drinking are classified as using an improved or non-improved source according to their water source for cooking and washing.
[2] Respondents could report multiple treatment methods so the sum of treatments can exceed 100 percent.
[3] Appropriate water treatment methods include boiling, bleaching, straining, filtering, and solar disinfecting.

The major source of drinking water for rural households is tube wells or boreholes (48 percent). One-fifth of rural households use a public tap or standpipe as their main source of drinking water. Access to piped drinking water has remained about the same over the past five years (GSS and ORC Macro, 2004). It takes nine in ten urban households and nearly eight in ten rural households less than 30 minutes to obtain water from their nearest source of drinking water. Table 2.7 provides information on persons who usually collect the drinking water. Overall, adult females age 15 and above are more likely to collect drinking water for the household than men and children, and this pattern is more prevalent in the rural areas (56 percent) than in urban areas (31 percent). In about 10 percent of households, it is the responsibility of the child (either male or female) to collect drinking water. Regarding treatment of water, nine in ten households do not treat their water prior to drinking. Of households that do treat their drinking water, the most common treatment methods are straining through cloth (4 percent) and boiling (2 percent).

The proportion of the population with access to improved toilet facilities, according to the WHO/UNICEF Joint Monitoring Programme (JMP), which is the UN officially mandated mechanism to monitor global progress in drinking water and sanitation (toilet facility), is the percentage of people using improved and sustainable toilet facilities. An improved toilet facility is considered the most efficient and hygienic method of human waste disposal. Table 2.8 shows the percent distribution of households by type of toilet facility, according to residence. Overall, only 11 percent of households use improved, not shared toilet facilities. There are marked differences by urban-rural residence. Sixteen percent of urban households and 7 percent of rural households use improved toilet facilities that are not shared with other households. However, nearly one in five households (18 percent) has no toilet facilities, a situation that is more common in rural areas (30 percent) than in urban areas (6 percent).

Table 2.8 Household sanitation facilities

Percent distribution of households and de jure population by type of toilet/latrine facilities, according to residence, Ghana 2008

	Households			Population		
Type of toilet/latrine facility	Urban	Rural	Total	Urban	Rural	Total
Improved, not shared facility	**15.6**	**7.3**	**11.3**	**17.8**	**8.2**	**12.4**
Flush/pour flush to piped sewer system	2.2	0.6	1.4	2.6	0.5	1.4
Flush/pour flush to septic tank	8.8	0.9	4.7	9.7	1.0	4.8
Flush/pour flush to pit latrine	2.0	0.2	1.1	2.1	0.2	1.0
Ventilated improved pit (VIP) latrine	1.9	1.9	1.9	2.6	2.2	2.4
Pit latrine with slab	0.7	3.6	2.2	0.8	4.2	2.7
Composting toilet	0.0	0.1	0.0	0.0	0.1	0.1
Non-improved facility	**84.3**	**92.8**	**88.8**	**82.1**	**91.8**	**87.7**
Any facility shared with other households	72.2	48.6	59.9	68.8	42.3	53.9
Flush/pour flush not to sewer/septic tank/ pit latrine	0.1	0.0	0.1	0.1	0.0	0.1
Pit latrine without slab/open pit	4.1	14.0	9.3	4.0	13.6	9.4
Bucket	2.0	0.3	1.1	1.8	0.2	0.9
No facility/bush/field	5.6	29.5	18.1	7.2	35.4	23.1
Missing	0.3	0.4	0.3	0.2	0.3	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	5,627	6,150	11,777	19,262	24,818	44,080

Table 2.9 presents the distribution of households by household characteristics, according to residence. Overall, six in ten households (61 percent) in Ghana have electricity; four-fifths (85 percent) of the households in urban areas have electricity, compared with two-fifths (38 percent) of the households in rural areas. The 2008 GDHS findings show an increase in the use of electricity over the past five years, especially among rural households (48 percent in all households and 24 percent in rural households in 2003) (GSS and ORC Macro, 2004).

Table 2.9 Household characteristics

Percent distribution of households and de jure population by housing characteristics; and among households using solid fuel, percent distribution by type of fire/stove, according to residence, Ghana 2008

	Households			Population		
Housing characteristic	Urban	Rural	Total	Urban	Rural	Total
Electricity						
Yes	84.8	38.2	60.5	83.8	34.4	56.0
No	15.2	61.7	39.5	16.1	65.5	43.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
Flooring material						
Earth, sand	3.8	21.5	13.0	4.1	23.6	15.1
Dung	0.1	2.0	1.1	0.1	2.7	1.6
Wood/planks	0.1	0.0	0.1	0.1	0.0	0.1
Palm/bamboo	0.0	0.0	0.0	0.0	0.0	0.0
Parquet or polished wood	0.2	0.0	0.1	0.2	0.0	0.1
Ceramic tiles/terrazzo	5.0	0.7	2.7	5.0	0.7	2.6
Cement	56.0	65.3	60.8	58.0	64.3	61.6
Woolen carpet/synthetic carpet	18.3	3.6	10.6	17.3	2.8	9.1
Linoleum/rubber carpet	16.2	6.8	11.3	14.9	5.7	9.7
Other	0.3	0.0	0.1	0.2	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Rooms used for sleeping						
One	63.4	56.3	59.7	48.8	39.3	43.5
Two	23.8	26.0	24.9	30.1	30.4	30.3
Three or more	12.0	17.4	14.8	20.2	29.9	25.7
Missing	0.8	0.4	0.6	0.8	0.4	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Place for cooking						
In the house	46.6	33.5	39.8	49.3	35.3	41.4
In a separate building	11.2	26.5	19.2	11.9	27.6	20.7
Outdoors	37.9	37.5	37.7	37.3	36.3	36.7
Missing	4.3	2.5	3.3	1.5	0.9	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Cooking fuel						
Electricity	0.9	0.2	0.5	1.0	0.1	0.5
LPG/natural gas/biogas	24.0	3.1	13.1	22.1	2.1	10.8
Kerosene	0.8	0.2	0.5	0.6	0.1	0.3
Charcoal	55.9	18.9	36.6	56.6	15.0	33.2
Wood	14.1	74.9	45.8	18.2	81.6	53.9
Straw/shrubs/grass	0.1	0.2	0.2	0.1	0.2	0.2
No food cooked in household	4.3	2.4	3.3	1.5	0.9	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percentage using solid fuel for cooking[1]	70.1	94.0	82.6	74.9	96.8	87.2
Number of households/ population	5,627	6,150	11,777	19,262	24,818	44,080
Type of fire/stove among households using solid fuels[1]						
Closed stove/coal pot with chimney	0.1	0.2	0.2	0.1	0.3	0.2
Open fire/coal pot/open stove without chimney or hood	99.8	99.7	99.8	99.8	99.6	99.7
Missing	0.1	0.1	0.1	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households/ population using solid fuel	3,945	5,783	9,728	14,433	24,024	38,457

[1] Includes coal/lignite, charcoal, wood/straw/shrubs/grass, agricultural crops, and animal dung
LPG = Liquid petroleum gas

The type of flooring material used in dwellings is a proxy indicator of the socio-economic status of the household as well as the likelihood of exposure to disease-causing agents. Most households in Ghana (85 percent) have finished floors (terrazzo, tiles, cement, carpet, and linoleum), with only 14 percent of households having rudimentary or natural flooring material (earth, sand, or mud mixed with dung). However, over the past five years there has been a small decline in the percentage of households with finished floors, 88 percent in 2003, compared with 86 percent in 2008 (GSS and ORC Macro, 2004). Rural households are much more likely to have cement floors (65 percent) than urban households (56 percent). The second most common flooring material in rural areas is earth and sand (22 percent). About 16 percent of urban households have linoleum floors and 18 percent have carpeted floors.

The number of rooms used for sleeping provides an indication of the extent of crowding in households. Overcrowding increases the risk of contracting infectious diseases like acute respiratory infections and skin diseases, which particularly affect children. In the 2008 GDHS, only 15 percent of households had three or more rooms for sleeping; most (60 percent) had one room. Households in rural areas are more likely than those in urban areas to have three or more rooms for sleeping (17 and 12 percent, respectively).

Four in ten households (40 percent) do their cooking inside their house, 19 percent cook in a separate building, and 38 percent cook outdoors. This pattern was observed in both urban and rural areas. The majority of households use solid fuels (primarily wood and charcoal) for cooking in Ghana (83 percent). While in rural areas three in four households (75 percent) use wood for cooking, only 14 percent of urban households use wood. More than one in two urban households (56 percent) and nearly one-fifth of rural households (19 percent) use charcoal. Liquefied petroleum gas (LPG) or natural gas is used more commonly by urban households (24 percent) than rural households (3 percent). Few households use electricity for cooking (1 percent), even in urban areas, presumably because of the higher cost.

The 2008 GDHS results indicate that all (100 percent) households that use solid fuel for cooking do so without a chimney or hood, and there is no marked difference between urban and rural areas. A closed fire or stove with a chimney is used by less than 1 percent of households in Ghana.

2.5 HOUSEHOLD DURABLE GOODS

Information was collected in the 2008 GDHS on the availability of household durable goods such as household effects, means of transportation, and ownership of agricultural land and farm animals. Table 2.10 shows that 74 percent of households own a radio, 57 percent own a mobile telephone, 43 percent own a television, and 26 percent own a refrigerator. Urban households are much more likely than rural households to own these goods. For instance, 79 percent of urban households own a radio, compared with 69 percent of rural households. Mobile telephones are available in 78 percent of households in urban areas and 37 percent of rural households. While 67 percent of urban households have a television, only 21 percent of households in rural areas have a television.

Twenty-six percent of households have a bicycle; this means of transportation is more common in the rural areas than in urban areas (31 and 20 percent, respectively). Urban households are four times more likely than rural households to own a car or truck (12 and 3 percent, respectively).

Table 2.10 Household durable goods

Percentage of households and de jure population possessing various household effects, means of transportation, agricultural land and livestock/farm animals, by residence, Ghana 2008

	Households			Population		
Possession	Urban	Rural	Total	Urban	Rural	Total
Household effects						
Radio	79.4	68.6	73.7	80.9	70.3	74.9
Television	67.1	20.7	42.9	69.1	20.0	41.5
Mobile telephone	78.4	37.3	57.0	80.4	37.6	56.3
Non-mobile telephone	6.5	0.6	3.4	7.2	0.7	3.5
Refrigerator	43.6	9.1	25.6	46.5	8.9	25.3
Means of transport						
Bicycle	19.7	31.2	25.7	25.2	39.7	33.4
Animal drawn cart	0.5	1.3	0.9	0.6	2.0	1.4
Motorcycle/scooter	4.7	4.4	4.5	6.0	6.0	6.0
Car/truck	11.9	2.5	7.0	14.0	2.9	7.7
Boat with a motor	0.2	0.8	0.5	0.3	1.1	0.7
Ownership of agricultural land	23.4	66.7	46.0	28.1	73.1	53.4
Ownership of farm animals[1]	21.0	57.9	40.3	27.8	68.3	50.6
Number	5,627	6,150	11,777	19,262	24,818	44,080

[1] Cattle, milk cows, bulls, horses, donkeys, mules, goats, sheep, pigs, rabbits, grasscutter, chickens, or other poultry

Nearly half of households (46 percent) own agricultural land and 40 percent have farm animals. Table 2.10 shows that rural households are almost three times as likely to own agricultural land as urban households (67 and 23 percent, respectively). Similarly, 58 percent of rural households own farm animals, compared with only 21 percent of urban households.

2.6 WEALTH QUINTILES

Using the wealth quintile index, the fifth round DHS survey (2008 GDHS) and the 2003 GDHS were able to provide information on the wealth status of Ghanaian households. Wealth quintiles provide a consistent measure of combined indicators of household income and expenditures that was not available during the first three DHS surveys in Ghana. The wealth quintile, as constructed, used information on household ownership of consumer items, ranging from a television to a bicycle or car, as well as dwelling characteristics, such as source of drinking water, sanitation facilities, and type of flooring material.

Each asset was assigned a weight (factor score) generated through principal components analysis, and the resulting asset scores were standardised in relation to a normal distribution with a mean of zero and standard deviation of one. Each household was then assigned a score for each asset, and the scores were summed for each household; individuals were ranked according to the total score of the household in which they resided. The sample was then divided into quintiles from one (lowest) to five (highest). A single asset index was developed for the whole sample; separate indices were not prepared for the urban and rural populations.

The 2008 GDHS provides an opportunity to examine the distribution of Ghana's population by household wealth status. Table 2.11 shows the percent distribution of the de jure population by wealth quintiles, according to residence and region. Seventy-four percent of the urban population is in the two highest wealth quintiles, compared with only 14 percent of the rural population. The rural population predominates in the two lowest quintiles. The regional distribution shows that Greater Accra is the richest region, with 64 percent of the population in the highest quintile, whilst the Upper West region has less than 4 percent of its population in the highest quintile. Residents of the three northern regions are most likely to be in the lowest wealth quintile.

Table 2.11 Wealth quintiles

Percent distribution of the jure population by wealth quintiles, according to residence and region, Ghana 2008

Residence/ region	Wealth quintile					Total	Number of population
	Lowest	Second	Middle	Fourth	Highest		
Residence							
Urban	1.9	5.6	19.1	32.3	41.2	100.0	19,262
Rural	34.0	31.2	20.7	10.5	3.6	100.0	24,818
Region							
Western	9.0	26.9	22.3	21.0	20.8	100.0	4,186
Central	3.2	28.1	31.1	24.3	13.3	100.0	4,234
Greater Accra	0.6	2.5	8.0	25.2	63.7	100.0	6,338
Volta	19.2	27.9	29.3	16.0	7.6	100.0	4,006
Eastern	12.7	26.9	27.2	22.6	10.6	100.0	4,437
Ashanti	6.2	20.1	23.0	27.0	23.7	100.0	8,021
Brong Ahafo	25.2	24.0	22.9	21.3	6.6	100.0	4,100
Northern	58.6	17.1	12.5	7.6	4.2	100.0	4,948
Upper East	71.6	12.5	4.7	5.2	6.0	100.0	2,613
Upper West	52.7	21.8	12.3	9.9	3.4	100.0	1,196
Total	20.0	20.0	20.0	20.0	20.0	100.0	44,080

2.7 BIRTH REGISTRATION

The Convention on the Right of the Child (UN General Assembly, 1989) states that every child has the right to a name and a nationality and the right to protection from being deprived of his or her identity. Parents are required to give their children a name and to register the child because the child has a right to know who his or her parents are and to have a nationality through registration in accordance with national laws and relevant international instruments.

Table 2.12 shows the percentage of children under five whose births were officially registered and the percentage with a birth certificate at the time of the survey. Not all children reported as registered had a birth certificate at the time of the survey because some certificates may have been lost or were never issued. However, all children with a certificate had been registered.

The births of 71 percent of children under five in Ghana have been registered; 55 percent have birth certificates and 16 percent do not. There is no substantial variation in birth registration by sex of child. There were, however, marked differences by urban-rural residence. While 82 percent of children under five in urban areas have had their births registered, only 65 percent of their rural counterparts have been registered. The distribution of children whose births are registered varies by region. Children in the Greater Accra region are more likely to be registered (85 percent) than children in all other regions. Central, Eastern, and Brong Ahafo regions each have more than 20 percent of children who have had their births registered but do not have a birth certificate. The Volta region has the lowest level of birth registration (58 percent). Households in the highest wealth quintile (88 percent) are much more likely to have a birth registered than those in the lowest wealth quintile (60 percent).

Table 2.12 Birth registration of children under age five

Percentage of de jure children under five years whose births are registered with the civil authorities, according to background characteristics, Ghana 2008

Background characteristic	Percentage of children whose births are registered			Number of children
	Has birth certificate	Does not have a birth certificate	Total registered	
Age				
<2	51.7	18.7	70.4	2,243
2-4	57.5	14.3	71.8	3,589
Sex				
Male	56.2	16.0	72.2	2,972
Female	54.3	16.0	70.2	2,859
Residence				
Urban	71.5	10.3	81.8	2,242
Rural	45.1	19.5	64.6	3,590
Region				
Western	52.9	12.5	65.4	535
Central	44.6	22.0	66.6	576
Greater Accra	76.2	8.8	85.1	684
Volta	51.3	6.7	58.0	478
Eastern	48.0	28.1	76.1	521
Ashanti	57.9	16.9	74.8	1,059
Brong Ahafo	51.1	20.5	71.7	615
Northern	47.8	16.8	64.6	882
Upper East	69.1	8.8	77.9	317
Upper West	59.3	11.2	70.4	166
Wealth quintile				
Lowest	40.3	19.2	59.5	1,433
Second	45.8	17.7	63.5	1,272
Middle	54.2	18.2	72.4	1,130
Fourth	67.1	13.8	80.9	1,119
Highest	79.7	8.1	87.8	877
Total	55.3	16.0	71.2	5,832

CHARACTERISTICS OF SURVEY RESPONDENTS 3

The purpose of this chapter is to provide a descriptive summary of the demographic and socio-economic profile of respondents in the 2008 GDHS. The basic information on women and men in the reproductive age group is crucial for the interpretation of the 2008 GDHS finding within the context of reproduction, health, and women's status. The percent distribution of respondents by the various demographic and socio-economic characteristics can also be used as an approximate indicator of the representativeness of the survey sample to the general population. The main background characteristics described in detail that will be used in subsequent chapters on reproduction and health are: age at the time of the survey, marital status, residence, education, and wealth quintile. This chapter also includes information on literacy, exposure to mass media, employment and earnings, health insurance coverage, knowledge and attitudes concerning tuberculosis, and use of tobacco and alcohol.

3.1 BACKGROUND CHARACTERISTICS OF RESPONDENTS

Table 3.1 shows the distribution of women age 15-49 and men age 15-49 by selected background characteristics including age, marital status, urban-rural residence, region, education, religion, ethnicity, and wealth status.

The age distribution shows that more than half of women (56 percent) and men (55 percent) are under age 30. The proportion of respondents in each age group generally decreases as age increases reflecting the comparatively young age structure of the Ghanaian population.

The results of the 2008 GDHS indicate that 59 percent of women are married or in union (living in an informal arrangement with a partner), compared with 48 percent of men. Because men marry later in life than women, almost half of the men interviewed in the survey (48 percent) have never married, compared with about one-third (32 percent) of women. On other hand, women are more likely than men to be widowed, divorced, or separated (9 and 4 percent, respectively)

The distribution of respondents by urban-rural residence shows that over half of women (52 percent) and men (54 percent) live in the rural areas. The distribution by region shows that about one in five respondents are from the Ashanti region, one in six are from Greater Accra, and about one in ten are from the Western, Central, Eastern, Northern, Volta, and Brong Ahafo regions. The regions with smallest proportion of respondents are the Upper East and Upper West regions.

Men are more likely than women to have received education at every level of schooling. About one in five women and one in six men have only primary education, while 17 percent of women and 29 percent of men have secondary or higher education. Twenty-one percent of women and 13 percent of men have no education.

The majority of respondents are Christians: 78 percent of women and 72 percent of men. Fifteen percent of women and 17 percent of men are Muslims.

As expected, Akan is the largest ethnic group, with 51 percent of women and 47 percent of men, followed by the Mole-Dagbani, who make up 16 percent of women and 17 percent of men, and the Ewe, with 13 percent of women and 15 percent of men.

Table 3.1 Background characteristics of respondents

Percent distribution of women and men age 15-49 by selected background characteristics, Ghana 2008

Background characteristic	Women			Men		
	Weighted percentage	Weighted number	Unweighted number	Weighted percent	Weighted number	Unweighted number
Age						
15-19	20.8	1,025	1,037	22.4	911	942
20-24	17.9	878	869	17.4	704	706
25-29	16.9	832	817	15.4	624	608
30-34	13.1	644	636	13.1	533	524
35-39	13.0	638	637	13.0	528	511
40-44	9.6	470	485	9.7	394	393
45-49	8.7	429	435	9.0	364	366
Marital status						
Never married	32.4	1,593	1,546	47.7	1,936	1,934
Married	45.4	2,232	2,361	42.5	1,724	1,752
Living together	13.1	644	589	5.6	226	206
Divorced/separated	7.0	345	316	3.9	157	142
Widowed	2.1	101	104	0.4	15	16
Residence						
Urban	48.5	2,383	2,162	46.0	1,866	1,696
Rural	51.5	2,533	2,754	54.0	2,191	2,354
Region						
Western	9.1	447	438	9.9	403	382
Central	8.6	424	334	8.0	326	249
Greater Accra	17.3	853	692	16.0	649	531
Volta	8.8	431	433	9.2	373	367
Eastern	9.8	483	479	10.1	411	394
Ashanti	20.6	1,011	815	19.4	785	621
Brong Ahafo	8.7	425	403	8.5	347	324
Northern	9.5	467	497	10.7	435	472
Upper East	5.1	253	373	5.4	219	313
Upper West	2.5	122	452	2.7	108	397
Education						
No education	21.2	1,042	1,243	13.3	540	662
Primary	20.1	988	999	15.3	619	677
Middle/JSS	41.5	2,039	1,893	42.4	1,721	1,616
Secondary +	17.2	844	777	28.8	1,167	1,085
Missing	0.1	4	4	0.3	11	10
Religion						
Catholic	12.4	610	733	13.1	530	593
Anglican/Methodist/Presbyterian	16.9	829	723	16.6	672	589
Pentecostal/Charismatic	37.2	1,827	1,696	29.1	1,179	1,082
Other Christian	11.1	544	478	13.5	548	484
Moslem	15.0	738	832	17.0	691	780
Traditional/spiritualist	4.2	205	266	5.3	215	291
No religion	3.1	153	178	5.2	211	216
Other/missing	0.1	9	10	0.3	12	15
Ethnicity						
Akan	50.7	2,493	2,136	47.2	1,915	1,619
Ga/Dangme	7.0	343	309	6.2	253	225
Ewe	12.9	633	637	14.7	597	580
Guan	2.5	122	117	2.3	94	97
Mole-Dagbani	16.2	795	1,071	16.9	685	982
Grussi	2.4	118	226	2.6	104	133
Gruma	3.7	184	202	5.1	205	223
Mande	0.6	29	28	0.5	20	19
Other	4.0	197	188	4.5	182	168
Missing	0.0	1	2	0.1	3	4
Wealth quintile						
Lowest	15.9	783	1,089	17.5	708	953
Second	18.3	900	921	18.2	738	777
Middle	19.9	979	897	17.2	699	654
Fourth	22.8	1,119	1,024	24.0	974	867
Highest	23.1	1,135	985	23.1	939	799
Total 15-49	100.0	4,916	4,916	100.0	4,058	4,050
50-59	na	na	na	na	510	518
Total 15-59	na	na	na	na	4,568	4,568

Note: Education categories refer to the highest level of education attended, whether or not that level was completed.
na = Not applicable

3.2 EDUCATIONAL ATTAINMENT

Education provides people with the knowledge and skills that can lead to a better quality of life. Level of education has been found to be closely associated with the health of women and children, as well as reproductive health behaviours of women and men. Tables 3.2.1 and 3.2.2 show the distribution of women and men by highest level of schooling attended or completed, and the median number of years of schooling, according to background characteristics. Twenty-one percent of women have never been to school, 15 percent have some primary education, 6 percent completed primary education, 45 percent have some secondary education, 10 percent completed secondary school, and 4 percent have attained more than secondary education. Younger persons have generally reached higher levels of schooling than older persons. The median years of schooling for women and men are 7.2 and 8.5 years, respectively. The results show that men have more education than women at all levels. For example, about twice as many men as women have completed secondary education or higher (24 percent, compared with 14 percent).

Table 3.2.1 Educational attainment: Women

Percent distribution of women age 15-49 by highest level of schooling attended or completed, and median number of years completed, according to background characteristics, Ghana 2008

Background characteristic	Highest level of schooling							Total	Median years completed	Number of women
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Missing			
Age										
15-24	10.6	13.1	6.9	52.6	14.2	2.5	0.1	100.0	7.7	1,902
15-19	7.1	13.4	8.3	62.7	8.3	0.2	0.0	100.0	7.3	1,025
20-24	14.7	12.6	5.3	40.9	21.2	5.1	0.2	100.0	8.2	878
25-29	18.9	14.7	4.7	42.7	10.3	8.7	0.0	100.0	8.2	832
30-34	28.3	15.3	5.2	38.6	8.8	3.7	0.0	100.0	6.0	644
35-39	27.5	19.1	4.7	40.1	5.4	3.1	0.1	100.0	5.6	638
40-44	33.6	14.6	4.6	38.8	5.9	2.5	0.0	100.0	5.3	470
45-49	39.0	12.6	4.0	35.7	4.7	3.7	0.2	100.0	4.6	429
Residence										
Urban	10.9	10.8	4.8	50.3	16.4	6.7	0.0	100.0	8.5	2,383
Rural	30.8	18.1	6.3	39.4	4.1	1.2	0.1	100.0	5.1	2,533
Region										
Western	13.9	17.7	6.7	47.7	10.1	3.4	0.4	100.0	7.9	447
Central	16.2	19.0	7.9	47.1	7.4	2.5	0.0	100.0	7.0	424
Greater Accra	7.7	9.3	5.4	46.5	21.8	9.4	0.0	100.0	8.8	853
Volta	22.9	16.8	7.8	40.7	9.4	2.2	0.2	100.0	6.1	431
Eastern	10.7	16.9	7.1	56.5	6.1	2.7	0.0	100.0	7.7	483
Ashanti	9.9	15.7	3.5	58.3	9.4	3.2	0.0	100.0	8.1	1,011
Brong Ahafo	24.9	11.6	8.2	47.2	6.6	1.5	0.0	100.0	6.4	425
Northern	65.7	8.0	2.7	16.3	5.1	2.1	0.0	100.0	0.0	467
Upper East	49.0	20.0	3.7	17.7	4.5	4.8	0.4	100.0	0.2	253
Upper West	48.1	21.2	2.2	22.4	4.7	1.3	0.0	100.0	0.2	122
Wealth quintile										
Lowest	59.6	16.9	5.2	16.7	1.4	0.1	0.1	100.0	0.0	783
Second	26.2	21.9	7.4	42.8	1.6	0.1	0.0	100.0	5.2	900
Middle	16.7	16.4	6.4	52.7	6.9	0.9	0.1	100.0	7.3	979
Fourth	10.5	13.5	5.4	55.8	11.9	2.7	0.2	100.0	8.1	1,119
Highest	5.1	6.5	3.7	47.6	23.7	13.3	0.0	100.0	9.3	1,135
Total	21.2	14.5	5.6	44.7	10.1	3.9	0.1	100.0	7.2	4,916

[1] Completed 6th grade at the primary level
[2] Completed 12th grade at the secondary level

As a result of the government's intervention, girls who drop out of school because of pregnancy can now return to school after delivery and continue their education. The government's policy has led to a marked improvement in education among girls age 15-24; whereas 16 percent of girls age 15-24 had no education in 2003 (GSS and ORC Macro, 2004), only 11 percent had no education in 2008.

The results of the 2008 GDHS indicate that educational attainment among both women and men has improved substantially over time; this can be seen in the changes between age cohorts. For example, 39 percent of women in the oldest age cohort (45-49) have no education, compared with 7 percent of those age 15-19; the corresponding percentages for men are 23 and 5 percent, respectively.

There is also a marked difference in educational attainment by rural-urban residence. Thirty-one percent of women and 20 percent of men in rural areas have no education, compared with 11 percent of women and 6 percent of men in urban areas.

Among regions, the Greater Accra region has by far the largest proportion of women and men who have completed secondary school. Educational attainment is lowest for both women and men in the Northern, Upper East, and Upper West regions. As expected, level of education increases with wealth quintile.

Table 3.2.2 Educational attainment: Men

Percent distribution of men age 15-49 by highest level of schooling attended or completed, and median number of years completed, according to background characteristics, Ghana 2008

Background characteristic	Highest level of schooling							Total	Median years completed	Number of men
	No education	Some primary	Completed primary[1]	Some secondary	Completed secondary[2]	More than secondary	Missing			
Age										
15-24	6.2	12.9	6.5	53.5	16.7	3.9	0.3	100.0	8.1	1,615
15-19	4.8	16.4	8.8	62.3	7.0	0.5	0.1	100.0	7.3	911
20-24	8.0	8.4	3.6	42.2	29.1	8.3	0.5	100.0	8.8	704
25-29	13.2	8.8	4.4	41.0	17.8	14.4	0.3	100.0	8.5	624
30-34	16.2	6.5	5.5	40.0	17.2	14.4	0.2	100.0	8.6	533
35-39	19.7	11.0	3.6	43.3	13.0	9.2	0.3	100.0	8.9	528
40-44	21.0	8.0	4.1	47.6	11.4	7.8	0.0	100.0	9.3	394
45-49	23.2	7.0	2.2	49.1	10.3	7.7	0.6	100.0	9.2	364
Residence										
Urban	5.6	6.1	3.3	48.7	23.1	12.9	0.4	100.0	9.3	1,866
Rural	19.9	13.7	6.6	46.5	8.8	4.3	0.1	100.0	7.4	2,191
Region										
Western	6.1	7.1	5.2	59.3	13.8	8.2	0.2	100.0	8.8	403
Central	6.6	11.9	5.8	54.5	11.0	9.9	0.3	100.0	8.5	326
Greater Accra	3.5	5.5	3.5	46.3	24.9	15.8	0.5	100.0	9.7	649
Volta	8.4	12.3	8.0	53.2	12.6	5.6	0.0	100.0	8.3	373
Eastern	2.5	6.6	7.6	65.4	11.2	6.7	0.0	100.0	8.6	411
Ashanti	6.6	9.4	3.2	56.3	19.0	5.4	0.2	100.0	8.7	785
Brong Ahafo	17.1	13.9	6.9	39.7	12.9	8.4	1.0	100.0	7.6	347
Northern	48.4	10.9	2.3	19.6	12.4	6.4	0.1	100.0	0.9	435
Upper East	34.4	21.5	7.8	22.0	7.6	6.4	0.2	100.0	3.9	219
Upper West	30.2	19.4	5.1	28.4	11.5	5.4	0.0	100.0	5.0	108
Wealth quintile										
Lowest	45.6	19.0	7.4	24.4	3.0	0.5	0.1	100.0	1.4	708
Second	15.1	14.6	7.1	53.3	7.9	1.6	0.3	100.0	7.4	738
Middle	7.6	10.2	6.4	58.9	12.3	4.2	0.3	100.0	8.4	699
Fourth	3.9	6.8	3.7	57.2	19.9	8.2	0.3	100.0	8.9	974
Highest	1.6	3.6	2.1	42.0	28.0	22.5	0.3	100.0	11.0	939
Total 15-49	13.3	10.2	5.1	47.5	15.4	8.3	0.3	100.0	8.5	4,058
50-59	19.4	6.2	2.0	46.8	10.7	14.5	0.3	100.0	9.4	510
Total 15-59	14.0	9.7	4.7	47.5	14.8	9.0	0.3	100.0	8.6	4,568

[1] Completed 6th grade at the primary level
[2] Completed 12th grade at the secondary level

3.3 LITERACY

The ability to read and write is an important personal asset, allowing individuals increased opportunities in life. Knowing the distribution of the literate population can help programme managers—especially those concerned with health and family planning—know how to reach women and men with their messages. The 2008 GDHS assessed respondents' ability to read by asking them to read a simple sentence in the local language (or in English). Only women and men who had never attended school and those who had attended only primary school or middle/JSS[1] were asked to read the sentence; it was assumed that everyone with secondary or higher education was literate. Literacy was measured by whether the respondent could read none, part, or all, of the sentence. Persons who were blind or visually impaired were excluded.

Tables 3.3.1 and 3.3.2 show the percent distribution of women and men age 15-49 respectively, by level of literacy, and percent literate, according to background characteristics.

Table 3.3.1 Literacy: Women

Percent distribution of women age 15-49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Ghana 2008

		No schooling or primary school								
Background characteristic	Secondary school or higher	Can read a whole sentence	Can read part of a sentence	Cannot read at all	No card with required language	Blind/ visually impaired	Missing	Total	Percentage literate[1]	Number of women
Age										
15-19	71.2	4.2	6.4	18.1	0.0	0.0	0.1	100.0	81.8	1,025
20-24	67.1	1.4	2.4	28.6	0.0	0.2	0.3	100.0	70.9	878
25-29	61.7	0.5	1.3	36.1	0.1	0.0	0.2	100.0	63.6	832
30-34	51.1	0.4	1.6	46.7	0.2	0.0	0.0	100.0	53.1	644
35-39	48.6	0.3	1.8	49.3	0.0	0.0	0.0	100.0	50.7	638
40-44	47.2	1.0	1.4	50.3	0.0	0.0	0.0	100.0	49.7	470
45-49	44.1	0.9	2.3	52.1	0.0	0.3	0.2	100.0	47.4	429
Residence										
Urban	73.5	1.2	2.4	22.8	0.1	0.0	0.1	100.0	77.0	2,383
Rural	44.7	1.8	3.1	50.1	0.0	0.1	0.1	100.0	49.6	2,533
Region										
Western	61.3	1.0	2.8	34.7	0.0	0.0	0.2	100.0	65.1	447
Central	57.0	1.1	3.9	37.8	0.0	0.2	0.0	100.0	62.0	424
Greater Accra	77.6	1.8	2.9	17.5	0.1	0.0	0.0	100.0	82.4	853
Volta	52.2	2.8	3.1	41.3	0.3	0.4	0.0	100.0	58.1	431
Eastern	65.4	1.1	4.4	29.0	0.0	0.0	0.2	100.0	70.8	483
Ashanti	70.9	0.9	1.9	26.0	0.0	0.0	0.3	100.0	73.7	1,011
Brong Ahafo	55.3	2.2	1.3	41.1	0.0	0.0	0.0	100.0	58.9	425
Northern	23.6	0.7	1.4	74.1	0.0	0.0	0.2	100.0	25.7	467
Upper East	27.0	3.6	3.8	65.7	0.0	0.0	0.0	100.0	34.3	253
Upper West	28.4	1.1	4.2	65.6	0.0	0.7	0.0	100.0	33.8	122
Wealth quintile										
Lowest	18.2	1.7	2.7	77.0	0.0	0.1	0.3	100.0	22.6	783
Second	44.5	1.6	3.6	50.2	0.0	0.2	0.0	100.0	49.6	900
Middle	60.4	1.1	2.6	35.6	0.1	0.0	0.1	100.0	64.2	979
Fourth	70.4	1.8	3.0	24.5	0.1	0.0	0.2	100.0	75.2	1,119
Highest	84.6	1.4	2.0	11.9	0.0	0.1	0.0	100.0	88.0	1,135
Total	58.6	1.5	2.8	36.9	0.0	0.1	0.1	100.0	62.9	4,916

[1] Refers to women who attended secondary school or higher and women who can read a whole sentence or part of a sentence

[1] Middle/JSS (3 years) and Senior Secondary School (3 years) are the education levels used in this report, although, at the secondary level, the 3-year Senior Secondary School was changed to the 4-year Senior High School after the 2007/2008 academic year. This change did not affect the Ghana DHS data

Sixty-three percent of women and 77 percent of men are literate, while 37 percent of women and 22 percent of men cannot read at all. As in the case of educational attainment, men are more likely to be literate than women. The male-female difference is larger at older than younger ages. There is also a strong urban-rural difference in literacy for both sexes. Fifty percent of rural women are literate, compared with 77 percent of urban women. Similarly, 67 percent of rural men are literate, compared with 89 percent of urban men.

Regional differences are marked. The Greater Accra region has the highest proportion of women and men who are literate, while the Northern, Upper East, and Upper West regions have the lowest proportions who are literate. In general, literacy increases with wealth quintile.

Table 3.3.2 Literacy: Men

Percent distribution of men age 15-49 by level of schooling attended and level of literacy, and percentage literate, according to background characteristics, Ghana 2008

Background characteristic	Secondary school or higher	No schooling or primary school: Can read a whole sentence	No schooling or primary school: Can read part of a sentence	No schooling or primary school: Cannot read at all	No schooling or primary school: No card with required language	No schooling or primary school: Blind/ visually impaired	Missing	Total	Percentage literate[1]	Number of men
Age										
15-19	69.8	6.1	8.0	15.9	0.1	0.0	0.0	100.0	84.0	911
20-24	79.6	1.1	3.6	15.4	0.0	0.0	0.3	100.0	84.3	704
25-29	73.3	1.2	2.1	22.3	0.3	0.1	0.8	100.0	76.6	624
30-34	71.5	0.9	2.6	24.7	0.0	0.0	0.2	100.0	75.1	533
35-39	65.5	0.4	3.2	30.7	0.0	0.0	0.3	100.0	69.0	528
40-44	66.8	0.4	2.6	29.6	0.6	0.0	0.0	100.0	69.8	394
45-49	67.1	1.3	0.9	29.5	0.0	0.7	0.6	100.0	69.3	364
Residence										
Urban	84.7	1.6	2.5	10.6	0.2	0.0	0.5	100.0	88.8	1,866
Rural	59.7	2.5	5.0	32.5	0.1	0.1	0.1	100.0	67.1	2,191
Region										
Western	81.4	0.5	1.9	15.8	0.4	0.0	0.0	100.0	83.8	403
Central	75.4	3.0	3.0	16.5	0.0	0.7	1.3	100.0	81.4	326
Greater Accra	87.0	2.1	3.7	6.5	0.0	0.0	0.7	100.0	92.8	649
Volta	71.3	3.2	6.5	18.8	0.0	0.2	0.0	100.0	81.0	373
Eastern	83.3	1.6	3.6	11.3	0.2	0.0	0.0	100.0	88.5	411
Ashanti	80.7	1.6	1.9	15.6	0.2	0.0	0.0	100.0	84.2	785
Brong Ahafo	61.1	2.5	6.1	30.1	0.2	0.0	0.0	100.0	69.6	347
Northern	38.3	1.6	4.4	55.4	0.0	0.0	0.3	100.0	44.3	435
Upper East	36.0	4.2	6.1	53.5	0.0	0.0	0.2	100.0	46.3	219
Upper West	45.2	2.9	6.9	44.5	0.0	0.0	0.3	100.0	55.1	108
Wealth quintile										
Lowest	27.9	1.7	6.7	63.4	0.1	0.1	0.1	100.0	36.2	708
Second	62.9	3.3	4.0	29.6	0.1	0.0	0.1	100.0	70.2	738
Middle	75.4	2.8	4.5	17.0	0.2	0.0	0.0	100.0	82.8	699
Fourth	85.3	1.5	3.3	9.0	0.2	0.2	0.4	100.0	90.2	974
Highest	92.5	1.4	1.7	3.8	0.0	0.0	0.7	100.0	95.5	939
Total 15-49	71.2	2.1	3.9	22.4	0.1	0.1	0.3	100.0	77.1	4,058
50-59	72.1	0.5	1.5	25.1	0.4	0.0	0.4	100.0	74.1	510
Total 15-59	71.3	1.9	3.6	22.7	0.1	0.1	0.3	100.0	76.8	4,568

[1] Refers to men who attended secondary school or higher and men who can read a whole sentence or part of a sentence

3.4 ACCESS TO MASS MEDIA

Access to information is essential in increasing people's knowledge and awareness of what is taking place around them. In the 2008 GDHS, information was collected on respondents' exposure to print and broadcast media, both of which are effective in reaching the population with important health messages such as those on reproductive health and HIV/AIDS. In the survey, exposure to media was assessed by asking how often a respondent reads a newspaper, watches television, or listens to the radio. Tables 3.4.1 and 3.4.2 show that exposure of women and men to print and broadcast media in Ghana is high, although men are more likely to have access to the media than women. Seventy-six percent of women and 88 percent of men listen to the radio at least once a week, and a high proportion of women and men watch television. For example, 54 percent of women and 61 percent of men watch television at least once a week. Twice as many women (17 percent) as men (8 percent) have no access to the media.

Table 3.4.1 Exposure to mass media: Women

Percentage of women age 15-49 who are exposed to specific media on a weekly basis, by background characteristics, Ghana 2008

Background characteristic	At least once a week: Reads the newspaper	At least once a week: Watches television	At least once a week: Listens to the radio	At least once a week: Exposed to all three media	Not exposed to any media	Number of women
Age						
15-19	25.6	62.1	73.9	19.4	15.2	1,025
20-24	18.8	61.1	79.5	14.4	12.7	878
25-29	14.0	57.3	77.9	10.5	15.4	832
30-34	8.7	52.8	76.4	7.6	17.8	644
35-39	8.3	45.0	76.9	7.6	19.4	638
40-44	9.4	42.4	76.7	8.0	19.3	470
45-49	7.5	41.7	72.6	6.0	22.3	429
Residence						
Urban	23.3	73.9	81.3	19.6	9.2	2,383
Rural	6.9	35.3	71.9	4.3	23.7	2,533
Region						
Western	23.9	56.9	89.6	18.3	7.0	447
Central	10.6	52.0	70.9	8.6	19.8	424
Greater Accra	27.6	80.8	80.5	23.5	8.0	853
Volta	20.4	41.4	79.3	12.8	15.1	431
Eastern	9.9	57.7	88.1	7.6	8.0	483
Ashanti	11.2	58.5	75.7	9.1	15.8	1,011
Brong Ahafo	5.3	41.9	80.8	3.6	15.5	425
Northern	7.0	33.2	55.9	5.6	38.4	467
Upper East	10.5	30.6	61.0	9.6	36.0	253
Upper West	9.5	27.4	63.9	5.0	29.9	122
Education						
No education	0.4	24.1	59.7	0.1	34.9	1,042
Primary	2.0	43.7	73.2	1.2	19.8	988
Middle/JSS	13.2	61.3	81.4	9.8	11.9	2,039
Secondary+	51.9	85.4	88.9	42.9	2.2	844
Wealth quintile						
Lowest	3.2	12.3	56.0	1.5	41.4	783
Second	4.6	28.4	71.3	2.2	24.5	900
Middle	9.8	49.3	81.7	6.5	12.8	979
Fourth	17.7	71.6	80.9	13.8	9.3	1,119
Highest	32.6	89.8	85.7	28.6	4.0	1,135
Total	14.8	54.0	76.4	11.7	16.7	4,916

Note: Total includes women with information missing on education who are not shown separately.

Table 3.4.2 Exposure to mass media: Men

Percentage of men age 15-49 who are exposed to specific media on a weekly basis, by background characteristics, Ghana 2008

Background characteristic	At least once a week				Not exposed to any media	Number of men
	Reads the newspaper	Watches television	Listens to the radio	Exposed to all three media		
Age						
15-19	20.5	62.8	83.7	16.0	10.2	911
20-24	32.1	67.7	87.8	26.2	8.1	704
25-29	27.9	65.8	90.4	23.7	4.4	624
30-34	27.9	63.2	91.3	25.0	6.6	533
35-39	23.8	58.2	89.9	20.3	7.6	528
40-44	27.4	52.5	91.0	24.0	8.2	394
45-49	20.8	48.0	87.2	16.9	9.6	364
Residence						
Urban	40.8	85.1	91.2	36.2	3.1	1,866
Rural	12.9	40.9	85.8	9.1	12.0	2,191
Region						
Western	27.7	63.5	94.4	22.3	3.0	403
Central	16.6	71.3	91.7	14.3	5.4	326
Greater Accra	48.9	88.1	90.6	43.2	2.5	649
Volta	26.4	44.9	91.9	19.3	6.1	373
Eastern	25.5	59.0	93.0	20.7	5.2	411
Ashanti	22.1	70.7	91.3	20.2	4.3	785
Brong Ahafo	19.2	52.8	88.7	15.4	8.5	347
Northern	17.2	39.2	75.2	12.8	20.6	435
Upper East	12.9	27.1	67.9	9.5	28.6	219
Upper West	13.6	42.0	81.6	10.2	13.7	108
Education						
No education	0.6	23.3	74.0	0.6	24.3	540
Primary	4.2	44.7	82.1	2.6	13.5	619
Middle/JSS	17.6	63.8	91.5	14.1	4.8	1,721
Secondary+	60.9	83.9	93.5	52.5	1.8	1,167
Wealth quintile						
Lowest	5.1	14.7	75.4	1.6	22.8	708
Second	9.9	34.6	86.4	5.9	10.6	738
Middle	18.1	57.7	90.9	13.4	7.0	699
Fourth	31.8	85.1	93.1	27.4	2.0	974
Highest	53.2	95.1	92.4	48.9	1.3	939
Total 15-49	25.8	61.2	88.3	21.5	7.9	4,058
50-59	36.1	52.9	89.4	28.1	7.8	510
Total 15-59	26.9	60.3	88.4	22.3	7.9	4,568

Note: Total includes men with information missing on education who are not shown separately.

Media exposure is higher among younger women (15-19) than older women (45-49). However, among men, exposure is lowest among those age 15-19 and highest among those age 20-24. Men and women in urban areas are about four times more likely to be exposed to mass media than those in rural areas. Likewise, residents in the Greater Accra region (24 percent of women and 43 percent of men) are more likely to be exposed to all three media than those in the other nine regions.

Exposure to mass media is positively associated with level of education and household wealth status; the proportion exposed to all three media increases with level of education and wealth quintile. Exposure to all three media changed little over the five-year period between 2003 and 2008 for both women and men (GSS and ORC Macro, 2004).

3.5 EMPLOYMENT

Male and female respondents age 15 and older were asked whether they were employed at the time of the survey and, if not, whether they were employed in the 12 months preceding the survey. The measurement of employment, however, is difficult because some work, especially work on family farms, in family businesses, or in the informal sector, is often not perceived as employment and hence not reported as such. To avoid underestimating respondent's employment, the DHS questionnaire asks respondents several questions to probe for their employment status and to ensure complete coverage of employment in both the formal and informal sectors. Respondents are asked a number of questions to elicit their current employment status and continuity of employment in the 12 months before the survey. Respondents are considered "employed" if they are currently working (i.e. worked in the past seven days) or if they worked at any time during the 12 months preceding the survey.

Tables 3.5.1 and 3.5.2 show the percent distribution of women and men age 15-49 by employment status, according to background characteristics. Overall, 75 percent of women and 78 percent of men age 15-49 are currently employed and 3 percent of women and men were employed during the past year but are not currently employed (Figure 3.1). Current employment increases with age and number of living children for both women and men. The low level of current employment among younger women and men is related to the majority being still in school.

Women and men who have never married are less likely to be currently employed than those who are currently married, divorced, separated, or widowed. Women and men in rural areas are more likely to be currently employed than those living in urban areas.

Table 3.5.1 Employment status: Women

Percent distribution of women age 15-49 by employment status, according to background characteristics, Ghana 2008

Background characteristic	Employed in the 12 months preceding the survey: Currently employed[1]	Employed in the 12 months preceding the survey: Not currently employed	Not employed in the 12 months preceding the survey	Total	Number of women
Age					
15-19	32.7	3.1	64.2	100.0	1,025
20-24	70.0	4.1	25.9	100.0	878
25-29	85.1	4.4	10.5	100.0	832
30-34	90.3	2.0	7.6	100.0	644
35-39	94.1	2.0	3.9	100.0	638
40-44	93.0	1.9	5.1	100.0	470
45-49	92.8	1.9	5.2	100.0	429
Marital status					
Never married	45.7	3.9	50.5	100.0	1,593
Married or living together	88.5	2.8	8.8	100.0	2,876
Divorced/separated/widowed	90.4	1.3	8.4	100.0	446
Number of living children					
0	47.8	3.9	48.3	100.0	1,691
1-2	84.5	3.3	12.3	100.0	1,447
3-4	92.3	1.9	5.8	100.0	1,050
5+	92.8	1.9	5.3	100.0	729
Residence					
Urban	70.5	3.3	26.1	100.0	2,383
Rural	78.8	2.7	18.6	100.0	2,533
Region					
Western	76.7	1.7	21.6	100.0	447
Central	76.6	1.5	21.9	100.0	424
Greater Accra	66.9	3.9	29.1	100.0	853
Volta	79.7	5.4	14.9	100.0	431
Eastern	75.7	2.1	22.2	100.0	483
Ashanti	75.0	2.7	22.3	100.0	1,011
Brong Ahafo	76.4	1.3	22.3	100.0	425
Northern	78.1	4.7	17.2	100.0	467
Upper East	78.3	4.0	17.7	100.0	253
Upper West	67.5	1.2	31.1	100.0	122
Education					
No education	88.0	2.6	9.3	100.0	1,042
Primary	79.2	2.2	18.7	100.0	988
Middle/JSS	70.8	2.6	26.6	100.0	2,039
Secondary+	62.7	5.4	31.9	100.0	844
Wealth quintile					
Lowest	82.4	2.4	15.2	100.0	783
Second	77.5	2.9	19.6	100.0	900
Middle	75.9	4.3	19.9	100.0	979
Fourth	74.0	1.7	24.3	100.0	1,119
Highest	67.2	3.6	29.2	100.0	1,135
Total	74.8	3.0	22.2	100.0	4,916

Note: Total includes women with information missing on education who are not shown separately.
[1] Currently employed is defined as having done work in the past seven days. Includes persons who did not work in the past seven days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

Table 3.5.2 Employment status: Men

Percent distribution of men age 15-49 by employment status, according to background characteristics, Ghana 2008

Background characteristic	Employed in the 12 months preceding the survey: Currently employed[1]	Employed in the 12 months preceding the survey: Not currently employed	Not employed in the 12 months preceding the survey	Total	Number of men
Age					
15-19	37.3	2.5	60.1	100.0	911
20-24	70.7	4.8	24.4	100.0	704
25-29	91.1	3.2	5.7	100.0	624
30-34	96.1	1.9	2.0	100.0	533
35-39	96.7	2.1	1.3	100.0	528
40-44	97.7	1.1	1.2	100.0	394
45-49	96.5	2.4	1.1	100.0	364
Marital status					
Never married	57.3	3.9	38.8	100.0	1,936
Married or living together	97.5	1.5	1.0	100.0	1,950
Divorced/separated/widowed	89.7	4.0	6.2	100.0	172
Number of living children					
0	60.1	3.8	36.1	100.0	2,086
1-2	95.3	2.4	2.4	100.0	893
3-4	97.5	1.5	1.0	100.0	655
5+	99.6	0.4	0.1	100.0	424
Residence					
Urban	74.2	3.7	22.1	100.0	1,866
Rural	81.2	1.9	16.9	100.0	2,191
Region					
Western	76.9	0.7	22.4	100.0	403
Central	74.2	4.0	21.8	100.0	326
Greater Accra	75.4	4.2	20.4	100.0	649
Volta	83.0	1.9	15.1	100.0	373
Eastern	73.6	1.7	24.7	100.0	411
Ashanti	77.4	3.8	18.8	100.0	785
Brong Ahafo	80.7	1.9	17.4	100.0	347
Northern	83.2	1.6	15.2	100.0	435
Upper East	80.5	3.9	15.6	100.0	219
Upper West	78.2	2.1	19.7	100.0	108
Education					
No education	96.3	1.2	2.4	100.0	540
Primary	76.5	1.5	21.9	100.0	619
Middle/JSS	76.1	2.3	21.6	100.0	1,721
Secondary+	73.1	4.7	22.2	100.0	1,167
Wealth quintile					
Lowest	87.0	1.3	11.6	100.0	708
Second	78.7	1.1	20.2	100.0	738
Middle	74.3	3.4	22.3	100.0	699
Fourth	75.5	2.9	21.5	100.0	974
Highest	76.0	4.4	19.6	100.0	939
Total 15-49	78.0	2.7	19.3	100.0	4,058
50-59	93.1	2.3	4.6	100.0	510
Total 15-59	79.7	2.7	17.6	100.0	4,568

Note: Total includes men with information missing on education who are not shown separately.
[1] Currently employed is defined as having done work in the past seven days. Includes persons who did not work in the past seven days but who are regularly employed and were absent from work for leave, illness, vacation, or any other such reason.

Figure 3.1 Employment Status of Women and Men Age 15-49

GDHS 2008

The proportion of women currently employed ranges from 67 percent in the Greater Accra region to 80 percent in the Volta region. There is little variation in the proportion of women currently employed in other regions.

Current employment is inversely related to education, falling from 88 percent among women with no education to 63 percent among women with at least secondary education. The corresponding proportions for men are 96 and 73 percent, respectively. A similar pattern is seen by wealth quintile for both women and men.

3.6 OCCUPATION

Respondents who are currently employed were asked to state their occupation. Tables 3.6.1 and 3.6.2 show the percent distribution of currently employed women and men by occupation, according to background characteristics. About one-third of working women (30 percent) and two-fifths (41 percent) of men are employed in the agricultural occupations (Figure 3.2). Four times as many women (51 percent) as men (12 percent) work in sales and services. Eleven percent of employed women and 22 percent of employed men are skilled manual workers. Twice as many men (11 percent) as women (5 percent) are working in professional, technical, and managerial positions.

Occupation varies by age. Among women, the proportion engaged in agriculture increases with age. For example, 20 percent of working women age 20-24 are engaged in agriculture, compared with 42 percent of women age 45-49. In contrast, the proportion of women engaged in skilled manual work decreases with age.

A similar pattern is seen for men. The proportion of men engaged in agriculture increases with age, from 33 percent among men age 20-24 to 59 percent among men in the oldest age group. The proportion of men working in skilled manual work decreases with age.

A higher proportion of never-married women than ever-married women are engaged in most occupations, with the exception of agriculture. One in three (35 percent) currently married women who are working are engaged in the agricultural sector, compared with about one in four formerly married women (27 percent), and 14 percent of never-married women. Among working men, about two-fifths of those who are currently or formerly married are engaged in the agricultural sector, compared with less than one-third of never-married men. Twenty-four percent each of never-married men and formerly married men are engaged in skilled manual work, compared with 20 percent of married men.

Table 3.6.1 Occupation: Women

Percent distribution of women age 15-49 employed in the 12 months preceding the survey by occupation, according to background characteristics, Ghana 2008

Background characteristic	Professional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Agri-culture	Missing	Total	Number of women
Age									
15-19	3.2	0.9	43.7	14.8	0.4	30.3	6.8	100.0	366
20-24	8.4	2.9	51.4	16.1	0.2	19.5	1.5	100.0	651
25-29	5.8	3.5	53.8	13.5	0.0	23.0	0.3	100.0	745
30-34	3.0	1.8	55.0	11.1	0.0	28.4	0.6	100.0	595
35-39	2.8	0.4	50.7	7.4	0.2	37.7	0.8	100.0	613
40-44	2.1	1.0	52.5	5.5	0.7	36.9	1.4	100.0	446
45-49	5.6	0.4	48.3	3.6	0.0	41.7	0.4	100.0	406
Marital status									
Never married	9.6	4.4	50.5	17.5	0.2	13.5	4.4	100.0	789
Married or living together	3.5	1.2	50.0	9.1	0.2	35.4	0.6	100.0	2,624
Divorced/separated/widowed	2.2	0.6	61.9	8.3	0.0	26.6	0.3	100.0	409
Number of living children									
0	11.1	4.9	49.1	17.1	0.3	13.6	3.8	100.0	874
1-2	3.8	1.6	57.3	13.6	0.1	22.7	0.9	100.0	1,269
3-4	2.9	0.4	54.9	6.1	0.0	35.2	0.5	100.0	989
5+	0.5	0.1	38.2	4.1	0.4	56.3	0.4	100.0	690
Residence									
Urban	7.7	3.5	68.2	11.6	0.2	7.5	1.3	100.0	1,760
Rural	2.0	0.3	37.0	10.0	0.2	49.0	1.4	100.0	2,062
Region									
Western	4.7	3.3	49.9	9.7	0.4	31.8	0.2	100.0	351
Central	4.7	0.6	51.9	8.7	0.0	33.1	1.1	100.0	331
Greater Accra	6.7	6.0	70.3	12.5	0.3	3.4	0.8	100.0	605
Volta	4.2	0.5	45.4	7.1	0.5	34.9	7.4	100.0	367
Eastern	3.8	1.4	60.2	11.8	0.0	22.5	0.4	100.0	375
Ashanti	5.1	1.1	57.5	12.0	0.0	24.0	0.3	100.0	785
Brong Ahafo	3.0	0.0	44.7	6.9	0.3	45.0	0.0	100.0	330
Northern	3.0	0.1	30.6	11.4	0.0	52.4	2.5	100.0	387
Upper East	5.7	0.4	28.8	13.1	0.2	51.0	0.9	100.0	208
Upper West	2.1	1.4	26.6	16.2	0.0	52.0	1.5	100.0	84
Education									
No education	0.0	0.1	33.6	6.7	0.0	58.5	1.0	100.0	945
Primary	0.5	0.0	54.2	11.1	0.2	33.0	0.9	100.0	803
Middle/JSS	1.0	0.3	62.1	14.2	0.1	20.7	1.7	100.0	1,496
Secondary+	27.4	11.0	48.7	7.8	0.5	2.7	1.8	100.0	575
Wealth quintile									
Lowest	0.8	0.1	17.7	7.5	0.2	73.0	0.7	100.0	664
Second	0.6	0.1	35.3	8.7	0.1	54.0	1.3	100.0	723
Middle	3.8	0.2	57.5	12.3	0.0	23.7	2.4	100.0	785
Fourth	5.1	2.0	71.4	12.3	0.1	7.4	1.7	100.0	847
Highest	11.7	6.2	66.5	12.1	0.4	2.4	0.7	100.0	804
Total	4.6	1.8	51.4	10.7	0.2	29.9	1.4	100.0	3,822

Note: Total includes women with information missing on education who are not shown separately.

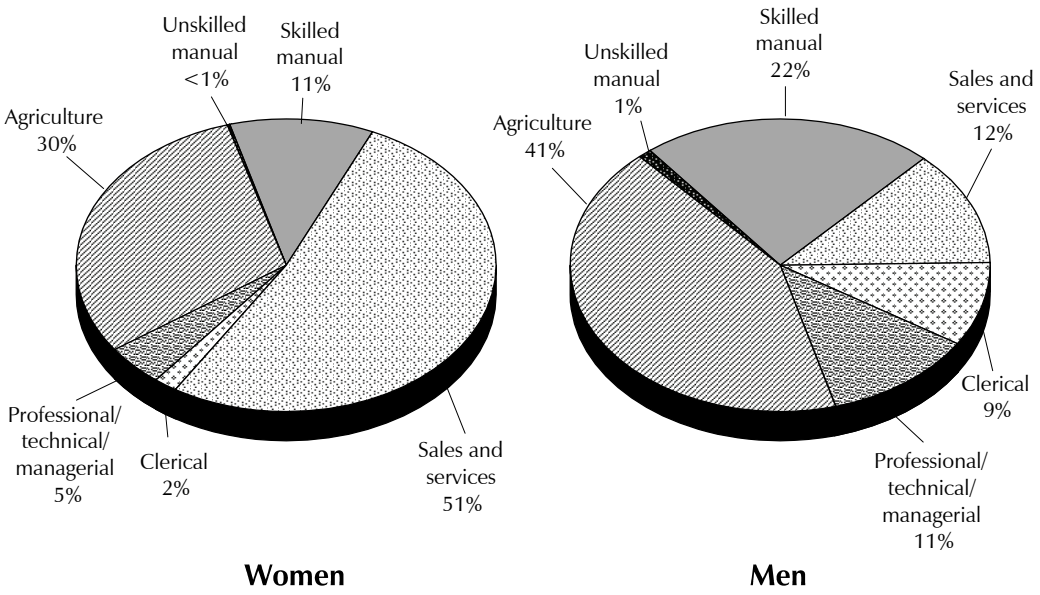
Table 3.6.2 Occupation: Men

Percent distribution of men age 15-49 employed in the 12 months preceding the survey by occupation, according to background characteristics, Ghana 2008

Background characteristic	Professional/ technical/ managerial	Clerical	Sales and services	Skilled manual	Unskilled manual	Agri-culture	Missing	Total	Number of men
Age									
15-19	2.2	4.6	7.0	23.6	2.3	43.4	16.9	100.0	363
20-24	17.2	10.1	13.7	21.2	0.8	32.5	4.5	100.0	532
25-29	11.8	9.6	15.8	25.9	2.0	32.4	2.4	100.0	588
30-34	14.1	10.8	15.0	22.6	0.4	35.2	1.9	100.0	522
35-39	11.1	8.2	12.2	23.1	0.7	42.8	2.0	100.0	522
40-44	9.2	9.0	9.2	19.3	0.8	48.5	4.0	100.0	389
45-49	10.5	7.9	8.7	11.9	0.2	58.9	1.8	100.0	360
Marital status									
Never married	14.0	7.1	13.0	24.0	1.9	31.2	8.8	100.0	1,185
Married or living together	10.0	9.5	12.0	20.0	0.6	46.2	1.8	100.0	1,930
Divorced/separated/widowed	9.7	14.0	9.0	23.4	0.0	41.5	2.4	100.0	161
Number of living children									
0	14.2	8.4	13.7	23.4	1.8	30.9	7.6	100.0	1,333
1-2	13.2	11.0	14.3	23.7	0.7	34.9	2.1	100.0	872
3-4	8.5	8.5	10.3	20.6	0.4	49.4	2.3	100.0	648
5+	3.6	6.3	6.0	13.1	0.2	69.0	1.7	100.0	424
Residence									
Urban	17.9	11.7	20.9	30.4	2.0	13.2	3.9	100.0	1,454
Rural	6.3	6.6	5.3	14.5	0.3	62.4	4.7	100.0	1,822
Region									
Western	14.6	8.8	11.6	25.4	0.0	37.2	2.4	100.0	313
Central	15.3	8.7	10.0	26.4	0.8	35.7	3.1	100.0	255
Greater Accra	19.8	11.7	24.9	31.7	3.1	4.3	4.5	100.0	517
Volta	10.7	6.5	7.6	15.1	0.6	44.1	15.5	100.0	316
Eastern	9.3	12.0	10.0	18.8	1.1	45.0	3.8	100.0	309
Ashanti	8.5	13.0	13.8	30.0	1.5	31.5	1.7	100.0	638
Brong Ahafo	10.9	5.9	11.2	14.6	0.0	55.9	1.5	100.0	286
Northern	6.7	3.6	5.1	9.4	0.0	72.7	2.5	100.0	369
Upper East	5.0	3.9	5.8	7.5	0.0	69.5	8.4	100.0	185
Upper West	6.3	2.1	6.3	9.8	0.7	71.2	3.6	100.0	87
Education									
No education	0.5	2.1	3.7	8.4	0.0	84.1	1.2	100.0	527
Primary	1.7	6.7	8.5	20.4	0.3	58.5	4.0	100.0	483
Middle/JSS	3.1	13.1	10.8	30.1	1.2	35.9	5.9	100.0	1,349
Secondary+	35.1	7.6	21.3	17.4	1.8	12.7	4.1	100.0	908
Wealth quintile									
Lowest	1.2	0.9	0.8	4.9	0.0	88.5	3.7	100.0	626
Second	3.7	5.5	3.1	14.8	0.1	68.6	4.4	100.0	588
Middle	7.3	10.8	9.7	25.3	0.5	40.4	6.0	100.0	543
Fourth	14.6	13.4	20.5	28.9	1.9	15.4	5.3	100.0	764
Highest	25.7	12.0	22.3	30.7	2.1	4.6	2.6	100.0	755
Total 15-49	11.4	8.8	12.2	21.6	1.0	40.6	4.3	100.0	3,276
50-59	17.1	5.7	13.7	13.0	0.2	49.0	1.4	100.0	487
Total 15-59	12.2	8.4	12.4	20.5	0.9	41.6	4.0	100.0	3,763

Note: Total includes men with information missing on education who are not shown separately.

Figure 3.2 Occupation of Women and Men Age 15-49



GDHS 2008

Half of never-married women and currently married women, and two-thirds of divorced, separated, or widowed women (62 percent) are employed in sales and services, but less than 1 percent of each group of women is engaged in unskilled manual work. For both women and men, there is a direct relationship between the number of living children and agriculture as an occupation. Not surprisingly, most working women and men in rural areas are engaged in the agricultural sector, in contrast to women and men in urban areas, who are mostly engaged in sales and services and skilled manual work. Agricultural work is the predominant occupation among both women and men in the Northern, Upper West, Upper East, and Brong Ahafo regions. In contrast, the majority of working women in the Greater Accra, Eastern, and Ashanti regions are in sales and services. Among working men, the highest proportions engaged in the professional, technical and managerial work, sales and services, and skilled manual work, are in the Greater Accra and Ashanti regions.

Respondents' occupation is related to level of education. Among women and men with no education, 59 percent of women and 84 percent of men work in agriculture. In contrast, the majority of women and men with secondary or higher education are employed in non-agricultural occupations. Likewise, women and men in the lowest wealth quintile are predominantly engaged in agriculture, while those in the highest wealth quintile are mostly in sales and services or professional, technical and managerial work.

3.7 Type of Employer, Form of Earnings, and Continuity of Employment

Tables 3.7.1 and 3.7.2 show the percent distribution of women and men age 15-49 employed in the 12 months preceding the survey by the type of earnings and employer, and continuity of employment, according to type of employment (agricultural or non-agricultural). Nearly two-thirds of respondents who work receive cash earnings while about one in five receives earnings in cash and in-kind. Fourteen percent of women and 15 percent of men are not paid at all (Figure 3.3).

Table 3.7.1 Type of employment: Women

Percent distribution of women age 15-49 employed in the 12 months preceding the survey by type of earnings, type of employer, and continuity of employment, according to type of employment (agricultural or non-agricultural), Ghana 2008

Employment characteristic	Agricultural work	Non-agricultural work	Total
Type of earnings			
Cash only	39.4	75.1	63.8
Cash and in-kind	34.6	11.5	18.3
In-kind only	7.3	2.6	4.0
Not paid	18.5	10.7	13.7
Missing	0.2	0.1	0.1
Total	100.0	100.0	100.0
Type of employer			
Employed by family member	18.5	5.0	9.0
Employed by non-family member	10.5	23.7	19.7
Self-employed	70.9	71.3	71.2
Missing	0.1	0.1	0.1
Total	100.0	100.0	100.0
Continuity of employment			
All year	63.4	87.0	79.9
Seasonal	33.5	9.3	16.5
Occasional	2.8	3.5	3.4
Missing	0.2	0.2	0.2
Total	100.0	100.0	100.0
Number of women employed during the past 12 months	1,144	2,626	3,822

Note: Total includes women with information missing on type of employment who are not shown separately.

The majority of women (71 percent) are self-employed, compared with 52 percent of men. Another 9 percent of women and 11 percent of men are employed by a family member, and 20 percent of women and 37 percent of men are employed by a non-family member.

Most working women (80 percent) and the majority of working men (71 percent) are employed throughout the year, and 17 and 25 percent of women and men, respectively, have seasonal jobs. Women and men are more likely to do seasonal work if they are employed in agriculture than if they are in non-agricultural occupations. Continuity of employment is more assured for women and men who are engaged in non-agricultural work.

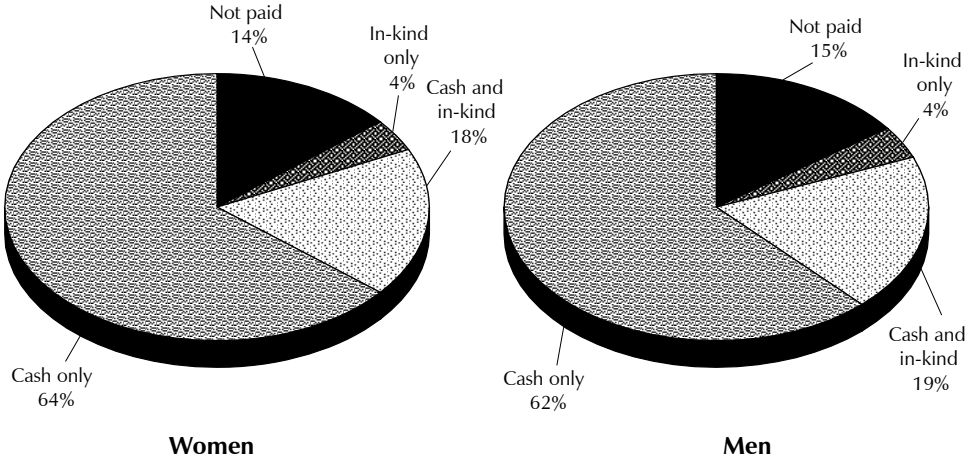
Table 3.7.2 Type of employment: Men

Percent distribution of men age 15-49 employed in the 12 months preceding the survey by type of earnings, type of employer, and continuity of employment, according to type of employment (agricultural or non-agricultural), Ghana 2008

Employment characteristic	Agricultural work	Non-agricultural work	Total
Type of earnings			
Cash only	35.7	83.1	62.3
Cash and in-kind	33.7	8.7	18.7
In-kind only	6.4	1.8	3.7
Not paid	24.2	6.4	15.2
Missing	0.0	0.0	0.1
Total	100.0	100.0	100.0
Type of employer			
Employed by family member	19.4	5.1	11.2
Employed by non-family member	11.3	54.9	36.8
Self-employed	69.2	39.9	51.9
Missing	0.1	0.1	0.1
Total	100.0	100.0	100.0
Continuity of employment			
All year	53.8	83.1	70.5
Seasonal	43.1	11.9	25.0
Occasional	2.6	4.7	4.1
Missing	0.5	0.2	0.3
Total	100.0	100.0	100.0
Number of men employed during the last 12 months	1,329	1,806	3,276

Note: Total includes men with information missing on type of employment who are not shown separately.

Figure 3.3 **Type of Earnings of Employed Women and Men Age 15-49**



Note: Total may not add to 100 due to rounding.

GDHS 2008

3.8 HEALTH INSURANCE COVERAGE

The national health insurance scheme (Act 650) was passed in 2003 with the aim of making health care accessible to all. Tables 3.8.1 and 3.8.2 show the percent distribution of women and men by membership in the national or district health insurance scheme (N/DHIS) or mutual health organisation or community-based insurance scheme, according to background characteristics. Thirty-nine percent of women and 29 percent of men are covered by the N/DHIS, compared with 1 percent of women and men who are covered by the community-based and mutual health organisation insurance schemes. Health insurance through an employer is almost non-existent, with less than 1 percent of respondents covered by insurance through their employer or by privately purchased commercial insurance. A high proportion of women (60 percent) and men (70 percent) say that they are not covered by any type of the health insurance scheme.

Table 3.8.1 Health insurance coverage: Women

Percent distribution of women age 15-49 by type of health insurance coverage, according to background characteristics, Ghana 2008

Background characteristic	National/ District Health Insurance Scheme (N/DHIS)	Health insurance through employer	Mutual health organisation/ community-based insurance	Privately purchased commercial insurance	No health insurance	Total	Number of women
Age							
15-19	37.0	0.2	1.3	0.2	61.7	100.0	1,025
20-24	33.8	0.0	0.8	0.0	65.4	100.0	878
25-29	40.3	0.0	1.1	0.0	58.6	100.0	832
30-34	41.8	0.0	0.9	0.2	57.0	100.0	644
35-39	42.1	0.0	0.6	0.0	57.8	100.0	638
40-44	42.9	0.5	1.4	0.0	55.2	100.0	470
45-49	36.8	0.0	1.7	0.0	61.2	100.0	429
Residence							
Urban	41.8	0.2	1.3	0.0	56.8	100.0	2,383
Rural	36.0	0.0	0.9	0.1	63.2	100.0	2,533
Region							
Western	42.6	0.0	0.0	0.0	57.4	100.0	447
Central	23.2	0.0	1.2	0.0	75.6	100.0	424
Greater Accra	24.6	0.1	0.1	0.0	75.1	100.0	853
Volta	30.2	0.0	0.3	0.0	69.3	100.0	431
Eastern	49.6	0.0	2.0	0.0	48.7	100.0	483
Ashanti	40.7	0.3	2.8	0.3	56.0	100.0	1,011
Brong Ahafo	58.9	0.0	0.7	0.0	40.4	100.0	425
Northern	38.8	0.0	0.7	0.0	61.2	100.0	467
Upper East	54.8	0.0	0.2	0.0	44.9	100.0	253
Upper West	47.0	0.0	0.9	0.0	51.6	100.0	122
Education							
No education	32.2	0.0	0.6	0.0	67.4	100.0	1,042
Primary	30.0	0.0	1.0	0.1	68.8	100.0	988
Middle/JSS	42.3	0.1	1.1	0.1	56.5	100.0	2,039
Secondary+	48.6	0.3	1.8	0.0	49.4	100.0	844
Wealth quintile							
Lowest	29.3	0.0	0.9	0.0	70.2	100.0	783
Second	31.7	0.0	0.7	0.0	67.6	100.0	900
Middle	37.8	0.0	0.5	0.0	61.7	100.0	979
Fourth	43.8	0.0	1.3	0.3	54.5	100.0	1,119
Highest	47.0	0.4	1.7	0.0	51.1	100.0	1,135
Total	38.8	0.1	1.1	0.1	60.1	100.0	4,916

Note: Total includes women with information missing on education who are not shown separately.

Table 3.8.2 Health insurance coverage: Men

Percent distribution of men age 15-49 by type of health insurance coverage, according to background characteristics, Ghana 2008

Background characteristic	National/ District Health Insurance Scheme (N/DHIS)	Health insurance through employer	Mutual health organisation/ community-based insurance	Privately purchased commercial insurance	No health insurance	Total	Number of men
Age							
15-19	33.8	0.0	0.7	0.0	65.5	100.0	911
20-24	22.5	0.2	0.7	0.0	76.6	100.0	704
25-29	20.5	0.0	0.3	0.0	79.2	100.0	624
30-34	33.9	0.2	2.4	0.0	64.0	100.0	533
35-39	30.8	0.2	1.8	0.0	67.6	100.0	528
40-44	30.7	0.0	1.0	0.0	68.3	100.0	394
45-49	28.1	0.6	1.3	0.0	70.0	100.0	364
Residence							
Urban	33.0	0.3	1.6	0.0	65.1	100.0	1,866
Rural	24.9	0.0	0.6	0.0	74.7	100.0	2,191
Region							
Western	27.6	0.3	1.8	0.0	70.3	100.0	403
Central	23.3	0.0	0.0	0.0	76.7	100.0	326
Greater Accra	19.9	0.2	0.4	0.0	79.5	100.0	649
Volta	24.0	0.0	0.0	0.0	76.0	100.0	373
Eastern	33.9	0.0	0.0	0.0	66.1	100.0	411
Ashanti	28.0	0.3	3.4	0.0	68.7	100.0	785
Brong Ahafo	44.1	0.2	2.2	0.0	54.1	100.0	347
Northern	31.6	0.0	0.0	0.0	68.4	100.0	435
Upper East	27.9	0.0	0.0	0.0	72.1	100.0	219
Upper West	40.9	0.0	0.0	0.0	59.1	100.0	108
Education							
No education	17.5	0.0	0.1	0.0	82.4	100.0	540
Primary	21.0	0.0	0.6	0.0	78.7	100.0	619
Middle/JSS	26.0	0.1	1.1	0.0	72.9	100.0	1,721
Secondary+	41.9	0.3	1.7	0.0	56.2	100.0	1,167
Wealth quintile							
Lowest	16.6	0.0	0.0	0.0	83.4	100.0	708
Second	22.5	0.0	0.4	0.0	77.4	100.0	738
Middle	25.9	0.0	1.0	0.0	73.2	100.0	699
Fourth	35.2	0.3	1.4	0.0	63.2	100.0	974
Highest	37.7	0.3	2.2	0.0	59.9	100.0	939
Total 15-49	28.6	0.1	1.1	0.0	70.3	100.0	4,058
50-59	37.9	0.6	2.3	0.3	59.0	100.0	510
Total 15-59	29.7	0.2	1.2	0.0	69.0	100.0	4,568

Note: Total includes men with information missing on education who are not shown separately.

Women age 20-24 (34 percent) and men age 25-29 (21 percent) are least likely to be covered by the N/DHIS. Urban residents are more likely than rural residents to be covered by the N/DHIS. Regional differentials show that at least half of women in the Eastern, Brong Ahafo, and Upper East regions are covered by the national or district health insurance scheme. The Brong Ahafo region has the highest coverage (59 percent of women and 44 percent of men), compared with other regions. Women and men who have secondary or higher education are more likely to be covered by the national or district health insurance scheme than women and men with no education. Likewise, respondents in the highest wealth quintile are more likely to be covered by the health insurance scheme than those in lower wealth quintiles.

Respondents covered by the N/DHIS were further asked whether they paid their N/DHIS membership themselves. Tables 3.9.1 and 3.9.2 show the percent distribution of women and men, respectively, by the person who paid for the insurance.

Table 3.9.1 N/DHIS Membership Payment: Women

Percent distribution of women age 15-49 covered under the National/District Health Insurance Scheme (N/DHIS) by person who paid for membership, according to background characteristics, Ghana 2008

Background characteristic	Membership payment made by: Woman, for self	Relative or friend	Employer	No payment, woman exempt as pensioner, elderly, or poor	Other	Missing	Total	Percentage with member-ship paid	Number of women with N/DHIS
Age									
15-19	5.7	91.2	1.2	0.5	1.0	0.4	100.0	98.1	379
20-24	26.3	67.1	2.1	0.0	3.6	0.8	100.0	95.6	297
25-29	43.5	49.4	6.0	0.0	1.0	0.0	100.0	99.0	335
30-34	36.9	56.3	2.8	0.0	3.7	0.4	100.0	96.0	269
35-39	45.8	50.0	3.1	0.0	1.1	0.0	100.0	98.9	268
40-44	55.4	39.1	3.2	0.0	2.1	0.3	100.0	97.7	202
45-49	49.6	45.4	3.7	0.1	1.2	0.0	100.0	98.7	158
Employment (past 12 months)									
Not employed	11.1	86.5	1.3	0.2	1.0	0.0	100.0	98.8	424
Employed for cash	43.8	49.9	4.0	0.0	2.0	0.3	100.0	97.7	1,252
Employed not for cash	25.9	67.8	1.5	0.5	3.6	0.7	100.0	95.2	229
Marital status									
Never married	20.8	75.1	3.0	0.3	0.8	0.0	100.0	98.9	571
Married or living together	36.0	57.7	3.4	0.0	2.5	0.3	100.0	97.1	1,190
Divorced/separated/ widowed	75.6	20.6	1.5	0.0	1.4	0.9	100.0	97.7	147
Residence									
Urban	36.7	58.0	3.9	0.1	1.1	0.1	100.0	98.7	996
Rural	32.0	62.3	2.3	0.1	2.8	0.4	100.0	96.6	912
Region									
Western	25.9	64.4	7.0	0.0	2.4	0.3	100.0	97.3	191
Central	29.0	56.9	7.5	1.2	5.4	0.0	100.0	93.4	98
Greater Accra	40.5	57.1	1.8	0.0	0.7	0.0	100.0	99.3	210
Volta	52.5	34.6	10.7	0.0	2.1	0.0	100.0	97.9	130
Eastern	39.6	57.3	1.7	0.0	0.9	0.4	100.0	98.7	239
Ashanti	38.9	58.0	1.6	0.0	1.0	0.6	100.0	98.4	412
Brong Ahafo	22.0	73.0	1.0	0.0	4.0	0.0	100.0	96.0	251
Northern	30.8	64.1	1.7	0.3	2.3	0.8	100.0	96.6	181
Upper East	35.2	60.5	2.9	0.0	1.3	0.0	100.0	98.7	139
Upper West	20.7	76.2	1.5	0.2	1.3	0.0	100.0	98.5	58
Wealth quintile									
Lowest	32.7	63.4	0.0	0.1	3.8	0.0	100.0	96.1	229
Second	30.1	63.7	0.9	0.0	4.4	0.8	100.0	94.7	285
Middle	36.3	58.0	2.3	0.5	2.6	0.2	100.0	96.6	370
Fourth	34.6	62.0	2.7	0.0	0.5	0.1	100.0	99.3	490
Highest	36.1	56.4	6.6	0.0	0.6	0.3	100.0	99.1	533
Total 15-49	34.5	60.1	3.1	0.1	1.9	0.3	100.0	97.7	1,908

Note: Total includes respondents with information missing on employment who are not shown separately

Overall, 98 percent of women and 99 percent of men covered by the N/DHIS have their membership paid. Approximately one-third of women and half of men paid for the insurance themselves. Older respondents, those employed for cash, and those who are currently or formerly married are more likely to pay for insurance themselves than other respondents. Only 3 percent of women and 13 percent of men age 15-49 said that their insurance was paid by the employer. Compared with the national average, women age 25-29, those in the Volta, Central, and Western regions, and those in the highest wealth quintile are at least twice as likely to report that their insurance is paid by their employer. Among men, those in their late 30s and early 40s (23 and 24

percent), those employed for cash (20 percent), men who are currently married (19 percent), those in the Western region (26 percent), in the Volta and Upper East regions (17 percent each), and those in the highest wealth quintile (23 percent), are most likely to report that their insurance is paid by their employer.

Table 3.9.2 N/DHIS Membership Payment: Men

Percent distribution of men age 15-49 covered under the National/District Health Insurance Scheme (N/DHIS) by person who paid for membership, according to background characteristics, Ghana 2008

Background characteristic	Membership payment made by: Man, for self	Relative or friend	Employer	No payment, man exempt as pensioner, elderly, or poor	Other	Missing	Total	Percentage with membership paid	Number of men with N/DHIS
Age									
15-19	6.7	90.3	0.4	0.5	2.2	0.0	100.0	97.3	308
20-24	32.8	57.1	9.5	0.0	0.7	0.0	100.0	99.3	159
25-29	71.2	10.6	15.4	0.0	2.5	0.3	100.0	97.2	128
30-34	79.7	3.2	17.1	0.0	0.0	0.0	100.0	100.0	181
35-39	76.4	0.9	22.5	0.0	0.2	0.0	100.0	99.8	163
40-44	75.2	1.3	23.5	0.0	0.0	0.0	100.0	100.0	121
45-49	78.1	0.7	19.7	0.0	1.4	0.0	100.0	98.6	102
Employment (past 12 months)									
Not employed	12.1	84.8	1.1	0.5	1.5	0.0	100.0	98.0	271
Employed for cash	66.3	12.5	20.4	0.0	0.7	0.1	100.0	99.2	730
Employed not for cash	53.1	44.8	0.0	0.0	2.1	0.0	100.0	97.9	160
Marital status									
Never married	23.2	67.7	7.0	0.3	1.9	0.0	100.0	97.8	554
Married or living together	78.6	2.2	18.7	0.0	0.4	0.1	100.0	99.5	577
Divorced/separated/ widowed	(67.7)	(13.2)	(19.1)	(0.0)	(0.0)	(0.0)	100.0	(100.0)	30
Residence									
Urban	49.9	34.2	15.3	0.0	0.7	0.0	100.0	99.3	616
Rural	54.2	33.3	10.6	0.3	1.5	0.1	100.0	98.1	545
Region									
Western	44.0	29.4	25.8	0.0	0.8	0.0	100.0	99.2	111
Central	60.6	25.6	13.8	0.0	0.0	0.0	100.0	100.0	76
Greater Accra	58.3	26.7	12.6	0.0	2.4	0.0	100.0	97.6	129
Volta	40.2	36.7	17.1	0.0	6.0	0.0	100.0	94.0	90
Eastern	54.3	36.9	8.8	0.0	0.0	0.0	100.0	100.0	139
Ashanti	48.7	39.8	11.0	0.0	0.6	0.0	100.0	99.4	220
Brong Ahafo	54.6	35.8	9.7	0.0	0.0	0.0	100.0	100.0	153
Northern	51.3	35.7	12.2	0.0	0.8	0.0	100.0	99.2	137
Upper East	54.7	25.1	16.5	2.3	0.7	0.7	100.0	96.3	61
Upper West	58.8	33.0	6.9	0.0	1.4	0.0	100.0	98.6	44
Wealth quintile									
Lowest	62.2	32.0	1.8	0.8	2.8	0.3	100.0	96.1	118
Second	60.9	31.8	5.4	0.3	1.6	0.0	100.0	98.0	166
Middle	48.2	41.4	8.3	0.0	2.0	0.0	100.0	98.0	181
Fourth	52.0	35.0	13.0	0.0	0.0	0.0	100.0	100.0	343
Highest	46.0	30.1	23.0	0.0	0.9	0.0	100.0	99.1	354
Total 15-49	51.9	33.8	13.1	0.1	1.1	0.0	100.0	98.7	1,161
50-59	60.6	2.7	35.1	1.1	0.6	0.0	100.0	98.4	194
Total 15-59	53.1	29.3	16.2	0.3	1.0	0.0	100.0	98.7	1,355

Note: Figures in parentheses are based on 25-49 unweighted cases

Differences in the source of the insurance payment by urban-rural residence are small but regional differences are large. For example, women in the Volta region are most likely to pay for the insurance themselves (53 percent), or their employer pays for it (11 percent), and least likely to have the insurance paid for by a relative or friend (35 percent). On the other hand, women in the Upper West and Brong Ahafo regions are the least likely to pay for the insurance themselves (21-22

percent), or have the employer pay for it (2 percent or less), and most likely to be helped by relatives or friends (at least 73 percent). Among men, those living in the Volta and Western regions are the least likely to pay for the insurance themselves (40 and 44 percent, respectively), and most likely to have their employer pay for the insurance (17 and 26 percent, respectively), compared with men in other regions. Men in the two lowest wealth quintiles (who are most in need of financial assistance) are more likely to pay for the insurance themselves, while men in the two highest wealth quintiles are more likely to have their insurance paid by their employer.

Table 3.10 shows that about nine in ten respondents insured with the N/DHIS have a valid card (seen or unseen by the interviewer). One in four women and one in three men were not able to show the N/DHIS card at the time of the interview. One in ten insured respondents does not have a valid membership card. The proportion of those who do not have a card is especially high among women in the Ashanti and Brong Ahafo regions (21 and 25 percent, respectively) and among men in the Upper West and Greater Accra regions (19 and 16 percent, respectively).

The median duration of waiting time to receive the insurance card is 8 weeks for women and 7 weeks for men. The waiting time is longer for women in their late 30s, women in the Central, Greater Accra, Volta, and Ashanti regions, men living in the Upper West region, and women in the fourth wealth quintile (11 weeks each).

Table 3.10 Possession of valid N/DHIS card

Percent distribution of N/DHIS insured women and men age 15-49 by possession of a valid N/DHIS card and whether or not card was seen by interviewer, and among respondents with a valid N/DHIS card, median number of weeks respondent waited to receive card, according to background characteristics, Ghana 2008

	Women							Men						
	Has valid N/DHIS card							Has valid N/DHIS card						
Background characteristic	Card seen	Card not seen	Does not have valid card	Missing	Total	Median number of weeks waited for card	Number of women	Card seen	Card not seen	Does not have valid card	Missing	Total	Median number of weeks waited for card	Number of men
Age														
15-19	58.9	27.4	13.3	0.4	100.0	7.0	379	56.6	35.1	8.3	0.0	100.0	4.7	308
20-24	57.0	27.0	15.2	0.8	100.0	7.6	297	54.8	31.0	14.2	0.0	100.0	6.8	159
25-29	60.0	30.0	9.7	0.4	100.0	8.7	335	55.1	38.0	6.9	0.0	100.0	7.3	128
30-34	66.7	21.4	11.5	0.4	100.0	7.6	269	61.2	30.5	8.3	0.0	100.0	7.4	181
35-39	67.5	22.2	9.7	0.6	100.0	11.1	268	57.8	34.5	7.7	0.0	100.0	7.3	163
40-44	64.5	24.4	11.0	0.0	100.0	7.6	202	57.6	34.8	7.6	0.0	100.0	7.2	121
45-49	61.0	28.7	10.3	0.0	100.0	7.7	158	56.2	28.0	14.7	1.0	100.0	8.5	102
Residence														
Urban	61.5	25.8	12.3	0.4	100.0	8.8	996	56.5	34.4	8.8	0.2	100.0	7.0	616
Rural	62.3	26.2	11.1	0.4	100.0	7.3	912	57.8	32.2	9.9	0.0	100.0	7.2	545
Region														
Western	73.2	13.2	13.6	0.0	100.0	3.9	191	53.1	43.1	3.8	0.0	100.0	3.8	111
Central	54.4	38.8	5.2	1.7	100.0	11.3	98	46.8	39.2	12.6	1.4	100.0	9.8	76
Greater Accra	59.6	36.3	4.1	0.0	100.0	11.1	210	44.7	39.6	15.7	0.0	100.0	7.0	129
Volta	77.7	18.9	3.4	0.0	100.0	11.2	130	58.0	36.4	5.6	0.0	100.0	3.7	90
Eastern	66.6	28.7	4.3	0.4	100.0	7.3	239	72.0	26.2	1.9	0.0	100.0	5.3	139
Ashanti	56.4	22.0	20.6	0.9	100.0	11.2	412	54.1	32.4	13.5	0.0	100.0	8.0	220
Brong Ahafo	56.7	18.8	24.5	0.0	100.0	3.6	251	59.8	29.6	10.6	0.0	100.0	4.7	153
Northern	75.6	14.0	9.6	0.8	100.0	7.7	181	61.5	29.9	8.6	0.0	100.0	9.0	137
Upper East	35.0	63.5	1.5	0.0	100.0	7.5	139	66.4	32.2	1.4	0.0	100.0	5.2	61
Upper West	73.7	20.5	5.8	0.0	100.0	9.2	58	52.9	28.5	18.6	0.0	100.0	11.2	44
Wealth quintile														
Lowest	58.1	37.2	4.7	0.0	100.0	7.4	229	62.0	28.2	9.9	0.0	100.0	7.0	118
Second	64.4	23.4	11.4	0.8	100.0	7.3	285	61.2	28.0	10.8	0.0	100.0	7.9	166
Middle	60.0	24.8	14.9	0.2	100.0	7.3	370	58.5	29.8	11.7	0.0	100.0	6.0	181
Fourth	63.5	23.2	13.3	0.0	100.0	11.0	490	57.3	36.6	5.9	0.3	100.0	5.7	343
Highest	62.0	26.0	11.2	0.8	100.0	7.7	533	52.8	36.5	10.7	0.0	100.0	7.2	354
Total 15-49	61.9	26.0	11.7	0.4	100.0	7.7	1,908	57.1	33.4	9.4	0.1	100.0	7.1	1,161
50-59	na	na	na	na	na	na	na	56.1	33.9	10.0	0.0	100.0	5.3	194
Total 15-59	na	na	na	na	na	na	na	57.0	33.5	9.5	0.1	100.0	7.1	1,355

na = Not applicable

Table 3.11 shows that the vast majority of the respondents insured with the N/DHIS did have to pay out of pocket for drugs and services at some time before the survey. Only 6 percent of respondents said they did not pay out of pocket. Differences across subgroups by background characteristics are small. Women in the Eastern region, men in the Western region, and those in the highest wealth quintiles are the least likely to pay out of pocket.

Table 3.11 Out-of-pocket payment for drugs and services by respondents insured with N/DHIS

Percent distribution of N/DHIS insured women and men age 15-49 by whether they made out-of-pocket payments for drugs and services, according to background characteristics, Ghana 2008

Background characteristic	Women						Men				
	Out-of-pocket payments						Out-of-pocket payments				
	Yes	No	Some-times	Missing	Total	Number of women	Yes	No	Some-times	Total	Number of men
Age											
15-19	4.2	5.1	90.5	0.2	100.0	379	9.1	3.7	87.3	100.0	308
20-24	13.1	5.5	81.4	0.0	100.0	297	18.1	3.1	78.8	100.0	159
25-29	17.0	5.3	77.2	0.5	100.0	335	13.7	4.4	81.9	100.0	128
30-34	9.4	7.1	82.9	0.6	100.0	269	19.9	9.3	70.8	100.0	181
35-39	12.3	7.1	80.7	0.0	100.0	268	20.9	11.9	67.2	100.0	163
40-44	14.7	6.5	78.8	0.0	100.0	202	15.4	10.3	74.3	100.0	121
45-49	13.8	4.7	80.8	0.7	100.0	158	20.7	3.3	76.0	100.0	102
Employment (past 12 months)											
Not employed	7.4	4.7	87.5	0.5	100.0	424	10.1	4.0	85.9	100.0	271
Employed for cash	12.7	6.7	80.4	0.3	100.0	1,252	18.0	8.4	73.6	100.0	730
Employed not for cash	13.8	3.8	82.4	0.0	100.0	229	15.7	1.0	83.3	100.0	160
Marital status											
Never married	9.5	5.9	84.6	0.0	100.0	571	11.5	4.0	84.6	100.0	554
Married or living together	12.6	5.9	81.1	0.3	100.0	1,190	20.3	8.6	71.1	100.0	577
Divorced/separated/ widowed	11.7	5.6	82.0	0.8	100.0	147	(11.1)	(6.3)	(82.6)	100.0	30
Residence											
Urban	12.6	6.5	80.4	0.4	100.0	996	17.7	6.5	75.9	100.0	616
Rural	10.5	5.1	84.2	0.1	100.0	912	13.8	6.2	80.0	100.0	545
Region											
Western	13.7	0.5	85.8	0.0	100.0	191	10.5	18.9	70.6	100.0	111
Central	8.1	3.4	87.4	1.1	100.0	98	7.8	3.4	88.8	100.0	76
Greater Accra	17.7	7.5	74.0	0.8	100.0	210	28.9	10.3	60.8	100.0	129
Volta	39.1	0.7	59.5	0.7	100.0	130	35.5	8.3	56.1	100.0	90
Eastern	9.2	14.6	76.2	0.0	100.0	239	10.6	4.1	85.3	100.0	139
Ashanti	9.5	8.0	82.2	0.3	100.0	412	13.1	3.9	82.9	100.0	220
Brong Ahafo	6.7	8.1	85.2	0.0	100.0	251	4.7	5.4	89.9	100.0	153
Northern	6.6	1.0	92.4	0.0	100.0	181	24.0	3.8	72.2	100.0	137
Upper East	3.4	0.4	95.9	0.3	100.0	139	12.8	1.9	85.3	100.0	61
Upper West	9.2	0.7	90.1	0.0	100.0	58	12.3	0.8	87.0	100.0	44
Wealth quintile											
Lowest	6.4	1.5	92.1	0.0	100.0	229	13.9	5.0	81.2	100.0	118
Second	10.3	7.5	81.8	0.3	100.0	285	10.6	4.7	84.8	100.0	166
Middle	10.1	4.5	85.5	0.0	100.0	370	14.9	4.3	80.9	100.0	181
Fourth	11.4	6.9	81.3	0.3	100.0	490	15.0	6.0	78.9	100.0	343
Highest	15.8	6.9	76.8	0.5	100.0	533	20.2	8.9	70.8	100.0	354
Total 15-49	11.6	5.9	82.2	0.3	100.0	1,908	15.8	6.3	77.8	100.0	1,161
50-59	na	na	na	na	na	na	16.3	7.9	75.8	100.0	194
Total 15-59	na	na	na	na	na	na	15.9	6.6	77.5	100.0	1,355

Note: Total includes respondents with information missing on employment who are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable

Women and men insured with the N/DHIS were also asked whether there were any services they needed from a health provider that were not covered by the N/DHIS. Table 3.12 shows that more men than women reported that they needed additional services that were not covered by the N/DHIS (26 and 17 percent, respectively). A similar proportion of women (27 percent) and men (28 percent) expressed a need for laboratory services. Surprisingly, more men (32 percent) than women (6 percent) reported needing coverage for postnatal care (data not shown separately). Women in their 20s, those living in urban areas, women in the Ashanti and Volta regions, and those in the two highest wealth quintiles are more likely than other women to report the need for services not covered by the N/DHIS insurance. The proportion of men who reported the need for additional coverage is high among men employed for cash and currently married men, and generally increases with age and wealth status. Reported need for additional insurance coverage is especially high among men in the Volta and Ashanti regions (40 and 37 percent, respectively).

Table 3.12 Reported need for health services not covered by N/DHIS

Percent distribution of women and men age 15-49 by reported need for health services that are not covered by N/DHIS, according to background characteristics, Ghana 2008

	Women					Men				
	Need health services not covered by N/DHIS:					Need health services not covered by N/DHIS:				
Background characteristic	Yes	No	Missing	Total	Number of women	Yes	No	Missing	Total	Number of men
Age										
15-19	11.2	88.5	0.2	100.0	379	21.9	78.1	0.0	100.0	308
20-24	19.5	80.5	0.0	100.0	297	19.9	80.1	0.0	100.0	159
25-29	22.9	76.6	0.5	100.0	335	28.2	70.9	0.9	100.0	128
30-34	18.8	81.2	0.0	100.0	269	29.3	70.7	0.0	100.0	181
35-39	18.6	81.4	0.0	100.0	268	29.9	70.1	0.0	100.0	163
40-44	15.4	84.6	0.0	100.0	202	33.6	66.4	0.0	100.0	121
45-49	15.0	84.4	0.6	100.0	158	28.5	71.5	0.0	100.0	102
Employment (past 12 months)										
Not employed	16.2	83.5	0.2	100.0	424	17.5	82.0	0.4	100.0	271
Employed for cash	18.1	81.7	0.2	100.0	1,252	30.0	70.0	0.0	100.0	730
Employed not for cash	16.1	83.9	0.0	100.0	229	25.1	74.9	0.0	100.0	160
Marital status										
Never married	16.4	83.6	0.0	100.0	571	21.7	78.1	0.2	100.0	554
Married or living together	18.2	81.5	0.2	100.0	1,190	31.3	68.7	0.0	100.0	577
Divorced/separated/ widowed	14.9	84.5	0.6	100.0	147	(19.4)	(80.6)	(0.0)	100.0	30
Residence										
Urban	21.4	78.3	0.4	100.0	996	26.7	73.1	0.2	100.0	616
Rural	13.1	86.9	0.0	100.0	912	26.0	74.0	0.0	100.0	545
Region										
Western	15.0	85.0	0.0	100.0	191	21.1	78.9	0.0	100.0	111
Central	17.6	81.4	1.0	100.0	98	25.7	74.3	0.0	100.0	76
Greater Accra	21.3	77.8	0.8	100.0	210	21.4	78.6	0.0	100.0	129
Volta	22.8	77.2	0.0	100.0	130	40.4	59.6	0.0	100.0	90
Eastern	18.4	81.2	0.4	100.0	239	29.3	70.7	0.0	100.0	139
Ashanti	26.7	73.3	0.0	100.0	412	36.5	63.0	0.5	100.0	220
Brong Ahafo	2.4	97.6	0.0	100.0	251	17.0	83.0	0.0	100.0	153
Northern	19.5	80.5	0.0	100.0	181	19.7	80.3	0.0	100.0	137
Upper East	6.4	93.6	0.0	100.0	139	26.6	73.4	0.0	100.0	61
Upper West	13.7	86.3	0.0	100.0	58	20.0	80.0	0.0	100.0	44
Wealth quintile										
Lowest	7.2	92.8	0.0	100.0	229	23.8	76.2	0.0	100.0	118
Second	11.6	88.4	0.0	100.0	285	21.8	78.2	0.0	100.0	166
Middle	14.9	84.8	0.2	100.0	370	24.4	75.6	0.0	100.0	181
Fourth	20.1	79.9	0.0	100.0	490	25.2	74.8	0.0	100.0	343
Highest	24.2	75.3	0.5	100.0	533	31.6	68.1	0.3	100.0	354
Total 15-49	17.4	82.4	0.2	100.0	1,908	26.4	73.5	0.1	100.0	1,161
50-59	na	na	na	na	na	34.0	66.0	0.0	100.0	194
Total 15-59	na	na	na	na	na	27.5	72.4	0.1	100.0	1,355

Note: Total includes respondents with information missing on employment who are not shown separately. Figures in parentheses are based on 25-49 unweighted cases
na = Not applicable

Table 3.13 presents data on client satisfaction among respondents insured with the N/DHIS. Half of men and women insured with the N/DHIS think that the N/DHIS card holders get better service than other clients. About one in ten insured respondents think that the N/DHIS card holders get worse service than other clients. Respondents in the wealthiest households, who generally have higher expectation of quality services, have the highest proportion of client dissatisfaction. For example, 15 percent of men in the highest wealth quintile, compared with 8 percent of men in the lowest wealth quintile think that the N/DHIS card holders get worse service than other clients. A similar pattern is seen for women. Client dissatisfaction is especially high among respondents age 25-29 and among those in the Central and Greater Accra regions (25 and 17 percent, respectively for men and 18 percent each for women).

Table 3.13 N/DHIS card holders' perceived quality of services received

Percent distribution of N/DHIS insured women and men age 15-49 by perceived quality of services received compared with other clients, according to background characteristics, Ghana 2008

	Women							Men						
	Compared with other clients, N/DHIS card holders receive services that are:							Compared with other clients, N/DHIS card holders receive services that are:						
Background characteristic	Better	Same	Worse	Don't know/ not sure	Missing	Total	Number of women	Better	Same	Worse	Don't know/ not sure	Missing	Total	Number of men
Age														
15-19	46.4	40.2	7.8	5.6	0.0	100.0	379	53.0	32.7	8.7	5.2	0.5	100.0	308
20-24	43.7	43.4	9.8	3.0	0.0	100.0	297	52.4	30.2	13.6	3.9	0.0	100.0	159
25-29	44.3	39.6	14.1	1.2	0.8	100.0	335	49.7	25.7	21.6	3.0	0.0	100.0	128
30-34	47.8	41.6	8.2	2.3	0.0	100.0	269	48.1	42.3	9.2	0.4	0.0	100.0	181
35-39	52.4	38.3	7.6	1.7	0.0	100.0	268	52.8	35.9	10.6	0.8	0.0	100.0	163
40-44	42.9	40.2	12.2	4.1	0.6	100.0	202	54.1	35.6	7.6	2.7	0.0	100.0	121
45-49	48.2	36.4	8.7	6.7	0.0	100.0	158	55.0	30.6	8.4	5.8	0.2	100.0	102
Employment (past 12 months)														
Not employed	50.8	35.7	9.1	4.4	0.0	100.0	424	57.4	28.6	10.5	2.9	0.5	100.0	271
Employed for cash	43.2	43.6	10.2	2.8	0.3	100.0	1,252	47.0	37.5	12.3	3.2	0.0	100.0	730
Employed not for cash	55.4	30.8	9.2	4.6	0.0	100.0	229	65.7	24.7	5.7	3.8	0.1	100.0	160
Marital status														
Never married	43.2	43.3	8.9	4.6	0.0	100.0	571	52.5	31.5	11.3	4.5	0.3	100.0	554
Married or living together	48.3	38.3	10.1	2.9	0.3	100.0	1,190	52.2	35.2	10.6	1.9	0.0	100.0	577
Divorced/separated/ widowed	43.5	43.7	10.8	1.9	0.0	100.0	147	(42.1)	(41.7)	(12.1)	(4.1)	(0.0)	100.0	30
Residence														
Urban	44.6	41.9	11.0	2.3	0.2	100.0	996	49.5	33.8	12.5	4.0	0.2	100.0	616
Rural	48.4	38.4	8.5	4.5	0.2	100.0	912	54.9	33.4	9.3	2.3	0.0	100.0	545
Region														
Western	58.4	33.7	5.6	2.3	0.0	100.0	191	65.4	21.5	12.3	0.8	0.0	100.0	111
Central	31.4	42.3	18.1	8.2	0.0	100.0	98	30.8	39.3	24.8	5.1	0.0	100.0	76
Greater Accra	27.9	52.3	17.5	1.5	0.8	100.0	210	38.8	39.0	17.4	4.8	0.0	100.0	129
Volta	44.9	43.4	6.5	5.2	0.0	100.0	130	43.1	52.1	2.4	2.4	0.0	100.0	90
Eastern	23.9	68.0	6.6	1.2	0.4	100.0	239	54.9	35.8	7.6	1.6	0.0	100.0	139
Ashanti	65.7	26.6	5.2	2.5	0.0	100.0	412	42.7	46.6	10.0	0.0	0.6	100.0	220
Brong Ahafo	37.7	48.6	12.2	1.0	0.5	100.0	251	62.8	24.0	8.2	4.9	0.0	100.0	153
Northern	54.8	21.5	16.8	7.0	0.0	100.0	181	64.8	12.2	13.3	9.7	0.0	100.0	137
Upper East	52.3	35.7	5.4	6.6	0.0	100.0	139	52.3	43.2	4.5	0.0	0.0	100.0	61
Upper West	56.4	23.2	12.6	7.7	0.0	100.0	58	72.0	16.6	9.0	1.9	0.5	100.0	44
Wealth quintile														
Lowest	52.2	34.0	7.6	6.2	0.0	100.0	229	62.1	24.6	7.9	5.4	0.0	100.0	118
Second	51.6	35.0	9.2	3.8	0.5	100.0	285	59.2	32.3	5.4	2.9	0.1	100.0	166
Middle	43.8	44.0	8.7	3.3	0.3	100.0	370	52.1	33.6	10.4	3.9	0.0	100.0	181
Fourth	43.9	42.3	11.2	2.6	0.0	100.0	490	51.2	34.3	10.6	3.4	0.4	100.0	343
Highest	45.3	41.2	10.5	2.6	0.3	100.0	533	46.1	36.6	15.2	2.0	0.0	100.0	354
Total 15-49	46.4	40.2	9.8	3.4	0.2	100.0	1,908	52.0	33.6	11.0	3.2	0.1	100.0	1,161
50-59	na	na	na	na	na	na	na	58.7	28.6	10.8	1.9	0.0	100.0	194
Total 15-59	na	na	na	na	na	na	na	53.0	32.9	11.0	3.0	0.1	100.0	1,355

Note: Total includes respondents with information missing on employment who are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable

Table 3.14 presents respondents' opinions on the quality of services received the last time the insured respondent was treated at a health facility. Overall, 82 percent of women and 77 percent of men with N/DHIS coverage said that the services were good the last time they were treated at a health facility. Women in the Greater Accra region and men in the Northern region were less likely to say that the services received the last time they were treated at a clinic or hospital were good (67 percent each), compared with over 90 percent of insured respondents in the Western region. Only 9 percent of women and 12 percent of men complained that the waiting period was too long, and an even smaller proportion (4 percent) said that they did not receive enough information about their illness and treatment from the health provider. Women in the highest wealth quintile were less likely than other women to say that the services were good, and more likely to say that the waiting period was too long.

Table 3.14 Client satisfaction

Percent distribution of N/DHIS insured women and men age 15-49 by client satisfaction with most recent visit to a clinic or hospital for treatment, and problem (if any) that occurred during visit, according to background characteristics, Ghana 2008

	Women								Men							
	Client satisfaction and problem during visit								Client satisfaction and problem during visit							
	Satisfied	Not satisfied							Satisfied	Not satisfied						
Background characteristic	Good service	Waiting time too long	Staff not polite	Did not receive enough infor-mation	Other	Missing	Total	Number of women	Good service	Waiting time too long	Staff not polite	Did not receive enough infor-mation	Other	Missing	Total	Number of men
Age																
15-19	79.8	6.2	1.8	3.4	8.3	0.4	100.0	379	80.3	11.8	0.7	1.7	5.0	0.5	100.0	308
20-24	81.7	10.6	0.1	3.8	2.4	1.3	100.0	297	70.7	12.6	3.4	5.1	8.3	0.0	100.0	159
25-29	80.2	9.4	1.8	5.6	1.6	1.3	100.0	335	70.3	12.6	4.0	5.5	7.6	0.0	100.0	128
30-34	83.5	11.9	1.2	1.0	2.0	0.4	100.0	269	78.2	10.7	3.3	4.6	3.3	0.0	100.0	181
35-39	85.5	7.0	0.7	4.0	1.6	1.1	100.0	268	80.3	10.8	0.5	5.5	2.9	0.0	100.0	163
40-44	83.1	7.3	2.0	2.4	2.5	2.7	100.0	202	73.6	14.5	1.6	3.7	6.6	0.0	100.0	121
45-49	82.1	6.8	1.5	3.4	4.5	1.8	100.0	158	78.5	11.4	2.3	2.7	5.2	0.0	100.0	102
Employment (past 12 months)																
Not employed	82.8	5.7	1.2	3.9	5.5	1.0	100.0	424	78.5	10.3	1.7	2.2	6.7	0.5	100.0	271
Employed for cash	82.6	9.5	1.4	3.3	2.1	1.1	100.0	1,252	75.7	12.5	2.3	4.9	4.5	0.0	100.0	730
Employed not for cash	78.1	8.1	1.1	3.8	7.3	1.5	100.0	229	78.2	11.9	1.2	1.8	6.8	0.0	100.0	160
Marital status																
Never married	81.1	6.2	1.7	4.2	5.8	1.0	100.0	571	76.8	12.0	2.2	2.9	5.8	0.3	100.0	554
Married or living together	81.8	9.9	1.1	3.5	2.5	1.2	100.0	1,190	76.4	12.1	1.8	4.9	4.7	0.0	100.0	577
Divorced/separated/ widowed	87.9	6.8	1.2	0.6	1.8	1.7	100.0	147	(79.7)	(6.8)	(2.4)	(2.6)	(8.6)	(0.0)	100.0	30
Residence																
Urban	80.9	9.7	1.3	3.6	3.7	0.8	100.0	996	75.0	11.7	2.5	4.6	5.9	0.2	100.0	616
Rural	83.3	7.2	1.3	3.4	3.2	1.6	100.0	912	78.6	12.2	1.5	3.0	4.7	0.0	100.0	545
Region																
Western	95.5	0.8	0.0	3.0	0.3	0.4	100.0	191	91.4	3.4	1.6	0.8	2.8	0.0	100.0	111
Central	76.7	10.0	0.0	3.1	10.2	0.0	100.0	98	75.0	9.5	1.9	3.7	10.0	0.0	100.0	76
Greater Accra	67.3	16.3	4.0	7.2	3.8	1.4	100.0	210	72.9	10.8	5.5	3.3	7.4	0.0	100.0	129
Volta	79.1	8.2	0.8	5.4	6.5	0.0	100.0	130	73.7	13.4	0.0	8.6	4.3	0.0	100.0	90
Eastern	81.9	10.8	0.8	2.5	2.6	1.4	100.0	239	78.0	16.1	4.3	0.5	1.1	0.0	100.0	139
Ashanti	83.5	8.6	1.4	2.4	2.2	1.8	100.0	412	70.4	19.2	1.7	5.9	2.1	0.6	100.0	220
Brong Ahafo	90.0	3.3	1.4	2.8	1.5	1.1	100.0	251	84.7	8.0	0.0	3.8	3.6	0.0	100.0	153
Northern	76.1	7.8	1.9	3.5	8.7	2.0	100.0	181	67.3	10.3	1.4	5.5	15.5	0.0	100.0	137
Upper East	83.0	12.4	0.0	2.4	1.7	0.5	100.0	139	79.9	12.0	2.2	1.6	4.3	0.0	100.0	61
Upper West	79.1	10.7	1.1	5.1	3.4	0.5	100.0	58	84.1	7.1	1.0	2.1	5.8	0.0	100.0	44
Wealth quintile																
Lowest	80.1	8.0	0.9	3.9	5.6	1.6	100.0	229	74.1	16.4	0.2	3.1	6.2	0.0	100.0	118
Second	85.8	6.0	1.7	2.9	2.5	1.2	100.0	285	82.5	6.4	2.2	1.7	7.2	0.0	100.0	166
Middle	84.4	6.4	1.0	3.3	3.7	1.2	100.0	370	78.6	11.4	0.3	5.8	4.0	0.0	100.0	181
Fourth	84.7	8.7	0.3	3.7	1.9	0.6	100.0	490	73.7	12.1	2.3	5.7	5.8	0.4	100.0	343
Highest	76.9	11.5	2.4	3.6	4.3	1.4	100.0	533	76.8	13.2	3.2	2.3	4.5	0.0	100.0	354
Total 15-49	82.1	8.5	1.3	3.5	3.5	1.2	100.0	1,908	76.7	11.9	2.0	3.8	5.4	0.1	100.0	1,161
50-59	na	na	na	na	na	na	na	na	76.8	9.9	4.6	3.7	4.4	0.4	100.0	194
Total 15-59	na	na	na	na	na	na	na	na	76.7	11.6	2.4	3.8	5.2	0.2	100.0	1,355

Note: Total includes respondents with information missing on employment who are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.
na = Not applicable

3.9 KNOWLEDGE AND ATTITUDE CONCERNING TUBERCULOSIS

Tuberculosis is primarily caused by a bacteria called *Mycobacterium tuberculosis.*[2] The disease usually affects the lungs, although other organs are involved in up to one-third of cases. If properly treated, tuberculosis caused by drug-susceptible strains is curable in virtually all cases. If untreated, more than half the cases may be fatal within five years. Transmission is usually airborne through the spread of droplets produced when patients with infectious pulmonary tuberculosis cough. Tuberculosis is a major global health problem and is currently responsible for the deaths of about two million people each year.

Tuberculosis is a significant public health problem in Ghana. The 2008 GDHS collected information on respondent's knowledge and attitudes concerning tuberculosis (TB). Tables 3.15.1 and 3.15.2 show the percentage of women and men who have heard of TB, and among those who have heard of TB, the percentage who know that TB is spread through the air by coughing, the percentage who believe that TB can be cured, and the percentage who would want a family member's TB to be kept secret.

Table 3.15.1 Knowledge and attitudes concerning tuberculosis: Women

Percentage of women age 15-49 who have heard of tuberculosis (TB), and among women who have heard of TB, the percentages who know that TB is spread through the air by coughing, the percentage who believe that TB can be cured, and the percentage who would want to keep secret that a family member has TB, by background characteristics, Ghana 2008

	All women		Women who have heard of TB:			
Background characteristic	Percentage who have heard of TB	Number of women	Percentage who report that TB is spread through the air by coughing	Percentage who believe that TB can be cured	Percentage who would want a family member's TB kept secret	Number of women
Age						
15-19	81.9	1,025	73.0	82.6	42.1	840
20-24	87.6	878	74.8	83.9	34.8	769
25-29	90.2	832	72.9	86.1	28.6	751
30-34	87.9	644	70.0	83.6	30.0	566
35-39	89.6	638	70.3	84.2	28.0	572
40-44	90.9	470	68.8	85.6	26.5	427
45-49	88.6	429	70.9	84.6	21.5	380
Residence						
Urban	93.9	2,383	79.8	88.5	32.6	2,239
Rural	81.6	2,533	63.4	79.6	30.6	2,066
Region						
Western	86.1	447	72.0	86.0	42.2	385
Central	86.6	424	49.9	86.8	41.2	367
Greater Accra	93.1	853	85.5	90.3	22.8	794
Volta	95.5	431	77.3	74.3	10.9	412
Eastern	91.9	483	75.5	78.5	34.2	444
Ashanti	93.7	1,011	72.9	86.6	32.5	947
Brong Ahafo	87.2	425	59.6	85.3	53.7	371
Northern	64.9	467	56.4	77.8	21.3	303
Upper East	75.5	253	83.9	85.2	28.7	191
Upper West	75.3	122	68.0	77.7	47.1	92
Education						
No education	69.9	1,042	59.3	77.2	25.5	729
Primary	81.3	988	62.0	77.0	32.4	802
Middle/JSS	94.7	2,039	72.8	85.0	34.3	1,930
Secondary+	99.5	844	90.5	95.4	30.2	840
Wealth quintile						
Lowest	68.0	783	60.7	73.9	27.1	532
Second	82.5	900	58.2	78.0	30.8	743
Middle	90.5	979	67.5	85.8	32.7	886
Fourth	93.1	1,119	77.2	84.5	35.0	1,042
Highest	97.1	1,135	85.4	92.0	30.2	1,102
Total	87.6	4,916	72.0	84.2	31.6	4,305

Note: Total includes women with information missing on education who are not shown separately.

[2] Bovine tuberculosis was eliminated by the introduction of pasteurization. In Ghana, any commercially available animal milk is pasteurized, and milk products available for human consumption are made from pasteurized milk.

Nearly nine in ten women and men in Ghana have heard of TB. The youngest respondents and those in rural areas are less likely than others to have heard of TB. Similarly, respondents with less education and those in households in the lowest wealth quintile are less likely to know about TB. Among women and men who have heard of TB, a high proportion of the respondents know that TB is spread through the air by coughing (72 percent of women and 79 percent of men). At least 84 percent of respondents know that TB can be cured. The knowledge that TB can be cured is generally lower among the youngest respondents, those with less education, and those in the lower wealth quintiles.

Some amount of stigma is attached to TB. For example, almost one-third of women and one-fifth of men said that if a family member had TB, they would want it to remain a secret.

Table 3.15.2 Knowledge and attitude concerning tuberculosis: Men

Percentage of men age 15-49 who have heard of tuberculosis (TB), and among men who have heard of TB, the percentages who know that TB is spread through the air by coughing, the percentage who believe that TB can be cured, and the percentage who would want to keep secret that a family member has TB, by background characteristics, Ghana 2008

	All men		Men who have heard of TB:			
Background characteristic	Percentage who have heard of TB	Number of men	Percentage who report that TB is spread through the air by coughing	Percentage who believe that TB can be cured	Percentage who would want a family member's TB kept secret	Number of men
Age						
15-19	84.5	911	77.5	87.5	26.9	770
20-24	91.2	704	82.8	91.9	23.8	642
25-29	92.7	624	80.8	88.8	20.9	578
30-34	93.4	533	76.4	90.8	21.6	498
35-39	94.1	528	77.6	90.2	15.1	497
40-44	94.8	394	77.5	92.1	13.3	373
45-49	95.6	364	75.9	88.2	17.5	348
Residence						
Urban	95.6	1,866	85.1	91.8	23.6	1,783
Rural	87.7	2,191	72.7	88.0	18.4	1,923
Region						
Western	93.4	403	65.1	88.3	30.0	377
Central	95.4	326	73.0	90.1	24.8	311
Greater Accra	95.9	649	87.7	91.0	15.1	622
Volta	94.2	373	81.7	89.6	6.0	351
Eastern	89.3	411	84.8	83.1	22.7	367
Ashanti	96.5	785	78.0	94.6	28.9	758
Brong Ahafo	90.9	347	76.8	88.5	22.0	315
Northern	72.3	435	75.8	86.8	16.8	315
Upper East	89.0	219	81.6	93.6	6.7	195
Upper West	87.7	108	71.8	82.1	32.1	95
Education						
No education	75.8	540	66.6	87.4	13.2	410
Primary	81.9	619	66.3	80.9	23.1	507
Middle/JSS	94.4	1,721	76.6	89.1	23.1	1,624
Secondary+	99.0	1,167	91.2	95.5	19.5	1,156
Wealth quintile						
Lowest	77.6	708	67.8	85.7	16.2	550
Second	87.2	738	69.8	87.7	20.9	643
Middle	93.5	699	75.0	85.6	21.8	654
Fourth	96.3	974	83.9	92.5	23.3	938
Highest	98.1	939	88.6	94.0	20.5	921
Total 15-49	91.3	4,058	78.7	89.8	20.9	3,706
50-59	95.8	510	77.4	90.9	12.4	489
Total 15-59	91.8	4,568	78.5	89.9	19.9	4,195

Note: Total includes men with information missing on education who are not shown separately.

3.10 SMOKING

Smoking is a known risk factor for cardiovascular disease. It also causes lung and other forms of cancer, and contributes to the severity of pneumonia, emphysema, and chronic bronchitis. Smoking may also have an impact on individuals who are exposed to the smoke second-hand. For example, inhaling second-hand smoke may adversely affect children's growth and cause childhood illness, especially respiratory diseases. Because smoking is an acquired behaviour that is chosen by individuals, all morbidity and mortality caused by smoking is preventable.

To measure the extent of smoking among Ghanaian adults, women and men who were interviewed in the 2008 GDHS were asked if they currently smoke cigarettes or use other forms of tobacco.

Tables 3.16.1 and 3.16.2 show the distribution of women and men who smoke cigarettes, or a pipe, or use tobacco. Smoking in Ghana is higher among men than women. Almost all women and 93 percent of men say they do not use tobacco at all and only 6 percent of men age 15-49 said they currently smoke cigarettes.

Young men are less likely to smoke than men in their 30s and 40s. Men in urban areas are less likely to smoke cigarettes than men in rural areas. Among men who smoke cigarettes, 37 percent say they smoke 3-5 cigarettes per day, and 6 percent say they smoke 10 or more cigarettes per day (data not shown).

Table 3.16.1 Use of tobacco: Women

Percentage of women age 15-49 who smoke cigarettes or use other tobacco products, by background characteristics and maternity status, Ghana 2008

Background characteristic	Uses tobacco		Does not use tobacco	Number of women
	Cigarettes	Other tobacco		
Age				
15-19	0.1	0.0	99.8	1,025
20-24	0.1	0.0	99.9	878
25-29	0.2	0.0	99.8	832
30-34	0.0	0.0	99.7	644
35-39	0.3	0.5	99.1	638
40-44	0.2	0.7	99.3	470
45-49	0.5	0.7	98.8	429
Maternity status				
Pregnant	0.3	0.2	99.5	360
Breastfeeding (not pregnant)	0.2	0.0	99.8	1,038
Neither	0.2	0.2	99.5	3,517
Residence				
Urban	0.2	0.0	99.8	2,383
Rural	0.1	0.4	99.4	2,533
Region				
Western	0.0	0.3	99.7	447
Central	0.3	0.0	99.3	424
Greater Accra	0.0	0.0	100.0	853
Volta	0.0	0.0	100.0	431
Eastern	0.5	0.1	99.4	483
Ashanti	0.2	0.2	99.6	1,011
Brong Ahafo	0.2	0.0	99.8	425
Northern	0.4	0.9	98.9	467
Upper East	0.2	0.3	99.4	253
Upper West	0.0	1.1	98.9	122
Education				
No education	0.1	0.8	99.0	1,042
Primary	0.3	0.0	99.7	988
Middle/JSS	0.2	0.1	99.7	2,039
Secondary+	0.0	0.0	100.0	844
Wealth quintile				
Lowest	0.2	0.9	99.0	783
Second	0.0	0.3	99.6	900
Middle	0.3	0.0	99.7	979
Fourth	0.2	0.0	99.7	1,119
Highest	0.1	0.0	99.9	1,135
Total	0.2	0.2	99.6	4,916

Note: Total includes women with information missing on education who are not shown separately.

Among men, the highest proportions of current smokers are in the Northern, Upper East, and Upper West regions (12-13 percent). Only 1 percent of men in the Central region are current smokers. Men with the least education and those in the poorest households are more likely to smoke cigarettes than other men (18 and 14 percent, respectively).

The proportion of current cigarette smokers among men age 15-59 has declined slightly over the past five years, from 9 percent in 2003 to 7 percent in 2007.

Table 3.16.2 Use of tobacco: Men

Percentage of men age 15-49 who smoke cigarettes or a pipe or use other tobacco products, by background characteristics, Ghana 2008

Background characteristic	Uses tobacco			Does not use tobacco	Number of men
	Cigarettes	Pipe	Other tobacco		
Age					
15-19	0.4	0.0	0.1	99.3	911
20-24	2.8	0.0	0.3	97.0	704
25-29	5.8	0.2	1.2	93.9	624
30-34	8.5	0.4	2.3	90.8	533
35-39	11.0	0.2	3.3	87.9	528
40-44	12.1	0.0	4.4	86.6	394
45-49	11.4	0.5	3.0	87.2	364
Residence					
Urban	4.5	0.0	1.1	95.2	1,866
Rural	7.7	0.3	2.2	91.4	2,191
Region					
Western	2.8	0.0	0.9	97.2	403
Central	0.8	0.0	0.3	98.9	326
Greater Accra	5.3	0.0	1.2	94.1	649
Volta	6.8	0.0	1.4	92.3	373
Eastern	3.5	0.0	0.5	96.2	411
Ashanti	5.3	0.1	1.3	94.6	785
Brong Ahafo	8.9	0.2	1.9	90.8	347
Northern	11.9	0.6	5.4	85.8	435
Upper East	11.6	0.8	3.9	86.0	219
Upper West	12.9	0.0	0.7	87.1	108
Education					
No education	17.7	0.6	6.8	79.6	540
Primary	8.2	0.3	1.7	90.9	619
Middle/JSS	4.0	0.1	0.7	95.8	1,721
Secondary +	3.2	0.0	0.8	96.6	1,167
Wealth quintile					
Lowest	14.4	0.7	4.9	83.1	708
Second	5.9	0.0	1.1	93.9	738
Middle	5.3	0.0	1.0	94.3	699
Fourth	4.7	0.1	1.4	95.1	974
Highest	2.5	0.0	0.5	97.3	939
Total 15-49	6.2	0.2	1.7	93.1	4,058
50-59	16.0	0.6	6.5	81.0	510
Total 15-59	7.3	0.2	2.2	91.8	4,568

Note: Total includes men with information missing on education who are not shown separately.

3.11 ALCOHOL CONSUMPTION

Alcohol abuse is a serious problem in many countries and is of increasing concern in Ghana. Alcohol consumption is considered one of the highest risk factor for death and disability. Potential consequences of alcohol abuse include increased risk of accidents, cirrhosis, hypertension, psychological illnesses, and congenital malformations. Moreover, alcohol consumption aggravates the risk of family problems as well as other social and employment issues such as alcohol addiction, accidents, criminal behaviour, inadvertent injuries, violence, homicide and suicide, road traffic problems.

Because there is lack of consistent information available in the country on alcohol consumption and alcohol abuse, a series of questions related to alcohol consumption were included in the 2008 GDHS. All respondents were asked whether they drink alcoholic beverages, and if yes, how frequently they had consumed alcohol during the past seven days: once, 2-3 times, 4 times or more, or not at all.

Table 3.17.1 shows that 18 percent of women in Ghana drink alcoholic beverages. Alcohol consumption varies by age, employment status, marital status and region. Consumption increases from 7 percent in the age group 15-19 to 26 percent in the age group 45-49. Employed women are twice as likely to drink alcohol (20 percent) as women who are not employed (10 percent). Similarly, formerly married women (26 percent) and currently married women (20 percent) are more likely to drink alcohol than never-married women (11 percent). Urban-rural differences in alcohol consumption are minimal. The highest consumption is found in the Upper West region (37 percent); the lowest consumption of alcoholic beverages is in the Brong Ahafo region (9 percent). By level of education, women with Middle/JSS level of education are least likely to drink alcohol (15 percent) while women with no education (21 percent) and women with the highest education (20 percent) are most likely to drink alcohol. Similarly, women in the lowest and highest wealth quintiles (23 and 21 percent, respectively) are more likely to drink alcohol, compared with women in the second to fourth wealth quintiles (14-16 percent).

In general, women who do drink alcohol do not drink frequently; one-third of women did not drink any alcoholic beverages in the week preceding the survey, 37 percent of women drank alcohol once during the past 7 days, 23 percent drank alcohol 2-3 times in the past week, and 7 percent drank alcohol 4 or more times in the week preceding the survey. Women in their late 30s and late 40s and those in the Eastern (37 percent), Upper West (36 percent), Upper East (34 percent) and Northern (28 percent) regions were the most likely to report consumption of alcohol 2-3 times in the week preceding the survey. Nearly one in five (18 percent) women in the Upper West region drank alcoholic beverages 4 or more times in the week before the survey, compared with about 2 percent of women in the Brong Ahafo region. Less educated women and those in the lowest wealth quintiles were also more likely to drink 2-3 times in the week before the survey than more educated women and women in the higher wealth quintiles.

Table 3.17.2 shows that the proportion of men in Ghana who drink alcoholic beverages (35 percent) is higher than the proportion of women, and men who drink alcohol also tend to drink more frequently than women. Consumption of alcoholic beverages by men increases rapidly from 8 percent in age group 15-19, to 27 percent in age group 20-24, to 44 percent in age group 25-29; then it stabilises with little variation (44-47 percent) through age 39. By their early 40s, over half of men in Ghana drink alcoholic beverages (52 percent).

Among men who drink there is little difference in alcohol consumption by background characteristics such as level of education, wealth quintile, and urban-rural residence; however, the lowest consumption of alcohol is in the Northern region (14 percent). As with women, men who are employed (41 percent) are more likely to drink alcohol than men who are not employed (9 percent), but the difference is considerably larger for men. Similarly, formerly married men (53 percent) and currently married men (47 percent) are more than twice as likely to drink alcohol, compared with never-married men (21 percent).

Table 3.17.1 Use of alcohol: Women

Percentage of women age 15-49 who drink alcoholic beverages and among women who drink alcohol, the number of times they drank alcohol in the 7 days preceding the survey, by background characteristics, Ghana 2008

Background characteristic	Percentage of women who drink alcoholic beverages	Number of women	Among women who drink alcohol, the number of times alcohol was drunk in the past 7 days					
			Once	2-3 times	4 times or more	None	Missing	Number of women
Age								
15-19	6.6	1,025	38.1	12.8	1.1	47.3	0.7	68
20-24	16.7	878	40.6	13.7	3.5	42.0	0.3	146
25-29	16.4	832	39.6	24.9	6.8	28.8	0.0	137
30-34	20.7	644	33.5	20.6	11.2	34.6	0.0	133
35-39	25.3	638	29.2	29.9	11.5	28.6	0.9	162
40-44	22.2	470	40.7	24.1	6.1	28.2	0.8	104
45-49	26.0	429	39.2	28.4	8.2	24.2	0.0	111
Employment (past 12 months)								
Not employed	10.0	1,094	39.8	14.6	3.8	40.1	1.7	110
Employed	19.7	3,822	36.4	23.9	8.0	31.6	0.2	751
Marital status								
Never married	11.0	1,593	38.0	11.3	3.5	46.8	0.3	175
Married or living together	19.8	2,876	36.1	26.4	8.2	28.8	0.5	569
Divorced/separated/widowed	26.3	446	38.6	21.7	9.5	30.1	0.0	117
Residence								
Urban	17.0	2,383	36.4	15.0	4.5	44.2	0.0	404
Rural	18.0	2,533	37.3	29.5	10.1	22.5	0.7	457
Region								
Western	10.6	447	(51.4)	(17.0)	(4.1)	(27.5)	(0.0)	48
Central	16.4	424	21.9	13.5	9.3	55.3	0.0	70
Greater Accra	26.2	853	34.7	14.1	7.2	44.1	0.0	223
Volta	24.3	431	54.8	27.7	6.1	11.3	0.0	105
Eastern	14.2	483	22.8	36.6	10.9	29.8	0.0	69
Ashanti	12.9	1,011	33.0	20.3	3.2	42.5	1.1	131
Brong Ahafo	8.6	425	27.4	21.2	2.4	49.0	0.0	37
Northern	15.2	467	35.1	28.3	11.4	25.2	0.0	71
Upper East	25.0	253	53.9	33.9	6.9	2.5	2.8	63
Upper West	37.3	122	32.7	35.9	18.0	13.5	0.0	46
Education								
No education	21.3	1,042	38.8	31.9	9.5	19.3	0.6	222
Primary	18.0	988	35.4	25.4	14.1	24.8	0.3	178
Middle/JSS	14.5	2,039	39.7	19.0	4.4	36.4	0.5	296
Secondary+	19.5	844	30.6	13.9	2.9	52.6	0.0	165
Wealth quintile								
Lowest	23.3	783	42.2	33.9	7.0	16.1	0.7	183
Second	15.6	900	32.4	30.8	18.0	18.6	0.3	141
Middle	13.5	979	30.3	18.8	8.7	42.2	0.0	133
Fourth	14.7	1,119	40.0	16.4	5.1	38.5	0.0	165
Highest	21.2	1,135	36.8	15.9	2.5	44.2	0.6	241
Total	17.5	4,916	36.8	22.7	7.4	32.7	0.4	861

Note: Total includes women with information missing on employment and education who are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.

Table 3.17.2 Use of alcohol: Men

Percentage of men age 15-49 who drink alcoholic beverages and among men who drink alcohol, the number of times they drank alcohol in the 7 days preceding the survey, by background characteristics, Ghana 2008

Background characteristic	Percentage of men who drink alcoholic beverages	Number of men	Among men who drink alcohol, the number of times alcohol was drunk in the past 7 days					
			Once	2-3 times	4 times or more	None	Missing	Number of men
Age								
15-19	7.5	911	42.6	25.7	4.6	27.2	0.0	69
20-24	26.5	704	33.0	32.5	9.3	25.0	0.2	187
25-29	43.6	624	32.9	35.8	12.4	18.9	0.0	272
30-34	44.2	533	32.0	36.2	15.7	16.1	0.0	235
35-39	47.1	528	25.2	39.7	21.1	14.1	0.0	249
40-44	51.7	394	20.8	45.8	21.0	12.4	0.0	204
45-49	50.8	364	21.5	43.4	25.3	9.8	0.0	185
Employment (past 12 months)								
Not employed	8.7	781	43.3	26.8	6.8	23.2	0.0	68
Employed	40.7	3,276	27.9	38.7	17.1	16.3	0.0	1,332
Marital status								
Never married	20.5	1,936	34.0	32.8	8.3	24.8	0.1	396
Married or living together	46.8	1,950	27.1	39.9	19.6	13.4	0.0	913
Divorced/separated/widowed	53.1	172	20.7	42.5	23.8	13.0	0.0	91
Residence								
Urban	33.4	1,866	33.4	30.4	13.3	22.9	0.0	624
Rural	35.4	2,191	24.8	44.3	19.3	11.6	0.1	777
Region								
Western	32.1	403	21.0	35.2	25.7	18.2	0.0	129
Central	37.0	326	33.7	20.1	18.1	28.2	0.0	121
Greater Accra	40.7	649	33.8	31.7	8.2	26.3	0.0	265
Volta	42.5	373	23.5	42.3	23.4	10.7	0.0	158
Eastern	39.6	411	19.3	53.7	18.3	8.7	0.0	163
Ashanti	33.0	785	26.4	40.9	20.7	11.9	0.0	259
Brong Ahafo	34.4	347	42.4	36.9	9.6	11.2	0.0	119
Northern	14.0	435	43.5	27.7	6.3	22.5	0.0	61
Upper East	39.5	219	22.6	50.0	13.3	14.1	0.0	87
Upper West	35.2	108	25.3	39.0	23.2	11.4	1.1	38
Education								
No education	34.9	540	28.0	40.5	22.1	9.4	0.0	189
Primary	32.3	619	29.1	39.5	20.0	11.2	0.2	200
Middle/JSS	35.3	1,721	26.7	43.1	16.8	13.5	0.0	608
Secondary +	34.1	1,167	31.8	29.1	11.7	27.5	0.0	397
Wealth quintile								
Lowest	35.5	708	26.3	44.0	17.6	12.0	0.0	251
Second	31.9	738	23.2	43.2	24.6	8.9	0.2	235
Middle	33.2	699	21.7	46.2	19.1	13.1	0.0	232
Fourth	32.4	974	32.8	34.8	16.0	16.4	0.0	315
Highest	39.0	939	34.4	28.4	10.0	27.2	0.0	366
Total 15-49	34.5	4,058	28.6	38.1	16.6	16.6	0.0	1,400
50-59	54.4	510	28.1	33.2	27.3	11.3	0.0	278
Total men 15-59	36.7	4,568	28.5	37.3	18.4	15.8	0.0	1,678

Note: Total includes men with information missing on education who are not shown separately.

Men drink alcoholic beverages more often than women. In the week preceding the survey only 17 percent of men did not drink any alcoholic beverages; 29 percent of men drank alcohol once, 38 percent of men drank alcohol 2-3 times, and 17 percent of men drank alcohol 4 or more times.

The proportion of men who drank alcohol 2-3 times in the week preceding the survey increases rapidly with age, from 26 percent in age group 15-19, to 33 percent in age group 20-24, then levels off at about 36-40 percent among men in their 30s, and peaks at 46 percent among men in their early 40s. The proportion of men who drank alcohol 2-3 times in the past week was higher in rural areas (44 percent) than in urban areas (30 percent). It was substantially higher in the Eastern and Upper East regions (54 and 50 percent, respectively). Men in the Central and Northern regions were the least likely to drink alcohol 2-3 times in the past week (20 and 28 percent, respectively). Men with more education and those in the wealthiest households (about 28 percent each) were less likely to drink 2-3 times in the week preceding the survey than less educated men and men in the poorest households (about 40 percent each).

Alcohol consumption 4 or more times in the week preceding the survey was highest among men in the oldest age group (25 percent), men in the Western (26 percent) and Volta (23 percent) regions, men with no education (22 percent), and those in the second wealth quintile (25 percent).

Table 3.18 shows that among men age 15-49 who drink alcohol, 30 percent never get drunk, about two-thirds (65 percent) get drunk sometimes, and 5 percent get drunk often. Men age 45-49 (8 percent), divorced, separated, or widowed men (10 percent), men with no education and men in the middle wealth quintile (7 percent each) are more likely to get drunk often than other men. The highest proportion of men who get drunk often (15 percent) is in the Central region, followed by the Eastern region (10 percent). The national average is 5 percent.

The findings from the 2008 GDHS confirm that drinking alcoholic beverages is higher among men than women and varies substantially across the regions and subgroups.

Table 3.18 Frequency of drunkenness among men

Percentage of men age 15-49 who drink alcoholic beverages and among men who drink alcohol, the frequency with which they get drunk (often, sometimes, or never), by background characteristics, Ghana 2008

Background characteristic	Percentage of men who drink alcoholic beverages	Number of men	Frequency of drunkenness among men who drink alcohol				
			Often	Sometimes	Never	Missing	Number of men
Age							
15-19	7.5	911	1.9	63.5	33.0	1.6	69
20-24	26.5	704	3.0	67.3	29.5	0.2	187
25-29	43.6	624	1.2	64.1	34.3	0.3	272
30-34	44.2	533	6.4	68.3	25.3	0.0	235
35-39	47.1	528	7.4	57.1	35.4	0.0	249
40-44	51.7	394	6.1	68.1	25.8	0.0	204
45-49	50.8	364	8.0	66.8	25.2	0.0	185
Employment (past 12 months)							
Not employed	8.7	781	5.5	66.2	28.3	0.0	68
Employed	40.7	3,276	5.1	64.8	29.9	0.2	1,332
Marital status							
Never married	20.5	1,936	3.2	64.7	31.5	0.6	396
Married or living together	46.8	1,950	5.4	64.7	29.9	0.0	913
Divorced/separated/widowed	53.1	172	9.8	67.6	22.7	0.0	91
Residence							
Urban	33.4	1,866	3.5	66.4	29.9	0.2	624
Rural	35.4	2,191	6.3	63.8	29.8	0.2	777
Region							
Western	32.1	403	3.7	50.7	45.6	0.0	129
Central	37.0	326	14.6	59.1	26.3	0.0	121
Greater Accra	40.7	649	2.9	65.8	31.3	0.0	265
Volta	42.5	373	2.6	69.7	27.7	0.0	158
Eastern	39.6	411	10.4	70.2	19.4	0.0	163
Ashanti	33.0	785	2.9	82.6	14.2	0.4	259
Brong Ahafo	34.4	347	3.4	62.5	34.1	0.0	119
Northern	14.0	435	7.1	49.7	43.2	0.0	61
Upper East	39.5	219	1.1	49.7	48.3	0.8	87
Upper West	35.2	108	8.0	29.4	60.5	2.0	38
Education							
No education	34.9	540	7.1	58.3	34.6	0.0	189
Primary	32.3	619	5.3	63.3	30.6	0.7	200
Middle/JSS	35.3	1,721	5.4	68.1	26.4	0.2	608
Secondary+	34.1	1,167	3.6	63.8	32.5	0.0	397
Wealth quintile							
Lowest	35.5	708	3.6	57.9	38.0	0.4	251
Second	31.9	738	6.5	67.0	26.3	0.2	235
Middle	33.2	699	7.4	65.7	26.8	0.0	232
Fourth	32.4	974	5.8	68.5	25.4	0.3	315
Highest	39.0	939	3.0	64.8	32.2	0.0	366
Total 15-49	34.5	4,058	5.1	64.9	29.8	0.2	1,400
50-59	54.4	510	12.2	59.5	27.2	1.1	278
Total men 15-59	36.7	4,568	6.2	64.0	29.4	0.3	1,678

Note: Total includes men with information missing on education who are not shown separately.

FERTILITY 4

The Government of Ghana initiated its first National Population Policy in 1969 to manage population resources in a manner consistent with the government's ultimate objective to accelerate the rate of economic development and improve the quality of life of the people. After 25 years, population growth still remained unacceptably high and so the Population Policy was revised in 1994 to include a systematic integration of population in development planning with renewed emphasis on fertility reduction to accelerate economic modernisation, sustainable development, and poverty eradication (NPC, 1994). Since then, Ghana has made substantial progress in reducing fertility. One of the major indicators provided by the DHS surveys in Ghana has been the current fertility rate, which is important for development of population policies and programmes.

This chapter looks at a number of fertility indicators including current fertility levels, trends, and differentials; age at first birth, and teenage pregnancy and motherhood. The analysis is based on the birth histories collected from women age 15-49 interviewed during the survey. To obtain this information, women were first asked a series of questions to determine the total number of live births they had in their lifetime. Then for each live birth, information was collected on the age, sex, and survival status of the child. For dead children, age at death was recorded.

The following measures of current fertility are derived from birth history data:

- **Age-specific fertility rates** (ASFR) are expressed as the number of births per thousand women in a specified age group and represent a valuable measure for assessing the current age pattern of childbearing. They are calculated by dividing the number of live births to women in a specific age group by the number of woman-years lived in that age group.
- **Total fertility rate** (TFR) is defined as the total number of births a woman would have by the end of her childbearing period if she were to pass through those years bearing children at the currently observed age-specific fertility rates. The TFR is obtained by summing the age-specific fertility rates and multiplying by five.
- **General fertility rate** (GFR) is the number of live births occurring during a specified period per 1,000 women.
- **Crude birth rate** (CBR) is the number of births per 1,000 population during a specified period.

The various measures of current fertility are calculated for the three-year period preceding the survey, which roughly corresponds to the calendar period 2006-2008. A three-year period was chosen because it reflects the current fertility situation, and also provides a sufficient number of cases for statistical precision.

4.1 FERTILITY LEVELS AND TRENDS

4.1.1 Fertility Levels

Table 4.1 shows the age-specific fertility rates, total fertility rates, general fertility rates, and crude birth rates for Ghana as a whole and for urban and rural areas. The 2008 GDHS findings indicate that the main childbearing years for Ghanaian women are during their 20s and early 30s. Urban-rural differences in childbearing rates are evident for all age groups, but are especially large in the early 20s. Figure 4.1 shows that fertility among rural women is highest in the age group 20-24 (243 births per 1,000), while among urban women, fertility peaks later in the age group 25-29 (173 births per 1,000).

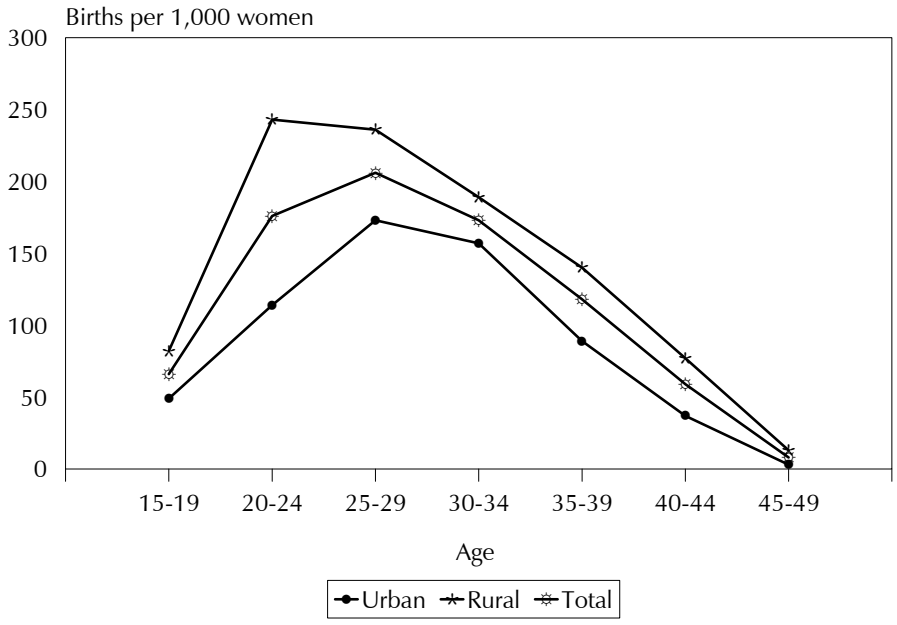
Table 4.1 Current fertility

Age-specific and total fertility rate, the general fertility rate and the crude birth rate for the three years preceding the survey, by residence, Ghana 2008

	Residence		
Age group	Urban	Rural	Total
15-19	49	82	66
20-24	114	243	176
25-29	173	236	206
30-34	157	189	173
35-39	89	140	118
40-44	37	77	59
45-49	3	13	8
TFR (15-49)	3.1	4.9	4.0
GFR	105	165	136
CBR	27.1	33.6	30.8

Notes: Age-specific fertility rates are per 1,000 women. Rates for age group 45-49 may be slightly biased due to truncation. Rates are for the period 1-36 months prior to interview.
TFR: Total fertility rate expressed per woman
GFR: General fertility rate expressed per 1,000 women
CBR: Crude birth rate, expressed per 1,000 population

Figure 4.1 Age-Specific Fertility Rates by Urban-Rural Residence



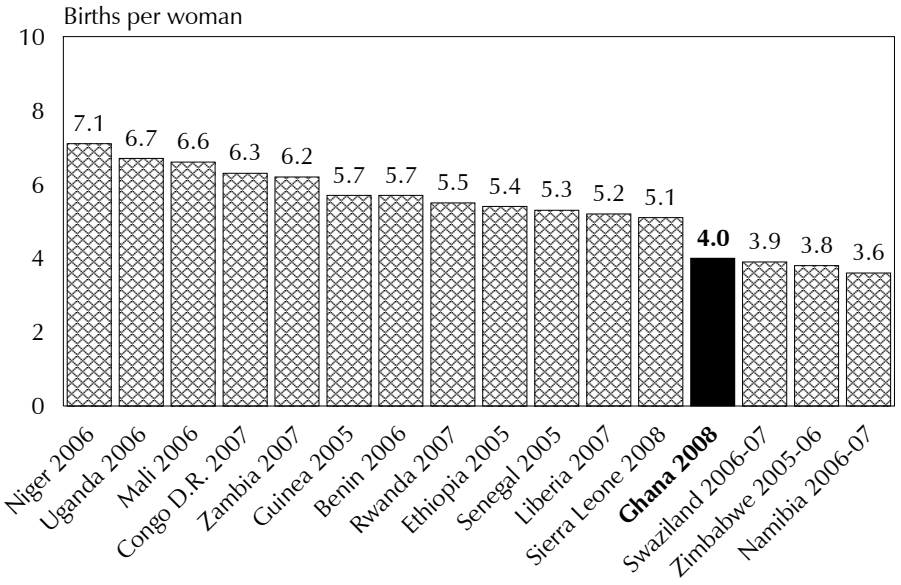
GDHS 2008

The total fertility rate (TFR), which is calculated for women age 15-49, is a useful measure for examining the overall level of fertility. The 2008 findings presented in Table 4.1 indicate that a Ghanaian woman who is at the beginning of her childbearing years will, on average, give birth to 4.0 children by the end of her reproductive period (if fertility levels remain constant at the levels observed in the three-year period preceding the 2008 GDHS). The TFR for rural areas (4.9 births) is higher than the rate for urban areas (3.1 births); however, over the past five years the TFR in rural areas declined from 5.6 to 4.9, while the rate in urban areas remained the same.

The general fertility rate (GFR) for Ghana is 136. This means that for every 1,000 women in the population, there are 136 births. Table 4.1 shows a crude birth rate (CBR) for Ghana of 30.8 per 1,000 population for the period under review. Both measures are based on the birth history for the three-year period preceding the survey.

One of the main targets of the 1994 revised National Population Policy was to reduce the total fertility rate from 5.5 to 5.0 by the year 2000, to 4.0 by 2010, and to 3.0 by 2020 (NPC, 1994). With a TFR of 4.0 in 2008, Ghana has achieved its fertility target two years before the target year (2010). The TFR in Ghana is one of the lowest in sub-Saharan Africa (Figure 4.2).

Figure 4.2 Total Fertility Rates, Selected Sub-Saharan Countries



Note: Rates refer to the three-year period preceding the survey, except for Niger where rate refers to the five-year period preceding the survey

4.1.2 Differentials in Current and Completed Fertility

Table 4.2 presents differentials in the total fertility rate and the percentage of women who are currently pregnant by background characteristics. The percentage currently pregnant provides a useful measure of current fertility. However, it may not capture all pregnant women because some women may be unaware of their pregnancy or reluctant to disclose a pregnancy in its early stages. The table also shows differentials in the mean number of children ever born to women age 40-49, that is, to women who are at the end of their childbearing years, which is a measure of completed or past fertility. The total fertility rate and the mean number of children ever born can be compared to assess the extent of fertility change over the past two decades in Ghana.

There is substantial variation in fertility by region, ranging from a TFR of 2.5 births in Greater Accra to 6.8 births in the Northern region. This means that women in the Northern region have more than twice as many children as women in the Greater Accra region. The TFR is inversely related to women's level of education. The higher the level of education, the fewer the number of children a woman has. For example, the TFR for women with no education is 6.0 births compared with 2.1 births for women with secondary or higher education. A similar inverse relationship is seen by wealth quintile. Fertility declines as household wealth status increases, from 6.5 births among women in the lowest wealth quintile to 2.3 among women in the highest wealth quintile.

Table 4.2 Fertility by background characteristics

Total fertility rate for the three years preceding the survey, percentage of women age 15-49 currently pregnant, and mean number of children ever born to women age 40-49 years, by background characteristics, Ghana 2008

Background characteristic	Total fertility rate	Percentage of women age 15-49 currently pregnant	Mean number of children ever born to women age 40-49
Residence			
Urban	3.1	6.3	4.3
Rural	4.9	8.3	5.9
Region			
Western	4.2	7.5	5.0
Central	5.4	7.8	5.5
Greater Accra	2.5	7.0	3.9
Volta	3.8	6.7	5.0
Eastern	3.6	5.3	4.7
Ashanti	3.6	7.6	5.1
Brong Ahafo	4.1	4.8	5.6
Northern	6.8	12.2	6.9
Upper East	4.1	6.9	5.6
Upper West	5.0	7.1	6.4
Education			
No education	6.0	9.0	6.2
Primary	4.9	7.4	5.6
Middle/JSS	3.5	7.4	4.5
Secondary+	2.1	4.9	3.0
Wealth quintile			
Lowest	6.5	8.6	6.4
Second	4.9	9.1	5.9
Middle	4.0	7.1	5.4
Fourth	3.4	5.9	4.4
Highest	2.3	6.6	3.8
Total	4.0	7.3	5.2

Note: Total fertility rates are for the period 1-36 months preceding the interview.

At the time of the survey, about 7 percent of the women interviewed were pregnant. Rural women were more likely to be pregnant (8 percent) than urban women (6 percent). The highest proportion of current pregnancy was seen in the Northern region (12 percent) while the lowest proportion was in the Brong Ahafo region (5 percent). The percentage of women currently pregnant decreases with increasing level of education, from 9 percent among women with no education, to 7 percent among those with primary or middle/JSS, to 5 percent among women with at least secondary education. Likewise, there are more currently pregnant women in the two lowest wealth quintiles (9 percent each) than in the two highest wealth quintiles (6 and 7 percent, respectively).

Women age 40-49 have given birth to an average of 5.2 children. Comparing this cumulative fertility rate with the TFR indicates that there has been a decline in fertility over time among women in all groups, except the Central and Northern regions, where it has remained the same.

4.1.3 Trends in Fertility

Besides the comparison of current and completed fertility, fertility trends in Ghana can be assessed in several other ways. Fertility trends can be observed using retrospective data from the birth histories collected from respondents in a single survey. The TFR from the 2008 GDHS can also be compared with estimates obtained in earlier surveys or censuses.

Table 4.3 uses information from the retrospective birth histories obtained from GDHS respondents to examine the trends in age-specific fertility rates for successive five-year periods preceding the survey. To calculate these rates, births were classified according to the period of time in which the birth occurred and the mother's age at the time of birth. The age-specific rates are progressively truncated with increasing time before the survey. Because women 50 years and over were not interviewed in the 2008 GDHS, the rates for older age groups become progressively more truncated for periods more distant from the survey date. For example, rates cannot be calculated for women age 45-49 for the period 5-9 years and earlier prior to the survey, because women in that age group would have been 50 years or older at the time of the survey. Partially truncated rates are enclosed in brackets in the table.

Table 4.3 indicates that fertility has fallen substantially in all age groups over time. This decline is most apparent between the periods 15-19 and 10-14 years preceding the survey.

Table 4.3 Trends in age-specific fertility rates

Age-specific fertility rates for five-year periods preceding the survey, by mother's age at the time of the birth, Ghana 2008

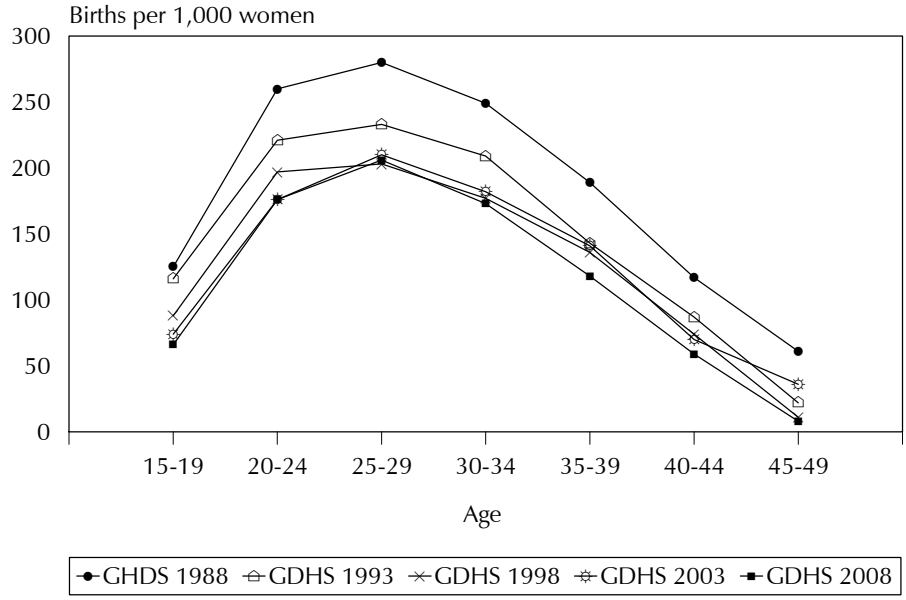
Mother's age at birth	Number of years preceding survey			
	0-4	5-9	10-14	15-19
15-19	70	84	94	110
20-24	171	187	194	216
25-29	207	220	232	237
30-34	178	202	194	[235]
35-39	122	140	[171]	-
40-44	67	[95]	-	
45-49	[13]	-		

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated. Rates exclude the month of interview.

A comparison of the Age-Specific Fertility Rates (ASFR) obtained from the four previous GDHS surveys (1988, 1993, 1998, and 2003) with the ASFR obtained from the 2008 GDHS is shown in Figure 4.3. This offers an opportunity to assess fertility trends by tracking the pattern of recent fertility estimates from the surveys. Direct estimates of fertility for the three years preceding the survey have been used in this comparison because a three-year rate is more robust than rates based on a shorter period of time. Hence, these rates may be slightly different from published rates for 1988, 1993, and 1998, which were based on the five years preceding the survey.

Fertility trends have to be interpreted in the context of data quality and sample size. A discussion of these issues in relation to earlier surveys is beyond the scope of this report. Therefore, the fertility trends shown in Figure 4.3 should be interpreted with caution. The TFR declined markedly from 6.4 children per woman in 1988 to 4.4 children per woman in 1998, stabilised at that level until 2003, and then declined to 4.0 in 2008 (data not shown separately). The decline in fertility was especially rapid during the period between 1988 and 1998. The downward trend in the TFR continued during the last decade, although at a slower pace. The figure shows that all age groups have contributed to the decline in fertility rates (Figure 4.3).

Figure 4.3 Trends in Fertility, 1988-2008



Note: Rates are for the three-year period preceding the interview.

4.2 CHILDREN EVER BORN AND LIVING

Table 4.4 presents the distribution of all women and currently married women by the mean number of children ever born and the mean number of children surviving, according to five-year age groups. Lifetime fertility reflects the accumulation of births over the past 30 years so its relevance to the current situation is limited; nevertheless, information on the mean number of children ever born is useful in examining the variation among different age groups.

The distribution of children ever born by age shows that early childbearing is not common in Ghana; nearly 90 percent of women age 15-19 have never given birth. This proportion declines to 22 percent for women age 25-29, and to 8 percent or less among women age 30 and older. Ghanaian women attain a parity of 5.6 children by the end of their reproductive period, which is 1.6 children more than the total fertility rate. Eight percent of Ghanaian women have 10 or more children by the end of their reproductive period.

Although the pattern for currently married women is similar to that for all women, just over one-third (36 percent) of currently married women age 15-19 have not borne a child, while nearly half (48 percent) have borne at least one child. This discrepancy between all women and currently married women is attributable to the sizeable proportion of young and unmarried women in the former category who exhibit lower fertility. Currently married women reported higher fertility at all ages, and especially at younger ages, and have had an average of 3.4 children, compared with 2.3 children among all women. Nevertheless, this one-child difference between currently married women and all women indicates that childbearing outside of marriage is not uncommon in Ghana. Consonant with

Table 4.4 Children ever born and living

Percent distribution of all women and currently married women age 15-49 by number of children ever born, mean number of children ever born and mean number of living children, according to age group, Ghana 2008

Age	Number of children ever born											Total	Number of women	Mean number of children ever born	Mean number of living children
	0	1	2	3	4	5	6	7	8	9	10+				
ALL WOMEN															
15-19	90.1	8.3	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1,025	0.11	0.11
20-24	50.7	27.7	14.0	5.7	1.3	0.4	0.3	0.0	0.0	0.0	0.0	100.0	878	0.81	0.74
25-29	21.6	23.2	23.7	18.8	8.8	3.0	0.8	0.1	0.0	0.0	0.0	100.0	832	1.83	1.69
30-34	8.1	11.6	23.1	19.4	19.5	9.2	5.3	2.0	1.1	0.8	0.0	100.0	644	3.01	2.76
35-39	5.6	6.8	13.5	15.6	21.6	15.9	9.8	6.6	2.5	1.5	0.4	100.0	638	3.90	3.49
40-44	2.6	6.3	9.9	12.9	14.4	16.8	14.4	9.0	6.8	3.1	3.9	100.0	470	4.79	4.16
45-49	1.5	1.5	7.6	12.0	15.3	12.7	12.7	13.7	10.8	4.6	7.5	100.0	429	5.59	4.73
Total	33.7	13.7	13.2	11.0	9.8	6.5	4.6	3.2	2.1	1.0	1.1	100.0	4,916	2.33	2.07
CURRENTLY MARRIED WOMEN															
15-19	36.4	48.4	15.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	85	0.79	0.77
20-24	19.1	41.5	24.1	11.2	2.8	0.7	0.6	0.0	0.0	0.0	0.0	100.0	414	1.42	1.28
25-29	9.0	21.6	29.5	23.9	10.8	3.9	1.1	0.1	0.0	0.0	0.0	100.0	612	2.23	2.06
30-34	4.3	9.7	22.7	22.0	21.1	10.5	5.8	2.1	0.9	1.0	0.0	100.0	539	3.23	2.96
35-39	3.4	3.8	12.6	15.4	23.7	17.4	10.8	7.8	3.0	1.6	0.5	100.0	527	4.19	3.78
40-44	2.5	4.1	8.2	14.0	13.6	17.5	15.5	9.6	7.5	3.3	4.0	100.0	380	4.97	4.34
45-49	1.3	1.6	4.5	10.9	14.3	12.7	13.9	14.8	11.5	5.2	9.4	100.0	319	5.91	5.03
Total	7.7	15.2	18.4	16.7	14.4	9.8	7.0	4.7	3.0	1.5	1.7	100.0	2,876	3.39	3.02

expectations, the mean number of children ever born and mean number of living children rise monotonically with increasing age of women, thus presupposing minimal or no recall lapse, which heightens confidence in the birth history reports.

Voluntary childlessness is uncommon and currently married women with no live births are likely to be those who are unable to bear children. The level of childlessness among married women at the end of their reproductive lives can be used as an indicator of the level of primary sterility. In Ghana, primary sterility among older currently married women is 1 percent.

4.3 BIRTH INTERVALS

A birth interval is defined as the length of time between two live births. The study of birth intervals is important in understanding the health status of young children. Research has shown that short birth intervals are closely associated with poor health of children, especially during infancy. Children born too close to a previous birth, especially if the interval between the births is less than two years, are at increased risk of health problems and dying at an early age. Longer birth intervals, on the other hand, contribute to the improved health status of both mother and child.

The study of birth intervals is done using two measures: median birth interval and proportion of non-first births that occur 24 months or more after the previous birth. Table 4.5 presents the distribution of second and higher-order births in the five years preceding the survey by the number of months since the previous birth, according to background characteristics. First births are omitted from the table because there is no prior birth with which to measure an interval. The table also shows the median number of months since the preceding birth.

Fourteen percent of all non-first births occur less than 24 months after an earlier birth. The median birth interval is 40 months, that is, more than half of non-first births to women in Ghana occur more than three years after a previous birth. There has been little change in the length of birth intervals over the past five years.

The median birth interval increases with age from 35 months for births to women age 20-29 to 47 months for births to women age 40-49. The longer birth interval among older women may be attributed to the decline in fecundity as women grow older. There are no substantial differences in the median birth interval by birth order or sex of the child. However, the median birth interval is markedly shorter if the previous child has died. Among births following a child who has died, 34 percent occurred after an interval of less than 24 months. This may be due to the desire of parents to replace dead children, as well as the impact of the loss of the fertility-delaying effects of postpartum amenorrhoea.

The median interval between births is six months longer among women in urban areas (44 months) than among those in rural areas (38 months). By region, the median birth interval ranges from a low of 37 months in the Northern region to 48 months in the Upper East region. Education is not strongly related to median birth interval but there is a correlation between women's household wealth status and the length of the birth interval. The median birth interval increases steadily from 36 months among women in the lowest (poorest) wealth quintile to 46 months among those in the highest (richest) wealth quintile.

4.4 Age at First Birth

The age at which childbearing begins has important demographic consequences for society as a whole as well as for the health and welfare of mother and child. One of the factors that determine the level of fertility in a population is age at first birth. Women who marry early are typically exposed to the risk of pregnancy for a longer period, especially when there is little or no contraceptive use. Thus, early childbearing generally leads to a larger family size than later onset of childbearing. A rise in the median age at first birth is typically a sign of transition from high to low fertility. In many countries, postponement of first births, reflecting a rise in age at marriage, has made a large

Table 4.5 Birth intervals

Percent distribution of non-first births in the five years preceding the survey by number of months since preceding birth, and median number of months since preceding birth, according to background characteristics, Ghana 2008

Background characteristic	Months since preceding birth						Total	Number of non-first births	Median number of months since preceding birth
	7-17	18-23	24-35	36-47	48-59	60+			
Age									
20-29	5.2	12.7	35.0	24.7	10.3	12.1	100.0	862	34.6
30-39	3.1	8.1	23.0	25.2	16.5	24.1	100.0	1,020	42.8
40-49	1.8	9.2	20.0	20.1	16.8	32.0	100.0	319	46.6
Sex of preceding birth									
Male	3.6	10.6	28.1	23.5	14.0	20.3	100.0	1,134	39.4
Female	4.1	9.8	26.7	24.8	14.1	20.5	100.0	1,083	40.1
Survival of preceding birth									
Living	2.8	9.2	27.6	24.5	14.5	21.4	100.0	2,020	40.6
Dead	14.0	20.4	25.6	20.2	9.4	10.5	100.0	197	29.5
Birth order									
2-3	4.0	10.3	26.8	23.9	13.8	21.3	100.0	1,103	40.3
4-6	3.8	9.0	26.5	24.4	14.9	21.5	100.0	839	40.5
7+	3.4	13.3	32.8	24.3	12.8	13.4	100.0	275	36.3
Residence									
Urban	2.9	9.4	22.4	22.9	15.2	27.2	100.0	769	44.2
Rural	4.3	10.6	30.1	24.8	13.5	16.8	100.0	1,448	38.0
Region									
Western	3.1	11.2	29.3	28.4	10.8	17.2	100.0	211	37.5
Central	8.0	13.1	25.9	19.0	17.1	16.8	100.0	218	37.9
Greater Accra	3.6	10.3	25.0	19.4	14.1	27.5	100.0	233	44.9
Volta	1.4	8.3	28.9	22.2	15.9	23.3	100.0	191	41.2
Eastern	3.1	11.4	26.5	22.0	15.5	21.6	100.0	188	39.8
Ashanti	5.6	10.6	27.8	22.6	13.2	20.2	100.0	407	38.1
Brong Ahafo	1.3	4.6	26.7	24.7	15.1	27.5	100.0	196	43.9
Northern	4.4	12.7	30.7	29.5	11.5	11.3	100.0	382	36.8
Upper East	0.3	4.8	19.1	27.0	18.7	30.1	100.0	126	47.7
Upper West	1.8	8.1	29.5	26.8	13.9	20.0	100.0	65	40.7
Education									
No education	3.6	10.1	28.8	26.1	14.7	16.6	100.0	841	39.4
Primary	4.6	11.4	28.8	23.8	12.8	18.6	100.0	559	38.0
Middle/JSS	2.6	9.5	26.0	22.4	13.9	25.5	100.0	674	41.2
Secondary+	8.2	8.8	19.8	22.0	16.3	25.0	100.0	141	42.8
Wealth quintile									
Lowest	3.9	13.3	33.4	25.7	10.8	13.0	100.0	642	35.8
Second	3.0	10.0	31.1	26.1	13.4	16.3	100.0	494	38.7
Middle	5.6	7.9	23.1	23.9	16.8	22.7	100.0	411	41.5
Fourth	2.6	8.8	23.9	20.6	15.7	28.5	100.0	389	44.0
Highest	4.4	8.6	18.4	22.2	16.4	29.9	100.0	281	45.7
Total	3.8	10.2	27.4	24.1	14.1	20.4	100.0	2,217	39.7

Note: First-order births are excluded from this table. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth. Total includes cases with information missing on education and 17 weighted cases of non-first births to women age 15-19, and are not shown separately.

contribution to overall fertility decline. Table 4.6 shows the percentage of women age 15-49 who gave birth by specific exact ages, the percentage who have never given birth, and the median age at first birth, according to current age.

The median age at first birth for the youngest cohort for whom a median could be calculated (women age 25-29) is 21.8 years, which is followed by 21.1 years for women age 30-34. For all other age groups, the median age at first birth is around 20 years, suggesting that age at first birth has increased in the most recent period. Further evidence of this trend is observed by the fact that the percentage of first births occurring at age 18 or less has fallen from 28 percent among the oldest cohort (women age 45-49) to 16 percent among the youngest cohort for whom complete information is available (women age 20-24). This reduction in the percentage of women giving birth early implies that more young women are postponing childbearing. A comparison of data from the 1993, 1998, 2003, and 2008 GDHS surveys for the same age groups reinforces the conclusion that there has been a trend towards a rising age at first birth.

Table 4.6 Age at first birth

Percentage of women age 15-49 who gave birth by specific exact ages, percentage who have never given birth, and median age at first birth, according to current age, Ghana 2008

	Percentage who gave birth by exact age					Percentage who have never given	Number	Median age at first
Current age	15	18	20	22	25	birth	of women	birth
15-19	0.5	na	na	na	na	90.1	1,025	a
20-24	2.2	15.8	32.2	na	na	50.7	878	a
25-29	2.3	17.5	36.7	51.8	69.4	21.6	832	21.8
30-34	4.9	24.7	40.5	59.0	77.1	8.1	644	21.1
35-39	2.9	23.8	45.7	61.3	75.6	5.6	638	20.5
40-44	4.8	26.4	45.5	67.1	81.5	2.6	470	20.3
45-49	3.0	27.6	50.5	69.9	85.3	1.5	429	20.0
20-49	3.2	21.5	40.4	na	na	18.8	3,891	a
25-49	3.5	23.2	42.8	60.3	76.5	9.5	3,014	20.7

na = Not applicable due to censoring
a = Omitted because less than 50 percent of women had a birth before reaching the beginning of the age group

4.5 MEDIAN AGE AT FIRST BIRTH BY BACKGROUND CHARACTERISTICS

Age at first birth varies by demographic and socio-economic characteristics of women. Table 4.7 shows the median age at first birth for women age 25-49 by current age and background characteristics. Overall, the median age at first birth for women age 25-49 in Ghana is 20.7 years. Women in urban areas (22.1 years) have their first birth two years later than their rural counterparts (20.0 years). Across regions, the median age at first birth ranges from 19.5 years in the Upper East and Upper West regions to 23.2 years in Greater Accra.

Age at first birth does not vary substantially by level of education, although the median age at first birth (20.9 years) for women with the highest level of education (Middle/JSS) for which a median could be estimated is at least one year higher than the medians for women with less education—19.9 years for women with no education and 19.3 years for women with primary education. The results on age at first birth by wealth status show that the median age at first birth for women in all five wealth quintiles is the same (20 years).

Table 4.7 Median age at first birth

Median age at first birth among women age 25-49, by current age and background characteristics, Ghana 2008

Background characteristic	Current age					Women age 25-49
	25-29	30-34	35-39	40-44	45-49	
Residence						
Urban	23.8	22.6	21.5	20.9	19.9	22.1
Rural	20.0	19.9	19.9	20.0	20.0	20.0
Region						
Western	20.9	21.8	20.5	20.9	20.5	21.0
Central	20.5	20.2	20.0	20.2	20.3	20.2
Greater Accra	a	23.6	22.1	21.2	19.6	23.2
Volta	19.6	21.1	22.1	19.9	20.1	20.4
Eastern	21.5	19.9	19.6	20.3	19.9	20.2
Ashanti	22.2	20.4	20.4	20.1	20.1	20.8
Brong Ahafo	20.5	20.7	20.7	18.8	18.6	20.2
Northern	21.3	20.9	19.9	21.0	20.4	20.7
Upper East	19.0	19.7	19.2	20.2	19.9	19.5
Upper West	20.4	20.3	19.5	18.5	17.6	19.5
Education						
No education	19.3	19.9	20.0	20.2	20.0	19.9
Primary	19.5	19.1	19.2	19.0	19.3	19.3
Middle/JSS	21.9	21.6	21.0	20.3	19.8	20.9
Secondary+	a	26.3	28.1	23.8	22.0	a
Wealth quintile						
Lowest	19.4	19.5	20.0	19.9	20.5	19.9
Second	a	20.3	19.3	19.3	19.8	20.1
Middle	a	20.7	20.2	19.9	19.2	20.1
Fourth	a	22.6	21.3	20.8	20.4	19.7
Highest	a	a	24.2	23.7	22.4	20.0
Total	21.8	21.1	20.5	20.3	20.0	20.7

Note: Total includes cases with information missing on education that are not shown separately.
a = Omitted because less than 50 percent of women had a birth before reaching the beginning of the age group

4.6 TEENAGE FERTILITY

Adolescent childbearing has potentially negative demographic and social consequences. Births to teenage mothers (age 15-19) have been found to have the highest infant and child mortality in Ghana (GSS and MI, 1994 and 1999). This may be due to these young mothers being more likely to experience complications during pregnancy and delivery than older mothers, resulting in higher morbidity and mortality for both themselves and their children. In addition, early childbearing may foreclose a teenager's ability to pursue educational or job opportunities. Table 4.8 shows the percentage of teenage women who are mothers or pregnant with their first child, by background characteristics. One in ten teenagers has already had a child (10 percent) and another 3 percent are pregnant with their first child.

The percentage of adolescent women who have began childbearing increases with age from less than 1 percent among those who are age 15, to 29 percent among teenagers who are age 19. Urban teenagers differ from their rural counterparts; 11 percent of adolescents in urban areas have begun childbearing, compared with 16 percent of those in rural areas. By region, the percentage of women age 15-19 who have begun childbearing ranges from 7 percent each in the Western and Greater Accra regions to 23 percent in the Central and Northern regions. It is also clear that childbearing decreases substantially as education increases; 31 percent of adolescents with no education have begun childbearing, compared with just 1 percent of teenagers with secondary or higher education. By wealth status, adolescent childbearing decreases from 21 percent in the second wealth quintile to 4 percent in the highest wealth quintile. This finding suggests that poverty is an

important consideration in understanding adolescent childbearing in Ghana (Nabila and Fayorsey, 1996). Over the past five years there has been no substantial change in the overall percentage of teenage women who have begun childbearing (13 percent in 2008, compared with 14 percent in 2003). However, the urban-rural gap in teenage childbearing has been reduced, from 7 percent in urban areas and 22 percent in rural areas in 2003, to 11 percent in urban areas and 16 percent in rural areas in 2008.

Table 4.8 Teenage pregnancy and motherhood

Percentage of women age 15-19 who have had a live birth or who are pregnant with their first child, and percentage who have begun childbearing, by background characteristics, Ghana 2008

Background characteristic	Percentage who:		Percentage who have begun childbearing	Number of women
	Have had a live birth	Are pregnant with first child		
Age				
15	0.5	0.3	0.7	213
16	1.1	3.4	4.5	187
17	8.3	2.8	11.1	205
18	17.2	4.1	21.4	239
19	22.1	6.8	28.9	181
Residence				
Urban	8.8	1.9	10.7	493
Rural	10.9	4.8	15.7	532
Region				
Western	5.9	0.6	6.5	94
Central	18.4	4.8	23.2	101
Greater Accra	5.9	0.8	6.6	162
Volta	9.2	6.6	15.9	91
Eastern	8.0	0.0	8.0	106
Ashanti	5.0	6.1	11.0	202
Brong Ahafo	18.2	4.0	22.2	80
Northern	17.4	5.2	22.6	102
Upper East	9.8	0.8	10.6	56
Upper West	9.4	3.1	12.5	30
Education				
No education	23.4	7.4	30.9	72
Primary	18.8	7.0	25.9	222
Middle/JSS	7.0	2.4	9.5	571
Secondary+	1.3	0.0	1.3	159
Wealth quintile				
Lowest	14.5	3.4	17.9	153
Second	13.2	8.1	21.3	200
Middle	11.2	3.1	14.2	221
Fourth	9.7	1.5	11.2	230
Highest	2.5	1.4	3.9	221
Total	9.9	3.4	13.3	1,025

FAMILY PLANNING 5

This chapter presents the 2008 GDHS findings on contraceptive knowledge and use, attitudes, and sources, as well as exposure to media messages about family planning. The information is particularly useful for policymakers, programme managers, and researchers in population and family planning, and provides a means to assess the success of the Ghanaian family planning programme. Although the focus is on women, some results from the male survey are also presented because men play an important role in realising women's reproductive goals. Comparisons are also made, where feasible, with findings from previous surveys to evaluate trends over the past twenty years in Ghana.

5.1 KNOWLEDGE OF CONTRACEPTIVE METHODS

Acquiring knowledge about contraceptive methods is an important step towards gaining access to family planning services and then adopting a suitable contraceptive method. Information on knowledge of contraception was collected in two ways. Respondents were asked to mention all ways or methods couples can use to avoid or delay pregnancy. When a respondent failed to mention a particular method spontaneously, the interviewer described the method and asked whether the respondent knew of it. Using this approach, information was collected for 12 modern family planning methods: female and male sterilisation, the pill, the IUD, injectables, implants, male and female condoms, diaphragm, foam tablets and jelly, the lactational amenorrhoea method (LAM), and emergency contraception. Information was also collected on two traditional methods: rhythm or periodic abstinence, and withdrawal. Provision was also made in the questionnaire to record any other methods named spontaneously by respondents and this was coded as 'folk methods.' This report combines both prompted and unprompted knowledge. Thus, knowledge of a family planning method in the GDHS is defined simply as having heard of a method.

Tables 5.1 shows the percentage of all women and men, currently married women and men, and sexually active unmarried women and men age 15-49 who have heard of specific contraceptive methods. Knowledge of any contraceptive method is almost universal in Ghana, with 98 percent of all women and 99 percent of all men knowing at least one method of contraception. Modern methods remain more widely known than traditional methods. Ninety-eight percent of all women know of a modern method, compared with 77 percent who know of a traditional method. Among women, the male condom is the most commonly known method (94 percent), followed by the pill (87 percent), injectables (86 percent), and the female condom (81 percent). Emergency contraception is known by 35 percent of all women. Lactational amenorrhoea method (LAM) is the least known (9 percent). Among the traditional methods, rhythm is the most commonly known (70 percent), followed closely by withdrawal (61 percent); a small proportion (2 percent) mentioned folk methods.

Knowledge of contraceptive methods among currently married women is similar to that among all women, especially regarding level of knowledge. Among currently married women, 98 percent know at least one method of contraception or a modern method, and 78 percent know a traditional method. Among modern methods, the most commonly known method is the male condom (93 percent), followed by injectables (91 percent), the pill (90 percent), and the female condom (81 percent). Emergency contraception is known by 34 percent of married women. LAM is the least known modern method (11 percent).

Table 5.1 Knowledge of contraceptive methods

Percentage of all respondents, currently married respondents, and sexually active unmarried respondents age 15-49 who know any contraceptive method, by specific method, Ghana 2008

	Women			Men		
Method	All women	Currently married women	Sexually active unmarried women[1]	All men	Currently married men	Sexually active unmarried men[1]
Any method	97.8	97.9	99.9	98.9	99.5	99.6
Any modern method	97.7	97.8	99.9	98.8	99.5	99.6
Female sterilisation	62.6	65.4	63.1	64.3	72.3	67.9
Male sterilisation	36.6	38.8	33.8	47.0	51.2	52.1
Pill	86.6	90.1	90.0	81.8	88.1	88.6
IUD	42.5	48.4	36.3	31.0	37.7	26.8
Injectables	85.6	91.1	87.2	78.4	87.5	84.0
Implants	63.8	73.8	61.2	36.7	47.7	33.5
Male condom	93.9	93.1	99.3	98.3	99.1	99.4
Female condom	81.3	80.7	90.1	86.4	89.2	92.2
Diaphragm	26.1	29.4	21.6	22.5	26.1	24.5
Foam/jelly	25.5	28.4	28.3	31.2	36.5	35.8
Lactational amenorrhoea (LAM)	8.7	10.6	6.5	6.9	9.6	6.0
Emergency contraception	35.4	33.9	48.5	37.1	40.7	49.0
Any traditional method	76.6	78.0	85.8	78.7	87.9	89.8
Rhythm	69.5	69.7	80.8	69.4	79.2	81.2
Withdrawal	61.3	65.6	72.3	69.4	78.1	82.4
Folk method	1.9	2.3	1.6	1.1	0.9	0.9
Mean number of methods known by respondents 15-49	7.8	8.2	8.2	7.6	8.4	8.2
Number of respondents	4,916	2,876	284	4,058	1,950	376
Mean number of methods known by respondents 15-59	na	na	na	7.7	8.5	8.2
Number of respondents	na	na	na	4,568	2,404	383

na = Not applicable
[1] Sexual intercourse in the past 30 days

Contraceptive knowledge is highest among sexually active unmarried women (100 percent). Unmarried women reported the male condom to be the most commonly known method (99 percent) followed by the female condom and the pill (90 percent each). Sexually active unmarried women are also more likely to report knowledge of emergency contraception (49 percent), rhythm, and withdrawal methods, while knowledge of male sterilisation, the IUD, injectables, implants, and LAM is higher among married women.

Knowledge of contraception is slightly higher among men than women—99 percent of men know of at least one method of contraception (Table 5.1). Like women, a larger proportion of men (99 percent) know a modern method than a traditional method (79 percent). As with women, sexually active unmarried men are more likely to report knowledge of emergency contraception, rhythm, and withdrawal methods, while knowledge of female sterilisation, the IUD, injectables, implants, and LAM is higher among married men. The most commonly known modern method is the male condom reported by 98 percent of all men and 99 percent of married men and sexually active unmarried men. Emergency contraception is known by 37 percent of all men, 41 percent of currently married men, and 49 percent of sexually active unmarried men. The rhythm method is known by 69 percent of all men, 79 percent of currently married men, and 81 percent of sexually active unmarried men. It is worth noting that knowledge of the pill, implants, injectables, and the IUD is lower among men than women. Knowledge of male sterilisation is slightly higher among men than women. On average, women and men in Ghana have heard of at least eight contraceptive methods.

Table 5.2 shows differentials in knowledge of any contraceptive method and any modern contraceptive method among currently married women and men age 15-49 by background characteristics. Knowledge of at least one method is high in almost all categories. Nevertheless, it is lower among women in rural areas than in urban areas, and lower among women age 15-19 and those living in the Northern region. Knowledge of at least one method increases with level of education and wealth quintile, but the differences are small. For example, 93 percent of women in the lowest wealth quintile have heard of at least one method of family planning, compared with 100 percent of those in the highest wealth quintile.

Table 5.2 Knowledge of contraceptive methods by background characteristics

Percentage of currently married women and currently married men age 15-49 who have heard of at least one contraceptive method and who have heard of at least one modern method, by background characteristics, Ghana 2008

	Currently married women			Currently married men		
Background characteristic	Heard of any method	Heard of any modern method[1]	Number of women	Heard of any method	Heard of any modern method[1]	Number of men
Age						
15-19	93.4	92.5	85	*	*	7
20-24	97.1	97.1	414	99.8	99.8	106
25-29	98.0	98.0	612	99.4	99.4	296
30-34	99.1	99.1	539	99.5	99.5	412
35-39	97.6	97.4	527	99.9	99.9	445
40-44	98.2	97.9	380	99.7	99.4	353
45-49	98.0	98.0	319	99.4	99.4	331
Residence						
Urban	99.2	99.2	1,216	99.9	99.9	832
Rural	96.9	96.8	1,660	99.3	99.2	1,118
Region						
Western	97.6	97.6	261	100.0	100.0	205
Central	98.6	98.6	254	100.0	100.0	148
Greater Accra	99.6	99.6	422	100.0	100.0	302
Volta	99.7	99.4	290	100.0	99.4	166
Eastern	99.7	99.7	252	99.5	99.5	189
Ashanti	99.5	99.2	542	99.6	99.6	374
Brong Ahafo	98.0	98.0	267	100.0	100.0	172
Northern	91.1	91.1	338	98.0	98.0	237
Upper East	96.9	96.4	168	98.6	98.6	109
Upper West	95.6	95.6	82	99.2	99.2	47
Education						
No education	94.0	93.7	853	97.9	97.9	398
Primary	99.5	99.5	638	99.8	99.4	251
Middle/JSS	99.5	99.4	1,058	100.0	100.0	812
Secondary+	100.0	100.0	325	100.0	100.0	485
Wealth quintile						
Lowest	92.9	92.6	573	97.7	97.7	380
Second	98.7	98.7	577	99.9	99.7	368
Middle	98.6	98.4	525	100.0	100.0	310
Fourth	99.6	99.6	600	100.0	100.0	434
Highest	99.6	99.6	601	100.0	100.0	458
Total 15-49	97.9	97.8	2,876	99.5	99.5	1,950
50-59	na	na	na	98.5	98.2	454
Total 15-59	na	na	na	99.3	99.2	2,404

Note: Total includes cases with information missing on education that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
na = Not applicable
[1] Female sterilisation, male sterilisation, pill, IUD, injectables, implants, male condom, female condom, diaphragm, foam, or jelly, Lactational Amenorrhoea Method (LAM), and emergency contraception

Knowledge of contraceptive methods among women age 15-49 in Ghana has increased substantially over the past two decades, although there has been little or no increase over the past five years. The proportion of all women age 15-49 who have heard of at least one method of family planning increased from 76 percent in 1988 to 98 percent in 2003 and 2008. Knowledge of specific methods has shown even more dramatic increases over the 20-year period. For example, the proportion of women age 15-49 who have heard of injectables increased from 43 to 86 percent, the proportion who have heard of the pill increased from 60 to 87 percent, and the proportion who have heard of the male condom increased from 49 to 94 percent. Knowledge of implants among women age 15-49 increased from 4 percent in 1993 to 64 percent in 2008. The mean number of methods known among all women, however, decreased slightly from 8.6 in 2003 to 7.8 in 2008. There was a similar trend among men age 15-59, the mean number of methods known decreased from 8.8 in 2003 to 7.7 in 2008.

5.2 Ever Use of Contraception

All women interviewed in the survey who said they had heard of a method of family planning were asked whether they had ever used that method. Men were asked if they had ever used "male-oriented" methods, i.e., male sterilisation, condoms, rhythm, and withdrawal. Table 5.3.1 shows the percentage of all women, currently married women, and sexually active unmarried women who have ever used specific methods of family planning, by age, and Table 5.3.2 shows comparable information for men.

Fifty percent of all women reported having used a method of contraception at some time; 42 percent have used a modern method and 25 percent have used a traditional method. Among modern methods, the male condom (20 percent) is the most commonly used method, followed by the pill (17 percent) and injectables (14 percent). Male sterilisation, the diaphragm, LAM, and female condoms are the least used methods (less than 1 percent each). Among traditional methods, rhythm (17 percent) is the most commonly used method, followed by withdrawal (14 percent). Emergency contraception has been used by 3 percent of women—an increase of two percentage points since 2003 (1 percent). The use of any contraceptive method increases with age, peaking among women in their late 20s through 30s, and then declining among women in their 40s.

Sixty percent of currently married women have used a method of contraception at some time; 50 percent have used a modern method and 29 percent have used a traditional method. The pill is the most commonly used method among currently married women (23 percent) followed by injectables and the male condom (19 percent each).

Ever use of contraception is highest among sexually active unmarried women. Seventy-five percent of sexually active unmarried women have used a method of contraception at some time. Sexually active unmarried women tend to use temporary methods of contraception rather than long-term or permanent methods. Forty-four percent of these women have used a male condom, compared with 19 percent of married women. Ever use of emergency contraception is higher among sexually active unmarried women than other women, and they are more likely to have used traditional methods like rhythm and withdrawal.

Ever use of family planning has increased over time. The proportion of all women who have ever used any method of contraception increased from 34 percent in 1988 to 50 percent in 2008. Similarly, the proportion of women who have ever used a modern method increased steadily from 21 percent in 1988 to 42 percent in 2008.

Table 5.3.1 Ever use of contraception: Women

Percentage of all women, currently married women and sexually active unmarried women age 15-49 who have ever used any contraceptive method by method, according to age, Ghana 2008

			Modern method												Traditional method			
Age	Any method	Any modern method	Female sterilisation	Male sterilisation	Pill	IUD	Injectables	Implants	Male condom	Female condom	Diaphragm	Foam/ jelly	LAM	Emergency contraception	Any traditional method	Rhythm	Withdrawal	Folk method	Number of women
ALL WOMEN																			
15-19	19.5	15.2	0.0	0.1	3.7	0.0	1.2	0.1	12.2	0.4	0.0	0.2	0.0	1.0	9.8	6.2	6.3	0.0	1,025
20-24	58.0	48.2	0.0	0.2	16.2	0.2	9.9	0.8	32.3	0.1	0.0	1.1	0.0	4.8	30.6	19.7	18.8	0.4	878
25-29	61.4	51.9	0.4	0.0	20.9	0.3	15.9	2.2	27.9	0.7	0.2	2.0	0.3	4.9	34.1	24.1	19.6	0.6	832
30-34	60.6	51.7	1.1	0.2	24.3	2.1	22.5	2.0	19.3	0.4	0.4	1.6	0.0	1.4	28.7	19.7	16.6	0.7	644
35-39	61.1	51.7	0.8	0.2	22.9	1.9	24.1	3.4	17.5	1.5	0.9	1.5	1.1	2.4	26.2	16.9	15.0	1.1	638
40-44	57.5	49.4	3.9	0.2	25.2	2.9	17.4	3.3	14.4	1.7	1.0	3.8	0.7	2.6	27.1	19.1	14.3	0.9	470
45-49	48.3	40.3	4.3	0.2	17.7	4.3	13.7	1.7	11.5	1.0	0.4	2.9	1.6	3.1	23.1	16.2	10.0	1.4	429
Total	50.4	42.3	1.0	0.1	17.3	1.3	13.7	1.7	20.2	0.7	0.3	1.6	0.4	2.9	25.0	16.9	14.3	0.6	4,916
CURRENTLY MARRIED WOMEN																			
15-19	55.2	41.0	0.0	1.5	15.8	0.0	4.3	0.9	27.0	1.6	0.0	1.8	0.0	2.3	31.0	15.8	24.3	0.0	85
20-24	61.3	50.7	0.0	0.0	22.7	0.4	16.5	1.5	26.9	0.1	0.0	1.1	0.0	3.2	31.3	19.5	19.4	0.2	414
25-29	62.6	52.3	0.2	0.0	22.3	0.4	17.5	1.8	25.9	1.0	0.3	2.5	0.4	4.5	35.3	24.4	20.2	0.7	612
30-34	61.1	51.7	1.3	0.2	25.2	2.1	23.6	2.4	16.8	0.5	0.4	1.4	0.0	1.4	26.4	18.3	14.8	0.8	539
35-39	61.6	52.4	0.8	0.2	24.2	2.4	25.6	3.7	15.8	0.9	0.8	1.6	0.9	2.3	25.2	17.1	14.1	0.7	527
40-44	58.8	50.2	4.8	0.3	26.3	2.3	17.7	3.5	14.3	2.1	1.3	4.4	0.8	2.1	28.3	21.3	14.0	1.1	380
45-49	49.5	42.4	5.4	0.2	18.7	5.4	15.2	2.3	11.8	1.0	0.5	2.5	1.7	3.3	22.6	16.1	10.4	1.1	319
Total	59.8	50.3	1.6	0.2	23.2	1.9	19.4	2.5	19.4	0.9	0.5	2.1	0.5	2.8	28.8	19.6	16.2	0.7	2,876
SEXUALLY ACTIVE UNMARRIED WOMEN[1]																			
15-19	66.6	51.4	0.0	0.0	13.8	0.0	2.6	0.0	43.8	1.5	0.0	0.0	0.0	4.7	40.5	27.0	25.4	0.0	87
20-24	74.0	62.0	0.0	0.0	13.0	0.0	7.2	0.0	48.4	0.8	0.0	3.4	0.0	12.0	36.7	26.0	20.5	0.0	88
25+	82.1	71.4	1.5	0.0	31.2	2.4	18.8	6.6	39.4	1.4	0.0	0.0	0.0	3.9	40.7	26.4	25.3	0.0	109
Total	74.8	62.3	0.6	0.0	20.2	0.9	10.2	2.5	43.5	1.2	0.0	1.1	0.0	6.7	39.4	26.4	23.9	0.0	284

LAM = Lactational amenorrhoea method

[1] Women who had sexual intercourse within the past 30 days

Table 5.3.2 shows the percentage of all men, currently married men and sexually active unmarried men age 15-49 who reported having ever used one of four male methods of contraception—male sterilisation, male condom, rhythm, and withdrawal. Ever use is lowest among teenagers and highest among sexually active, unmarried men, 86 percent of whom have used a method. More than half of all men age 15-49 have used a male-oriented method of contraception at some time. The most popular male method, the condom, has been used by 46 percent of all men, 56 percent of currently married men, and 78 percent of sexually active unmarried men. Male sterilisation is practically non-existent in Ghana; less than 1 percent of men reported ever use of male sterilisation. Ever use of contraception is generally higher among men than women, however considerably higher proportions of men than women reported having used rhythm and withdrawal. Of the two traditional methods, rhythm is reported as used more often than withdrawal by all men (29 and 27 percent, respectively) and currently married men (42 and 35 percent, respectively). However, it is less popular than withdrawal among sexually active unmarried men (39 and 45 percent, respectively).

Table 5.3.2 Ever use of contraception: Men

Percentage of all men, currently married men, and sexually active unmarried men age 15-49 who have ever used any contraceptive method by method, according to age, Ghana 2008

			Modern method		Any traditional method	Traditional method			
Age	Any method	Any modern method	Male sterilisation	Male condom		Rhythm	Withdrawal	Folk method	Number of men
ALL MEN									
15-19	14.7	11.9	0.4	11.7	8.5	4.9	6.3	0.0	911
20-24	57.6	51.3	0.4	51.3	33.2	19.7	25.0	0.3	704
25-29	72.5	63.0	0.5	63.0	52.7	38.5	35.5	0.4	624
30-34	77.3	63.4	0.4	63.2	57.7	40.8	39.1	0.1	533
35-39	72.9	59.0	0.6	59.0	58.7	42.3	39.5	0.5	528
40-44	69.2	52.5	1.0	52.0	51.3	40.4	30.5	0.0	394
45-49	62.6	41.9	0.0	41.9	50.5	40.3	28.8	0.0	364
Total 15-49	56.4	46.1	0.5	46.0	40.5	28.8	27.1	0.2	4,058
50-59	60.9	42.2	0.5	41.8	47.0	36.5	25.6	0.0	510
Total 15-59	56.9	45.7	0.5	45.5	41.2	29.7	26.9	0.2	4,568
CURRENTLY MARRIED MEN									
15-19	*	*	*	*	*	*	*	*	7
20-24	73.2	60.9	1.4	60.9	51.2	36.0	35.8	0.0	106
25-29	72.9	59.9	0.4	59.9	55.4	43.6	34.0	0.8	296
30-34	78.5	63.5	0.3	63.2	59.7	43.3	38.7	0.2	412
35-39	72.6	57.3	0.3	57.3	58.8	43.1	39.0	0.6	445
40-44	70.4	52.9	1.1	52.4	52.4	41.0	31.7	0.0	353
45-49	62.6	42.4	0.0	42.4	50.6	40.2	29.5	0.0	331
Total 15-49	71.7	55.7	0.5	55.6	55.4	41.9	35.0	0.3	1,950
50-59	63.0	43.7	0.5	43.1	48.7	37.8	26.6	0.0	454
Total 15-59	70.0	53.4	0.5	53.2	54.1	41.1	33.4	0.2	2,404
SEXUALLY ACTIVE UNMARRIED MEN[1]									
15-19	72.4	62.0	0.0	62.0	43.1	23.1	33.4	0.0	61
20-24	86.7	78.9	0.0	78.9	53.7	37.1	38.0	0.9	121
25+	89.1	82.6	1.1	82.6	69.2	45.4	53.8	0.0	195
Total 15-49	85.6	78.1	0.6	78.1	60.0	39.2	45.4	0.3	376
50-59	*	*	*	*	*	*	*	*	7
Total 15-59	85.4	77.7	0.6	77.7	59.8	38.8	45.5	0.3	383

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Men who had sexual intercourse within the past 30 days

5.3 CURRENT USE OF CONTRACEPTIVE METHODS

This section presents information on the prevalence of contraceptive use among all women, currently married women, and sexually active unmarried women age 15-49. The level of current use is the most widely used and valuable measure of the success of a family planning programme. Furthermore, it can be used to estimate the reduction in fertility attributable to contraception. The contraceptive prevalence rate (CPR) is usually defined as the percentage of currently married women who are currently using a method of contraception.

Table 5.4 shows that about one in four currently married women (24 percent) are currently using some method of contraception. Modern methods of contraception account for almost all the use, with 17 percent of married women reporting use of a modern method, compared with 7 percent using a traditional method. Injectables (6 percent), pills, and rhythm (5 percent each) are the most widely used methods among married women, followed by male condoms, and female sterilisation (2 percent each).

Among currently married women, the proportion currently using any modern method of contraception rises with age from 8 percent of those age 15-19 to 19 percent among those age 35-39 and 40-44, after which it declines. Female sterilisation is mostly used by currently married women in their 40s (5 percent); among younger women, 1 percent or less use sterilisation. Except for women age 45-49, injectables and rhythm are the two most commonly used methods among currently married women in every age group. Injectables are most commonly used by married women age 20-24 and those in their 30s, whereas rhythm is mostly used by teenagers and women in their early 40s. Except for women in their late 40s, pills are the third most commonly used method (after injectables and rhythm) in every age group.

Among sexually active unmarried women—most of whom are young—the male condom is by far the most commonly used method. This group is seven times as likely to use male condoms as currently married women. After the male condom (18 percent), the most commonly used modern method among sexually active unmarried women is the pill (10 percent), while rhythm (12 percent) is the most widely used traditional method.

Table 5.4 also shows that current use is slightly higher among those who are currently married than among all women. However, use is far higher among unmarried women who are sexually active (50 percent) than among married women (24 percent) or all women (19 percent).

Table 5.4 Current use of contraception by age

Percent distribution of all women, currently married women, and sexually active unmarried women age 15-49 by contraceptive method currently used, according to age, Ghana 2008

Age	Any method	Any modern method	Modern method									Any traditional method	Traditional method			Not currently using	Total	Number of women
			Female sterilisation	Pill	IUD	Injectables	Implants	Male condom	Female condom	Diaphragm	Foam/jelly		Rhythm	Withdrawal	Folk method			
ALL WOMEN																		
15-19	8.1	5.2	0.0	1.3	0.0	0.2	0.0	3.6	0.0	0.0	0.2	2.9	2.1	0.6	0.2	91.9	100.0	1,025
20-24	21.3	14.8	0.0	4.0	0.0	4.8	0.1	5.6	0.0	0.0	0.3	6.5	4.3	1.9	0.3	78.7	100.0	878
25-29	23.8	16.2	0.4	4.8	0.0	4.8	0.9	5.2	0.0	0.0	0.2	7.6	4.7	1.4	1.4	76.2	100.0	832
30-34	23.1	16.4	1.1	3.8	0.4	6.9	0.7	3.1	0.0	0.2	0.2	6.7	4.8	1.4	0.6	76.9	100.0	644
35-39	23.9	17.4	0.8	5.2	0.3	7.1	1.2	2.5	0.3	0.0	0.0	6.5	4.0	1.8	0.7	76.1	100.0	638
40-44	24.1	16.7	3.9	4.3	0.4	4.9	1.4	1.6	0.0	0.0	0.2	7.4	5.9	0.5	1.0	75.9	100.0	470
45-49	16.1	11.6	4.3	2.7	0.5	2.2	1.2	0.7	0.0	0.0	0.0	4.5	3.5	1.0	0.0	83.9	100.0	429
Total	19.3	13.5	1.0	3.6	0.2	4.2	0.7	3.6	0.0	0.0	0.2	5.9	4.0	1.3	0.6	80.7	100.0	4,916
CURRENTLY MARRIED WOMEN																		
15-19	13.6	7.6	0.0	2.4	0.0	2.1	0.0	1.3	0.0	0.0	1.8	6.0	4.4	1.6	0.0	86.4	100.0	85
20-24	22.4	17.3	0.0	5.7	0.0	7.9	0.3	3.0	0.0	0.0	0.4	5.1	3.1	1.7	0.3	77.6	100.0	414
25-29	23.0	14.2	0.2	4.5	0.0	5.3	0.5	3.4	0.0	0.0	0.2	8.8	5.6	1.5	1.7	77.0	100.0	612
30-34	23.3	17.3	1.3	4.1	0.3	7.1	0.9	3.2	0.0	0.3	0.2	6.0	4.1	1.3	0.7	76.7	100.0	539
35-39	25.9	18.8	0.8	5.9	0.3	8.2	1.5	1.8	0.3	0.0	0.0	7.1	4.2	2.0	0.9	74.1	100.0	527
40-44	27.6	19.0	4.8	5.3	0.3	5.7	1.2	1.5	0.0	0.0	0.3	8.6	7.0	0.6	0.9	72.4	100.0	380
45-49	20.2	14.8	5.4	3.3	0.6	2.9	1.6	0.9	0.0	0.0	0.0	5.4	4.1	1.4	0.0	79.8	100.0	319
Total	23.5	16.6	1.6	4.7	0.2	6.2	0.9	2.4	0.1	0.1	0.2	6.9	4.7	1.4	0.8	76.5	100.0	2,876
SEXUALLY ACTIVE UNMARRIED WOMEN[1]																		
15-19	52.6	32.8	0.0	9.5	0.0	0.0	0.0	23.3	0.0	0.0	0.0	19.8	13.7	4.3	1.8	47.4	100.0	87
20-24	43.7	27.2	0.0	3.8	0.0	7.2	0.0	14.9	0.0	0.0	1.3	16.4	13.7	2.8	0.0	56.3	100.0	88
25+	54.0	39.8	1.5	14.1	1.7	5.2	2.1	15.2	0.0	0.0	0.0	14.2	8.5	4.8	0.9	46.0	100.0	109
Total	50.4	33.8	0.6	9.5	0.6	4.2	0.8	17.6	0.0	0.0	0.4	16.6	11.7	4.0	0.9	49.6	100.0	284

Note: If more than one method is used, only the most effective method is considered in this tabulation.
[1] Women who had sexual intercourse within the past 30 days

5.4 DIFFERENTIALS IN CONTRACEPTIVE USE BY BACKGROUND CHARACTERISTICS

Table 5.5 shows the percent distribution of currently married women by current use of family planning methods, according to background characteristics. Current use of contraception varies with number of living children, urban-rural residence, region, education, and wealth.

The proportion currently using contraception generally increases with increasing number of children. Seventeen percent of women without children are currently using contraceptive methods, compared with 26 percent of women with five or more children. Current use of contraception is highest among women who have three or four children (27 percent).

Women in urban areas are more likely to use contraceptive methods (27 percent) than their rural counterparts (21 percent). The Greater Accra region has the highest contraceptive prevalence rate (33 percent), followed by the Brong Ahafo and Volta regions (29 percent each). The Northern region reports the lowest level of contraceptive use (6 percent). Women with at least some secondary education are more than twice as likely to use contraception as women with no education (30 and 14 percent, respectively). Use of any method and use of any modern method increase with level of education. Use of contraception is also positively related to wealth status, increasing from 14 percent among currently married women in the lowest wealth quintile to 31 percent in the highest wealth quintile.

The pattern of current use of modern and traditional methods of contraception is similar across subgroups. Use of both modern and traditional methods is more common in urban areas than rural areas, and increases with level of education and wealth quintile.

5.5 TRENDS IN THE USE OF FAMILY PLANNING

Figure 5.1 shows trends in contraceptive use among currently married women based on the results from the 2008 GDHS and four previous DHS surveys. Overall, contraceptive use among married women in Ghana has nearly doubled in the past 20 years. The survey results indicate there was a large increase in contraceptive use in the late 1980s and 1990s, from 13 to 22 percent among married women. However, over the past ten years, increases have been small. The contraceptive prevalence rate increased from 22 percent among currently married women in 1998 to 25 percent in 2003, and has declined in the past five years—24 percent in 2008—a reversal in the trend. Similarly, use of modern methods nearly doubled over the past 15 years from 10 percent in 1993 to 19 percent in 2003, before declining slightly to 17 percent in 2008. Over the past 20 years, there has been a slight decrease in the use of traditional methods. While initially there was a small increase in the use of traditional methods from 8 to 10 percent between 1988 and 1993, use of these methods decreased to 9 percent in 1998 and to 7 percent in 2003 and 2008.

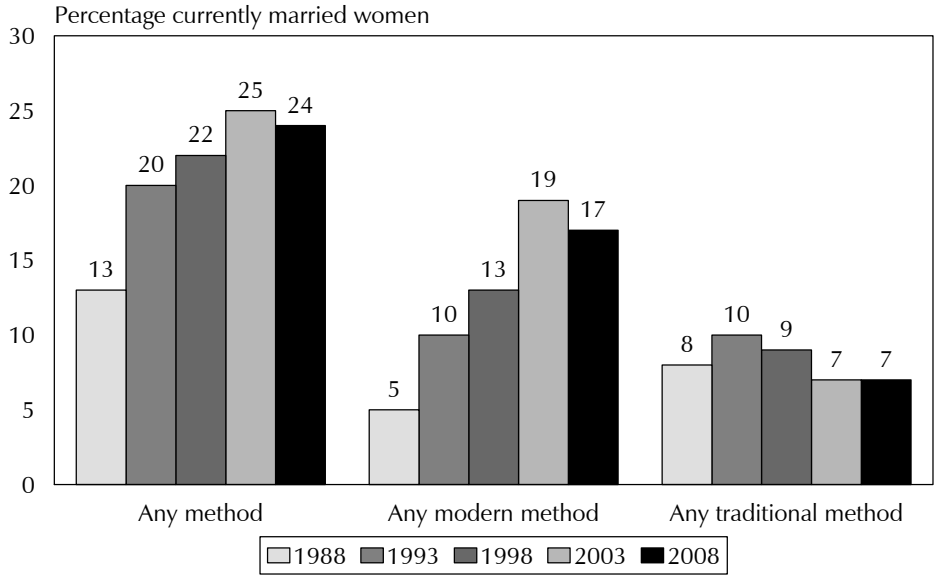
Table 5.5 Current use of contraception by background characteristics

Percent distribution of currently married women age 15-49 by contraceptive method currently used, according to background characteristics, Ghana 2008

Background characteristic	Any method	Any modern method	Modern method: Female sterilisation	Pill	IUD	Injectables	Implants	Male condom	Female condom	Diaphragm	Foam/jelly	Any traditional method	Traditional method: Rhythm	Withdrawal	Folk method	Not currently using	Total	Number of women
Number of living children																		
0	17.1	11.1	0.0	4.0	0.0	0.6	0.0	5.9	0.0	0.0	0.7	6.0	5.4	0.6	0.0	82.9	100.0	240
1-2	20.3	13.5	0.2	3.4	0.0	6.7	0.2	2.7	0.0	0.0	0.3	6.8	4.5	1.3	1.0	79.7	100.0	1,079
3-4	27.3	20.1	2.1	6.4	0.4	7.2	1.3	2.3	0.2	0.0	0.3	7.2	5.2	1.3	0.7	72.7	100.0	915
5+	25.9	18.8	3.9	4.9	0.4	6.4	2.0	0.9	0.0	0.2	0.0	7.2	3.9	2.3	1.0	74.1	100.0	641
Residence																		
Urban	27.1	18.6	1.7	4.8	0.4	6.2	0.6	4.1	0.1	0.1	0.4	8.5	6.5	1.1	1.0	72.9	100.0	1,216
Rural	20.9	15.1	1.6	4.7	0.1	6.3	1.2	1.2	0.0	0.0	0.1	5.8	3.4	1.7	0.7	79.1	100.0	1,660
Region																		
Western	19.1	13.2	1.1	6.5	0.0	3.6	0.6	1.3	0.0	0.0	0.0	5.9	4.7	1.2	0.0	80.9	100.0	261
Central	22.9	17.0	3.0	3.6	0.0	7.7	1.8	0.8	0.0	0.0	0.0	5.9	3.3	2.6	0.0	77.1	100.0	254
Greater Accra	32.6	22.2	1.1	6.0	0.9	6.0	0.7	6.1	0.4	0.0	1.1	10.4	9.3	1.1	0.0	67.4	100.0	422
Volta	28.6	20.5	2.9	6.1	0.3	7.1	0.9	3.3	0.0	0.0	0.0	8.1	5.3	1.4	1.5	71.4	100.0	290
Eastern	24.2	17.0	2.6	3.7	0.4	5.8	0.7	3.8	0.0	0.0	0.0	7.2	4.4	2.5	0.3	75.8	100.0	252
Ashanti	27.0	15.7	3.0	4.9	0.0	5.9	1.0	0.7	0.0	0.0	0.2	11.3	5.4	2.6	3.4	73.0	100.0	542
Brong Ahafo	29.0	21.6	0.0	7.1	0.0	6.9	1.5	5.1	0.0	0.6	0.5	7.4	6.5	0.9	0.0	71.0	100.0	267
Northern	5.9	5.7	0.0	1.8	0.0	2.9	0.4	0.5	0.0	0.0	0.0	0.2	0.2	0.0	0.0	94.1	100.0	338
Upper East	14.7	14.3	0.4	2.5	0.0	10.4	1.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4	0.0	85.3	100.0	168
Upper West	21.7	20.5	0.3	2.7	0.4	15.3	1.1	0.7	0.0	0.0	0.0	1.2	0.8	0.0	0.4	78.3	100.0	82
Education																		
No education	13.6	10.8	1.0	2.6	0.1	5.4	1.4	0.3	0.0	0.0	0.0	2.7	1.4	0.9	0.5	86.4	100.0	853
Primary	26.6	18.0	1.1	5.3	0.4	7.3	0.9	2.2	0.3	0.0	0.5	8.7	4.5	3.0	1.1	73.4	100.0	638
Middle/JSS	27.4	19.6	2.7	5.9	0.1	7.0	0.7	3.1	0.0	0.0	0.2	7.8	5.8	1.0	1.0	72.6	100.0	1,058
Secondary+	30.4	18.5	1.1	5.2	0.4	4.1	0.6	6.2	0.0	0.5	0.4	11.8	9.9	1.3	0.7	69.6	100.0	325
Wealth quintile																		
Lowest	14.2	11.6	1.4	4.0	0.0	5.3	0.8	0.1	0.0	0.0	0.0	2.6	1.5	1.0	0.1	85.8	100.0	573
Second	20.3	14.4	0.7	4.9	0.1	6.2	1.2	1.3	0.0	0.0	0.0	6.0	3.6	1.9	0.4	79.7	100.0	577
Middle	21.8	15.8	1.2	4.7	0.2	5.9	1.0	2.9	0.0	0.0	0.0	6.0	3.1	1.3	1.6	78.2	100.0	525
Fourth	29.0	20.0	2.4	4.0	0.3	8.7	0.7	3.1	0.3	0.2	0.2	9.0	5.8	1.9	1.3	71.0	100.0	600
Highest	31.4	20.6	2.5	6.1	0.5	5.1	0.8	4.7	0.0	0.0	0.9	10.8	8.9	1.1	0.8	68.6	100.0	601
Total	23.5	16.6	1.6	4.7	0.2	6.2	0.9	2.4	0.1	0.1	0.2	6.9	4.7	1.4	0.8	76.5	100.0	2,876

Note: If more than one method is used, only the most effective method is considered in this tabulation. Total includes cases with information missing on education and are not shown separately.

Figure 5.1 **Trends in Current Use of Contraceptive Methods Ghana 1988-2008**



GDHS 2008

5.6 NUMBER OF CHILDREN AT FIRST USE OF CONTRACEPTION

Couples use family planning methods to either limit family size or delay the next birth. The decision to initiate family planning use differs according to the circumstances of couples and individuals concerned. Couples using family planning to control family size (i.e., to stop having children) adopt contraception when they have had the number of children they want. When contraception is used to space births, couples may start to use family planning earlier, with the intention of delaying a possible pregnancy. Using contraception for birth spacing may also be done before a couple has had their desired number of children.

In the 2008 GDHS, women were asked how many children they had at the time they first used a method of family planning. The number of living children at the time of first use of contraception is both a measure of the willingness to postpone the first birth (i.e., women who have no children), and of the desire of women with children to space subsequent births. Thus, differences in fertility-control behaviour among cohorts of women can be observed by examining the parity and number of living children at first use of contraception.

Table 5.6 shows the percent distribution of women by number of living children at the time of first use of contraception, according to current age. The results indicate that more Ghanaian women are adopting family planning methods at lower parities (i.e., when they have fewer children) than previously. This change in behaviour can be seen by comparing women's parity at first use of contraception among younger and older women. Among women age 15-19, 18 percent began using contraception before having any children, compared with 5 percent of women age 40-44. Older women are more likely to have waited until they had children to start using contraception, with the largest proportion starting after they had four or more children. The survey findings suggest a move towards earlier use of contraception by Ghanaian women to delay childbearing. In a culture where smaller family size is becoming a norm, young women adopt family planning at an earlier age than their older counterparts. On the other hand, older women initiate contraceptive use at a later age primarily to limit births rather than to space births.

Table 5.6 Number of children at first use of contraception

Percent distribution of women age 15-49 by number of living children at the time of first use of contraception, according to current age, Ghana 2008

Current age	Never used contra-ception	Number of living children at time of first use of contraception						Total	Number of women
		0	1	2	3	4+	Missing		
15-19	80.5	17.5	1.6	0.2	0.0	0.0	0.2	100.0	1,025
20-24	42.0	42.6	11.2	2.7	0.8	0.0	0.7	100.0	878
25-29	38.6	27.0	19.9	9.1	4.1	1.1	0.1	100.0	832
30-34	39.4	14.5	16.7	13.6	8.1	7.5	0.2	100.0	644
35-39	38.9	10.8	12.0	12.4	11.4	14.4	0.2	100.0	638
40-44	42.5	5.0	10.8	8.0	11.3	22.3	0.0	100.0	470
45-49	51.7	6.8	7.3	8.1	5.0	21.1	0.0	100.0	429
Total	49.6	20.2	11.1	6.9	4.9	7.0	0.2	100.0	4,916

5.7 USE OF SOCIAL MARKETING BRANDS

The proportion of clients using socially marketed brands of contraceptives and private commercial sector contraceptives provides information on market segmentation and guidance on preferred brands and sources of contraceptives. This is critical to ensuring sustainable supplies of contraceptives for clients, according to their preferences. Information on the use of social marketing brands is also important for tracking the success of social marketing programmes and the private commercial sector.

Social marketing is an important strategy in Ghana, and the Ghana Social Marketing Foundation (GSMF) is the largest body marketing pills and condoms. New programmes and partners are continually being engaged. The pill and condom are the most commonly used methods of contraception available through social marketing programmes. To assess the use of social marketing brands, pill and condom users in Ghana were asked for the brand name and the cost of their method.

The results for pill users are presented in Table 5.7. *Secure* (a branded form of duofem) is the oral contraceptive pill initially introduced and marketed by the Ghana Social Marketing Foundation, but currently being marketed by other social marketing groups. In 2007, GSMF introduced *My Pearl*, another brand of combined oral contraceptive. *Blue* is a newly introduced pill brand for both social marketing programmes and the private commercial sector. *Ovrette, Microgynon, Micronor, and Lo-femenal* are brands provided by the public sector and through clinics of the Planned Parenthood Association of Ghana (PPAG). The other brands are mainly sold in the private commercial sector.

Table 5.7 presents information on both commonly used pill brands and those that are less known. *Secure* remains the most popular brand in Ghana. It is used by almost half of pill users (47 percent)—among those who mentioned a brand name—and is marketed by Social Marketing Programmes. Three in ten (34 percent) respondents did not know their pill brand, or information is missing on the brand of pills they use. A pill mentioned as N/M tablets is reported by 8 percent of users. The public sector brands *Lo-femenal* and *Microgynon* were mentioned by 2 percent and 3 percent, respectively of pill users. This represents a decline of six percentage points in the use of *Lo-femenal* (8 percent in 2003) and an increase of two percentage points in the use of *Microgynon* (1 percent in 2003). *Duofem,* which is marketed by the private sector, is used by 2 percent of pill users. Other brands not known by the programme are *Skill, Hot, OC,* and *Nofian,* which together constitute about 5 percent of pill use.

The table also shows the average cost of a cycle of pills by brand name for women who know the cost. The average cost of a cycle of pills is 0.31 Ghana cedis.[1] Cost varies markedly by brand type, ranging from a high of 0.50 Ghana cedis for *Skill* to a low of 0.01 Ghana cedis for *Oral*. Among those who do not know the brand names, the average price of a packet of pills is 0.22 Ghana cedis. The prices of *Secure* and *Migrogynon* have increased over the past five years, while *Lo-femenal* and *Duofem* are about the same price as in 2003.

Table 5.7 Pill brand and cost

Percent distribution of current users of pills age 15-49 and average cost per cycle of pills among users who paid for pills, by brand of pills, Ghana 2008

Brand name	Percentage of current users of pills	Cost per cycle (in pesewas)[1]
N/M Tablets	7.5	30.9
Skill	1.2	50.0
Secure	46.5	38.5
Hot	1.7	13.4
Lo-femenal	1.9	15.2
OC	1.1	33.6
Blue[2]	0.3	na
Microgynon	3.1	42.6
Oral	0.5	1.4
Duofem	2.0	4.8
Nofian	0.8	0.3
Don't know/missing	33.5	22.0
Average cost per cycle	na	30.9
Total	100.0	na
Number	178	165

Note: One US dollar is equivalent to 1.176 new Ghana Cedis at the time of survey; 100 pesewa = 1 Ghana Cedi
na = Not applicable
[1] Includes only users who paid for pills.
[2] This brand has no users who paid for pills

Table 5.8 presents information on condom brands and costs of male condoms. The majority (67 percent) of respondents do not know the brand of condom they use, or have information missing on the condom brand; however, they report an average cost of 0.22 Ghana Cedis per condom. The average cost per condom for all brands of condoms reported is also 0.22 Ghana Cedis.

[1] One US dollar is equivalent to 1.176 New Ghana cedis (at the time of the survey).

Table 5.8 Condom brand and cost

Percent distribution of current users of condoms age 15-49 and average cost per condom among users who paid for condoms, by brand of condom, Ghana 2008

Brand name	Percentage of current users of male condoms	Cost per condom (in pesewas)[1]
GSMF		
Bazuka/Bazooka	1.8	5.0
Champion	17.8	12.8
Panther	2.8	27.8
Private commercial		
Gold Circle	5.8	25.0
Alatech	0.5	26.7
Night Rider	0.5	50.0
Rough Rider	0.5	50.0
Durex	0.4	100.0
USA	0.6	100.0
Tiger	0.9	5.0
Migrant	0.3	12.5
Unidus[2]	1.2	na
Don't know/missing	67.0	21.7
Average cost per condom	na	22.3
Total	100.0	na
Number	175	46

Note: One US dollar is equivalent to 1.176 new Ghana Cedis at the time of survey; 100 pesewa = 1 Ghana Cedi
na = Not applicable
[1] Includes only users who paid for condoms
[2] This brand has no users who paid for condoms

Eighteen percent of women who reported using condoms mentioned *Champion*, 2 percent mentioned *Bazuka*, and 3 percent cited Panther, all brands marketed by the Ghana Social Marketing Foundation. *Gold Circle* (6 percent) is a social marketing brand marketed by private commercial outlets. *Night Rider, Rough Rider*, and *Durex*, which cost 0.5 to 1 Ghana Cedis each, are sold by the private commercial market. The most popular condoms, *Champion* and *Bazuka*, are also among the cheapest. Condoms marketed by the private sector are much more expensive than those marketed by GSMF or the public sector. It is unclear what brand the public sector condoms are, or how much they cost because during the year, different types of no-logo (plain silver or white foiled) male condoms were available at public sector facilities.

5.8 KNOWLEDGE OF FERTILE PERIOD

A basic knowledge of reproductive physiology is important for the successful practice of coitus-related methods such as withdrawal, condoms, vaginal methods, and fertility-awareness methods that are collectively referred to as periodic abstinence, rhythm, or the calendar method. Knowledge of the fertile period in a woman's menstrual cycle is particularly critical in the case of the rhythm method, and the successful practice of natural family planning depends on an understanding of when during the menstrual cycle a woman is most likely to conceive.

The 2008 GDHS included a question designed to obtain information on the respondent's understanding of when a woman is most likely to become pregnant during the menstrual cycle. Both women and men were asked, "From one menstrual period to the next, are there certain days when a woman is more likely to get pregnant if she has sexual intercourse?" If the answer was "yes," they were further asked whether that time was just before her period begins, during her period, right after her period ended, or halfway between two periods. Table 5.9 shows the results for all women and men age 15-49 and for those who reported they are currently using the rhythm method.

Among all women, about four in ten (39 percent) understand that a woman is most likely to conceive halfway between her menstrual periods. One-quarter of women wrongly believe that the fertile period is right after a woman's period has ended, while 15 percent of women say they do not know when the fertile period falls, and 12 percent believe that there is no specific fertile time.

Knowledge of a woman's ovulatory cycle is much more limited among men than women. Only 29 percent of men know that a woman is most likely to conceive halfway between her menstrual periods and 21 percent say there is no specific time when a woman is most fertile. Like women, one-quarter of men wrongly believe that the fertile period is right after a woman's period has ended.

As expected, women who use the rhythm method are more likely than non-users to know that the fertile time in a woman's menstrual cycle is halfway between periods (70 percent, compared with 38 percent). The same pattern is seen for men; 53 percent of men who rely on the rhythm method for contraception know that a woman is most likely to conceive halfway between her menstrual periods, compared with 28 percent of men who are non-users of the rhythm method.

There has been consistent improvement in knowledge of the fertile period over the previous GDHS surveys. In 2008, 39 percent of all women and 70 percent of users of the rhythm method correctly reported when a woman is most fertile, compared with 29 percent of all women and 62 percent of users of periodic abstinence in the 2003 survey. Conversely, 25 percent of all women in the 2008 GDHS, compared with 35 percent in the 2003 GDHS wrongly reported that the fertile period is right after the woman's menstrual period has ended.

Table 5.9 Knowledge of fertile period

Percent distribution of women and men age 15-49 by knowledge of the fertile period during the ovulatory cycle, according to current use of the rhythm method, Ghana 2008

	Women			Men		
Perceived fertile period	Users of rhythm method	Non-users of rhythm method	All women	Users of rhythm method	Non-users of rhythm method	All men
Just before her menstrual period begins	4.7	7.2	7.1	7.0	10.0	9.9
During her menstrual period	3.1	2.8	2.8	5.6	5.3	5.3
Right after her menstrual period has ended	19.1	24.8	24.6	31.4	25.7	25.9
Halfway between two menstrual periods	69.6	37.6	38.9	52.7	28.3	29.2
Other	0.0	0.0	0.0	0.0	0.0	0.0
No specific time	1.3	11.9	11.5	0.0	9.3	8.9
Don't know	2.1	15.5	14.9	3.3	21.2	20.5
Missing	0.0	0.3	0.2	0.0	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of respondents	197	4,719	4,916	150	3,908	4,058

5.9 TIMING OF STERILISATION

The 2008 GDHS collected information on the timing of female sterilisation among those using the method. However, the number of cases (46 unweighted cases) was too small for meaningful analysis by background characteristics. The median age at sterilisation is 33.6 years. About one-third of sterilised women underwent the procedure at age 30-34, and 31 percent at age 35-39. Nineteen percent of sterilised women underwent the procedure at age 40-44, and 13 percent at age 25-29. The smallest proportion of sterilised women underwent the procedure before age 25 (data not shown).

5.10 SOURCE OF CONTRACEPTION

Information on sources of modern contraceptive methods is important to family planning programme management. In Ghana, both public and private sectors are strategically important in the provision of family planning services. Non-clinical short-term methods such as the pill and condoms are widely distributed by the private sector. Ghana has vibrant social marketing programmes that network with pharmacies and chemical sellers, private clinics, and maternity homes as well as major NGOs, such as the PPAG and Marie Stopes International, which provide both clinical and non-clinical methods. The public sector provides the full range of clinical and non-clinical methods mainly through health facilities and also supports major partners.

In the 2008 GDHS, all current users of modern contraceptive methods were asked the most recent source of their methods. Interviewers were instructed to record the name of the source or facility, because respondents may not always be able to accurately categorise a source as public or private. Supervisors and editors then verified and coded this information to improve the accuracy of the information.

Table 5.10 shows that 39 percent of users obtain their contraceptive methods from the public sector. Government hospitals or polyclinics are the most common public source (20 percent), followed by government health centres (14 percent). In addition, 5 percent obtain their methods from government health posts or community-based health and planning services (CHPS) compounds, and family planning clinics.

Table 5.10 Source of modern contraception methods

Percent distribution of users of modern contraceptive methods age 15-49 by most recent source of method, according to method, Ghana 2008

Source	Pill	Inject-ables	Implants	Male condom	Total
Public sector	12.7	86.9	(79.2)	2.7	39.4
Government hospital/ polyclinic	3.7	45.2	(41.7)	1.7	19.5
Government health centre	6.5	29.6	(33.6)	0.0	14.4
Government health post/ CHPS	1.2	5.8	(0.0)	0.0	2.3
Family planning clinic	0.5	5.0	(3.8)	0.0	2.3
Mobile clinic	0.4	0.0	(0.0)	0.0	0.1
Fieldworker/outreach/ peer educator	0.5	1.3	(0.0)	1.0	0.9
Private medical sector	84.3	11.0	(17.8)	70.9	51.1
Private hospital/clinic	1.2	7.1	(11.6)	0.0	3.5
Pharmacy	8.4	0.0	(0.0)	16.6	7.6
Chemical/drug store	74.7	0.2	(0.0)	54.0	37.9
FP/PPAG clinic	0.0	0.4	(6.2)	0.0	0.9
Maternity home	0.0	3.3	(0.0)	0.3	1.2
Other source	1.4	2.0	(0.0)	6.5	3.0
Shop/market	0.6	0.0	(0.0)	1.1	0.5
Church	0.0	0.6	(0.0)	0.0	0.2
Community volunteer	0.0	0.6	(0.0)	0.0	0.2
Friend/relative	0.8	0.8	(0.0)	5.4	2.0
Other	0.0	0.0	(0.0)	3.6	1.0
Don't know	0.7	0.0	(0.0)	16.3	5.1
Missing	0.9	0.1	(3.0)	0.0	0.4
Total	100.0	100.0	(100.0)	100.0	100.0
Number of women	178	207	33	175	612

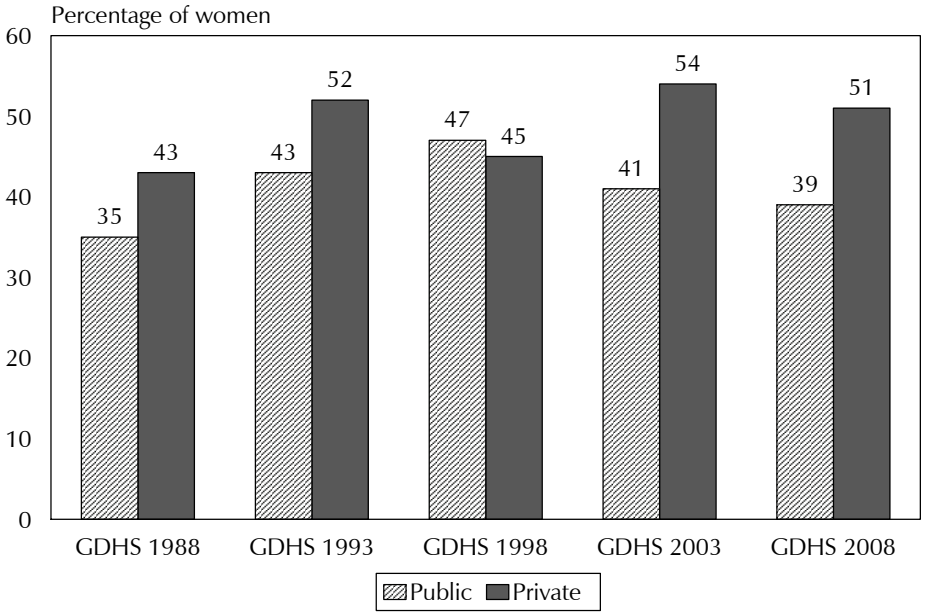
Note: Total includes other modern methods but excludes lactational amenorrhoea method (LAM). Figures in parentheses are based on 25-49 unweighted cases. Total includes 8 users of IUD, 6 users of foam/jelly, and 1 user each of female condom and diaphragm.

Over half of women (51 percent) use the private medical sector to obtain their contraceptive methods. Chemical or drug stores (38 percent) and pharmacies (8 percent) account for the largest providers in the medical private sector. Only 4 percent of women obtain their methods from private hospitals and clinics and 2 percent obtain their methods from private maternity homes or PPAG clinics. Three percent of women who are using a modern method of contraception get their method from other sources, mostly from friends or relatives.

The type of source differs by method. Whereas the majority of users of injectables and implants obtain their methods from a government source (87 and 79 percent, respectively), pill and condom users are almost as likely to use private medical sector sources (84 and 71 percent, respectively). Three-fourths of pill users and half of condom users get their method from chemical/drug stores, but a sizeable minority of pills users (13 percent) depend on the public medical sector.

In the past 20 years, there has been a shift in the sources of modern contraceptive methods from the public to the private sector (Figure 5.2). The proportion of current users relying on private medical sources has increased from 43 percent in 1988 to 52 percent in 1993, declined to 45 percent in 1998, increased to 54 percent in 2003, and declined to 51 percent in 2008. Reliance on public sources for all modern methods increased from 35 percent in 1988 to 47 percent in 1998, and then declined to 41 percent in 2003. In the five years preceding the 2008 survey, it declined further to 39 percent.

Figure 5.2 **Trends in Source of Modern Contraceptive Methods, Ghana 1988-2008**



5.11 COST OF CONTRACEPTION

Information on the cost of obtaining contraceptive methods is useful to family planning programmes. It is important to know how much clients are paying for contraceptive methods. This information provides guidance on price differentials among the sectors and pricing of commodities. It also gives an indication of adherence to stipulated prices by the various sectors. In the GDHS, women who were using modern methods of contraception were asked how much they paid in total the last time they obtained their method, including the cost of the method and any consultation they may have had. Table 5.11 shows the percentage of women who obtained the method free and, for those who paid, the median cost, by method and public-private source.

In Ghana contraceptives are generally not provided free of charge. Commodities are sold at highly subsidised prices and public sector prices are expected to be lower than those in the private sector. Few respondents were able to provide cost information, which may affect the inferences drawn; nevertheless, the information is useful. The median cost of pills is 0.50 Ghana cedis per pack (0.50 in public sector and 0.60 in private outlets). Male condoms sell at a median price of 0.50 Ghana cedis in the private sector. Injectables cost about twice as much in the private sector, compared with the public sector (1 Ghana cedi and 0.50 Ghana cedis, respectively). Implants are the most expensive method obtained in the public sector and cost 3 Ghana cedis per piece. The public sector prices reported are higher than the stipulated prices.

Table 5.11 Cost of modern contraceptive methods

Percentage of current users of modern contraceptive methods age 15-49 who received their method free, percentage who do not know the cost of their method, and median cost (in pesewa) of the method, by current method and source of method (public or private), Ghana 2008

Source of method/cost	Pill	Inject-ables	Implants	Male condom	Total
Public sector					
Received method free	(1.2)	0.9	(2.4)	*	2.0
Does not know cost	(0.0)	1.1	(5.5)	*	1.5
Median cost (in pesewa)[1]	(49.3)	49.7	(299.8)	*	49.9
Number of women	23	180	26	5	241
Private medical sector/other					
Received method free	0.9	(4.9)	*	7.7	4.3
Does not know cost	3.1	(9.5)	*	64.5	32.0
Median cost (in pesewa)[1]	59.4	(99.2)	*	49.3	59.9
Number of women	155	27	7	170	371
Total					
Received method free	1.0	1.4	(1.9)	8.3	3.4
Does not know cost	2.7	2.2	(4.4)	62.9	20.0
Median cost (in pesewa)[1]	49.9	49.8	(299.9)	49.3	50.0
Number of women	178	207	33	175	612

Note: Table excludes lactational amenorrhoea method (LAM). Costs are based on the last time current users obtained method. Costs include consultation costs, if any. For condom, costs are per package; for pills, costs are per cycle. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Total includes 8 users of IUD, 6 users of foam/jelly, and 1 user each of female condom and diaphragm.
[1] Median cost is based on women who reported a cost; 100 pesewa = 1 Ghana cedi.

5.12 INFORMED CHOICE

Informed choice is an important aspect of the delivery of family planning services. Family planning clients have a right to information about their contraceptive method. Providers are required to inform all users of contraceptive methods about 1) the potential side effects of their method, 2) what they should do if they encounter side effects or signs of a problem, and 3) alternate methods of family planning they can use. Current users of modern methods who are well informed about the side effects and problems associated with methods and know of a range of method options are better placed to make an informed choice about the method they would like to use. This information improves the quality of care and compliance by assisting users to cope with side effects, thereby decreasing unnecessary discontinuation of temporary methods.

Current users of selected modern contraceptive methods were asked whether, at the time they adopted the particular method, they were informed about the possible side effects or problems that

might be encountered with the method. Table 5.12 shows the percentage of current users of modern methods who were either informed about possible side effects or problems with the method used or informed of other methods they could use; these are broken down by method type and source of the method.

About half of current users of modern methods received the relevant information to make informed choices. Health providers were somewhat more likely to inform users of modern methods about the side effects or problems of methods used (54 percent) and about other methods that could be used (53 percent), than about what to do if they experienced side effects (51 percent). Information varies by type of method, but is least likely to be provided to pill users. There has been little or no improvement in the provision of information about modern methods (to support informed choice) over the past five years.

Public sector clients received more information than private sector clients (seven in ten and three in ten, respectively). The private sector is made up of private hospitals or clinics, pharmacies, and chemical and drug stores. Information on some categories cannot be presented because the percentages are based on small numbers of users.

Table 5.12 Informed choice

Among current users of modern methods age 15-49 who started the last episode of use within the five years preceding the survey, percentage who were informed about possible side effects or problems with the method, percentage who were informed about what to do if they experienced side effects, and percentage who were informed about other methods that could used, by method and source, Ghana 2008

	Among women who started the last episode of use of modern contraceptive method within the past five years, percentage who were:			
Method/source	Informed about side effects or problems with method used	Informed about what to do if side effects experienced	Informed by a health or family planning worker of other methods that could be used	Number of women
Method				
Pill	35.8	31.7	34.3	160
Injectables	70.8	67.7	68.7	184
Implants	(59.8)	(59.8)	(72.7)	31
Other[1]	(48.0)	(47.2)	(41.3)	39
Initial source of method[2]				
Public sector	67.9	64.7	70.9	223
Government hospital/polyclinic	69.7	65.9	73.6	108
Government health centre	68.2	67.5	65.0	80
Government health post/CHPS	*	*	*	14
Family planning clinic	*	*	*	17
Mobile clinic/fieldworker/outreach/peer educator	*	*	*	6
Private medical sector	36.1	33.7	33.1	148
Private hospital/clinic	*	*	*	24
Pharmacy	*	*	*	13
Chemical/drug store	25.4	25.6	27.4	102
FP/PPAG clinic/maternity home	*	*	*	9
Other source	*	*	*	5
Don't know	*	*	*	5
Missing[3]	(50.9)	(45.1)	(28.4)	32
Total	54.4	51.3	53.2	414

Note: Table excludes users who obtained their method from friends/relatives. Table excludes current users who use either male sterilisation or condoms. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
na = Not applicable
[1] 'Other' methods are IUD, diaphragm, female sterilisation, female condom, and foam/jelly.
[2] Source at start of current episode of use
[3] Source of method not collected for female or male sterilisation in GDHS 2008, thus source for these methods is set to 'missing'

5.13 FUTURE USE OF CONTRACEPTION

Intention to use family planning is an important indicator of the potential demand for services. Currently married women who were not using contraceptives at the time of the survey were asked about their intention to use family planning in the future. Table 5.13 shows the percent distribution of currently married women who are not using a contraceptive method by intention to use in the future and according to number of living children.

Forty-eight percent of currently married non-users say they intend to use family planning in the future, while 46 percent do not intend to use, and 6 percent are unsure. The proportion of those intending to use varies slightly with the number of living children, increasing from 48 percent for those with no children to a peak of 53 percent for those with three children. The proportions who do not intend to use contraception in the future are highest among those with no child (48 percent) and those with 4 or more children (49 percent). These findings indicate there is a need to increase the level of family planning messages and services to target groups, particularly women with four or more children.

Over the past 20 years, there has been an increase in the percentage of currently married non-users who intend to use family planning in the future—including those who intend to use but are not sure of the timing—from 37 percent in 1988 to 54 percent in 2008. However, over the past five years there has been a slight decline in the proportion of currently married non-users who intend to use family planning in the future, from 54 percent in 2003 to 48 percent in 2008.

Table 5.13 Future use of contraception

Percent distribution of currently married women age 15-49 who are not using a contraceptive method by intention to use in the future, according to number of living children, Ghana 2008

Intention to use in the future	Number of living children[1]					
	0	1	2	3	4+	Total
Intends to use	47.5	49.3	47.9	53.0	43.7	47.5
Unsure	4.9	7.8	5.4	5.0	6.8	6.2
Does not intend to use	47.6	42.5	46.2	41.6	48.6	45.7
Missing	0.0	0.3	0.5	0.4	0.9	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	126	386	478	387	823	2,200

[1] Includes current pregnancy

5.14 REASONS FOR NOT INTENDING TO USE CONTRACEPTION

An understanding of the reasons non-users of contraception have for intending not to use a contraceptive method in the future, is crucial to identifying strategies to improve the access, acceptability, and quality of care of family planning services. Table 5.14 presents the main reasons for not intending to use contraception reported by currently married women who are not using a contraceptive method and who do not intend to use contraception in the future.

The most commonly cited reason for not intending to use contraception is fear of side effects, which was mentioned by 26 percent of this subgroup of women. Sixteen percent of non-users said they do not intend to use in the future because they themselves are opposed to using family planning, and an additional 3 percent said that their husband or partner was opposed to family planning. Other reasons given for not intending to use include infecundity/subfecundity (10 percent), menopause/hysterectomy (7 percent), desire for more children and health concerns (8 percent each). Only small proportions of women cited lack of knowledge of methods, lack of access, or cost as the main reason they do not intend to use family planning.

Fertility-related reasons for future non-use such as menopause or infertility are more likely to be cited by older women, while younger women are more likely to cite method-related reasons or say that they are opposed to family planning. For example, 22 percent of women age 15-29 are opposed to using family planning, compared with 14 percent of women age 30-49. Similarly, fear of side effects is cited by a larger proportion of younger women than older women (34 and 23 percent, respectively). Younger women are more likely to say that lack of knowledge of methods or sources of methods are the main reasons for future non-use. These results indicate a need for increased provision of information and counselling on the side effects of contraceptive methods by the family planning programme in Ghana, and intensified action targeting younger women.

Table 5.14 Reason for not intending to use contraception in the future

Percent distribution of currently married women who are not using a contraceptive method and who do not intend to use a method in the future by main reason for not intending to use contraception, according to age, Ghana 2008

	Age		
Reason	15-29	30-49	Total
Fertility-related reasons	**11.1**	**37.4**	**30.1**
Infrequent sex/no sex	2.5	5.3	4.5
Menopausal/had hysterectomy	0.0	10.1	7.3
Subfecund/infecund	1.8	13.3	10.1
Wants as many children as possible	6.8	8.7	8.2
Opposition to use	**30.8**	**19.2**	**22.5**
Respondent opposed	22.1	14.2	16.4
Husband/partner opposed	4.1	2.0	2.6
Others opposed	1.2	0.5	0.7
Religious prohibition	3.4	2.5	2.8
Lack of knowledge	**6.4**	**2.3**	**3.5**
Knows no method	3.7	1.3	2.0
Knows no source	2.7	1.0	1.5
Method-related reasons	**48.8**	**38.5**	**41.2**
Health concerns	8.1	8.2	8.1
Fear of side effects	34.1	22.9	26.0
Lack of access/too far	0.4	0.3	0.3
Cost too much	0.0	1.0	0.7
Inconvenient to use	3.6	2.0	2.4
Interfere with body's normal process	2.6	4.1	3.7
Other	0.5	1.1	0.9
Don't know	2.3	1.5	1.7
Total	100.0	100.0	100.0
Number of women	282	724	1,006

In 2008, the main reasons for not intending to use contraception in the future among currently married women were method-related reasons (41 percent combined), followed by fertility-related reasons (30 percent combined), and opposition to use (23 percent). This pattern is different from the pattern seen in the 2003 survey, where fertility-related issues were cited more frequently (41 percent) than method-related reasons (37 percent). For example, the proportion of women who cited being subfecund/infecund has declined from 15 percent in 2003 to 10 percent in 2008. This decline is most pronounced among women age 30-39 (20 percent in 2003, compared with 13 percent in 2008). The desire to have as many children as possible—as a reason for non-use of contraception in the future—declined among married women, from 14 percent in 2003 to 8 percent in 2008. The decline of this reason is most evident among younger women (17 percent in 2003, compared with 7 percent in 2008).

Fear of side effects remains the most cited method-related reason for non-use of contraception among currently married women (26 percent). It increased in importance as a reason for non-use from 18 percent in 1998 to 26 percent in 2003 and 2008. Compared with the 2003 results, lack of knowledge and cost were cited less often as reasons for non-use in the 2008 survey, while inconvenient to use and interferes with body's normal process were cited more often in the 2008 survey.

5.15 PREFERRED METHOD OF CONTRACEPTION FOR FUTURE USE

Of particular interest to programme managers is the preferred methods of non-users who reported that they intend to use a family planning method in the future. This information is useful in assessing the potential demand for specific methods of family planning. Table 5.15 shows that among currently married women, the contraceptive method most preferred for future use is injectables (39 percent), followed by the pill (21 percent), and implants (10 percent).

There has been a slight change in the order of preferred methods since the 1998 GDHS. The proportion of non-users who prefer injectables for future use increased from 36 percent in 1998 to 43 percent in 2003, and then declined to 39 percent in 2008. The proportion of non-users who prefer the pill decreased from 21 percent in 1998 to 15 percent in 2003, and then increased to 21 percent in 2008. Preference for implants increased from 4 percent in 1998 to 11 percent in 2003, with little change over the past five years (10 percent in 2008). Intention to use the IUD also increased from 2 percent in 1998 to 4 percent in 2003, and then declined to 1 percent in 2008. In 1998, 4 percent of non-users said that they preferred to use female sterilisation in the future with little change in 2003, compared with just 2 percent in 2008. The proportion preferring the rhythm method (or periodic abstinence) declined markedly from 8 percent in 1998 to 4 percent in 2003 and doubled over the past five years back to 8 percent in 2008.

Table 5.15 Preferred method of contraception for future use

Percent distribution of currently married women age 15-49 who are not using a contraceptive method but who intend to use in the future by preferred method, Ghana 2008

Preferred method	Percent distribution currently married women
Female sterilisation	2.8
Pill	20.9
IUD	1.4
Injectables	39.1
Implants	9.8
Condom	4.3
Female condom	0.2
Diaphragm	0.2
Foam/jelly	0.4
Rhythm	8.3
Withdrawal	0.6
Other	2.4
Unsure	9.4
Total	100.0
Number of women	1,044

5.16 EXPOSURE TO FAMILY PLANNING MESSAGES

The media is seen as an effective means to disseminate family planning information. To assess the extent to which media serve as sources of family planning messages, respondents were asked whether they had heard or seen a message about family planning on the radio, television, newspapers or magazines in the few months preceding the survey. Exposure to family planning messages among women and men age 15-49 is shown in Table 5.16.

Radio is the most common source of family planning messages for both women (60 percent) and men (69 percent). Approximately half of respondents (45 percent of women and 51 percent of men) saw a family planning message on the television. Newspapers and magazines are the least common source of family planning messages for both women (11 percent) and men (20 percent). Roughly one in three women (32 percent) and one in four men (24 percent) were not exposed to any family planning messages in the three media. These figures represent a considerable decline in exposure to messages on family planning in radio, television, newspapers and magazines over the past five years. In 2003, only about one in five women (20 percent) and one in eight men age 15-59 (12 percent) were not exposed to any family planning messages through radio, television, or newspaper/magazines in the few months preceding the survey (Figure 5.3).

Exposure to family planning messages is more common among men than women, more common in urban areas than rural areas, and increases with level of education and wealth quintile. Among the regions, respondents in the Greater Accra, Western, and Ashanti regions and men in the Brong Ahafo region, have the greatest exposure to family planning messages through any media, while respondents in the Upper West, Upper East, Volta and Northern regions have the lowest exposure to family planning messages through the media. Individuals age 15-19 of both sexes report the lowest exposure to family planning messages in the media. Non-exposure to all three media sources among young people age 15-19 is 39 percent for males and 44 percent for females. These results indicate a need for programmes that target youth (with family planning messages) in their preferred media channels and sources of information.

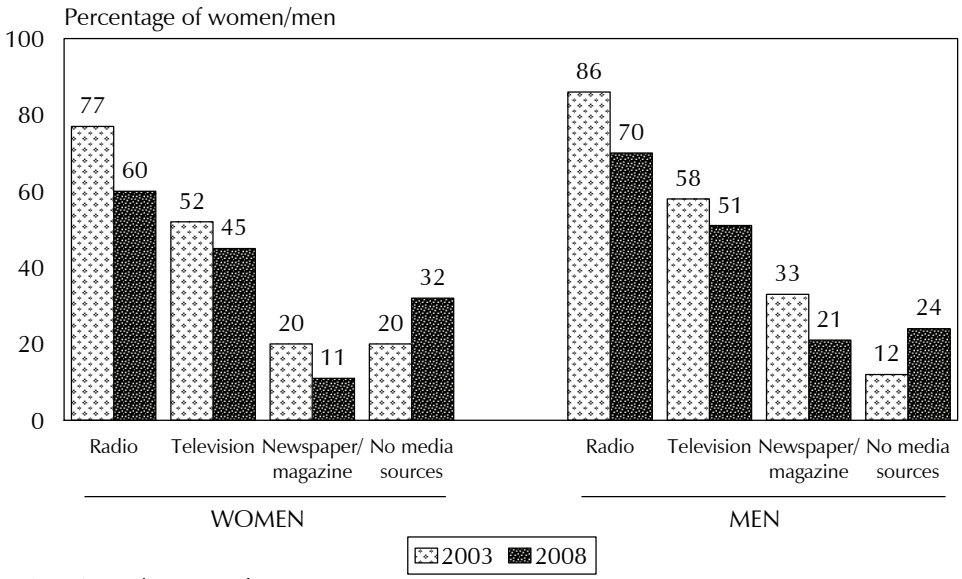
Table 5.16 Exposure to family planning messages

Percentage of women and men age 15-49 who heard or saw a family planning message on radio or television, or in a newspaper or magazine, in the past few months, according to background characteristics, Ghana 2008

Background characteristic	Women					Men				
	Radio	Television	News-paper/ magazine	None of specified media sources	Number of women	Radio	Television	News-paper/ magazine	None of specified media sources	Number of men
Age										
15-19	43.0	39.6	11.8	44.4	1,025	53.6	41.6	12.0	38.5	911
20-24	60.2	49.9	12.2	28.5	878	67.7	53.7	22.1	24.3	704
25-29	65.5	50.1	13.1	26.5	832	73.5	58.5	22.3	20.5	624
30-34	64.0	49.0	9.9	28.0	644	77.4	59.0	24.2	16.7	533
35-39	69.6	46.4	9.7	28.2	638	72.3	51.4	19.4	19.9	528
40-44	67.0	41.6	9.2	28.8	470	77.2	51.4	23.5	19.9	394
45-49	62.2	36.8	6.2	33.9	429	80.2	45.3	20.6	16.8	364
Residence										
Urban	65.8	65.0	16.2	21.7	2,383	73.1	69.9	29.3	16.3	1,866
Rural	54.6	26.7	5.7	41.4	2,533	66.1	35.2	11.7	31.0	2,191
Region										
Western	75.6	42.4	12.8	20.8	447	80.7	58.0	20.8	12.0	403
Central	58.5	43.9	11.5	36.4	424	74.7	67.4	19.3	21.9	326
Greater Accra	72.0	77.6	20.1	14.9	853	70.7	69.5	31.5	17.0	649
Volta	49.2	24.4	11.0	44.1	431	61.7	25.4	13.1	34.3	373
Eastern	64.5	42.4	5.1	29.8	483	70.5	53.3	25.8	25.7	411
Ashanti	63.8	58.5	8.9	22.7	1,011	70.7	58.6	17.9	21.3	785
Brong Ahafo	51.5	30.5	9.1	42.0	425	76.3	55.6	15.9	18.1	347
Northern	41.2	20.7	6.3	55.2	467	60.3	31.4	15.1	36.3	435
Upper East	49.5	16.9	7.4	47.7	253	52.8	15.6	10.4	44.1	219
Upper West	38.0	14.3	4.9	58.6	122	62.8	29.3	12.7	32.0	108
Education										
No education	47.8	18.9	2.4	49.2	1,042	61.0	20.8	1.7	37.5	540
Primary	54.0	32.9	3.2	40.8	988	59.8	32.6	2.8	36.6	619
Middle/JSS	64.2	51.1	8.4	26.9	2,039	70.7	53.3	15.4	23.3	1,721
Secondary+	72.1	78.3	36.1	12.3	844	76.1	71.6	43.7	13.1	1,167
Wealth quintile										
Lowest	42.8	7.9	2.6	56.4	783	56.3	11.2	4.2	42.8	708
Second	54.5	20.9	3.4	43.2	900	69.7	32.7	9.6	28.7	738
Middle	56.6	36.2	7.3	35.6	979	68.7	49.7	16.4	27.2	699
Fourth	66.8	63.1	13.0	21.7	1,119	74.9	70.3	25.7	16.4	974
Highest	72.6	80.7	23.2	12.8	1,135	73.7	76.9	36.0	12.6	939
Total 15-49	60.0	45.3	10.8	31.9	4,916	69.3	51.1	19.8	24.2	4,058
50-59	na	na	na	na	na	76.4	49.6	31.5	20.1	510
Total 15-59	na	na	na	na	na	70.1	51.0	21.1	23.8	4,568

Note: Total includes cases with information missing on education that are not shown separately.
na = Not applicable

Figure 5.3 Percentage of Women 15-49 and Men 15-59 Exposed to Family Planning Messages in the Media



Note: No media sources refers to nonexposure to radio, television and newspaper/magazine.

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5.17 CONTACT OF NON-USERS WITH FAMILY PLANNING PROVIDERS

To determine whether non-users of family planning in Ghana have had an opportunity to receive information about family planning from providers, women who were not using contraception were asked whether they had attended a health facility in the past year for any reason and, if so, whether a staff person at that facility spoke to them about family planning methods. They were also asked whether they had been visited by a fieldworker who discussed family planning. The results are shown in Table 5.17.

Table 5.17 shows that in the 12 months preceding the survey 13 percent of non-users reported that they had visited a health facility and discussed family planning and 10 percent of women were visited by a fieldworker who discussed family planning. About one in three women (34 percent) visited a health facility but did not discuss family planning. The majority of the women (80 percent) did not discuss family planning with a fieldworker or staff at a health facility.

Women age 30-34 are more likely to have discussed family planning with a service provider than younger women or older women.

Women in rural areas are more likely to have discussed family planning with health professionals than women in urban areas; likewise, women with no education or primary education are more likely to have discussed family planning with a fieldworker or staff at a health facility than women with higher levels of education. The same pattern is seen by wealth status, women in the lowest wealth quintile are more likely to have discussed family planning with health professionals than women in the highest wealth quintile. These results may indicate that some groups of women are already using contraceptive methods, or that they already have information about family planning and, therefore, do not feel the need to discuss family planning with providers, or they may be less likely to have visited a facility. Discussion of family planning with staff at health facilities is highest in the Upper East, Volta, and Upper West regions (25, 24 and 23 percent, respectively) and lowest in the Central region (9 percent). Discussion of family planning during a visit by a fieldworker is highest in the Northern and Volta regions (19 and 15 percent, respectively) and lowest in the Greater Accra region (8 percent).Women not currently using family planning in the Western, Greater Accra, and Eastern regions are the least likely to discuss family planning with a fieldworker or staff at a health facility.

The overall proportion of women not currently using family planning who did not discuss family planning with a fieldworker or staff at a health facility has not changed over the past five years (79 percent in 2003, compared with 80 percent in 2008), however, the proportion of women who visited a health facility but did not discuss family planning has increased slightly from 27 percent in 2003 to 34 percent in 2008.

Table 5.17 Contact of non-users with family planning providers

Among women age 15-49 who are not using contraception, the percentage who during the past 12 months were visited by a fieldworker who discussed family planning, the percentage who visited a health facility and discussed family planning, the percentage who visited a health facility and did not discuss family planning, and the percentage who neither discussed family planning with a fieldworker nor with staff at a health facility, by background characteristics, Ghana 2008

Background characteristic	Percentage of women visited by fieldworker who discussed family planning	Among women who visited a health facility in the past 12 months, percentage who:		Percentage of women who neither discussed family planning with fieldworker nor with staff at health facility	Number of women
		Discussed family planning	Did not discuss family planning		
Age					
15-19	5.9	4.0	23.1	91.7	942
20-24	9.7	12.6	37.9	81.3	691
25-29	11.3	20.3	37.7	73.1	635
30-34	13.4	22.2	40.7	69.5	495
35-39	14.6	16.1	34.5	74.1	486
40-44	13.7	11.7	35.6	77.8	357
45-49	9.1	4.4	35.2	88.0	360
Residence					
Urban	9.3	11.1	39.1	82.6	1,893
Rural	11.4	14.0	29.0	78.3	2,072
Region					
Western	4.3	10.3	32.1	86.6	380
Central	10.0	9.2	34.5	82.8	342
Greater Accra	7.5	9.8	40.2	85.3	637
Volta	14.8	23.7	22.5	71.1	334
Eastern	8.9	10.0	28.5	83.6	378
Ashanti	10.5	10.1	36.5	82.1	794
Brong Ahafo	9.1	13.7	40.1	80.3	335
Northern	19.1	10.1	38.2	73.9	441
Upper East	10.2	25.2	20.0	71.9	224
Upper West	11.9	22.8	25.7	69.8	99
Education					
No education	12.9	15.0	31.1	75.5	919
Primary	12.1	12.2	32.5	79.2	785
Middle/JSS	8.7	11.3	33.5	83.3	1,623
Secondary+	9.3	12.8	40.3	81.4	636
Wealth quintile					
Lowest	14.5	15.4	24.2	74.6	694
Second	9.7	13.1	29.1	80.1	737
Middle	10.7	13.1	35.2	79.9	794
Fourth	10.5	12.1	36.2	80.7	867
Highest	7.5	10.0	41.9	85.3	873
Total	10.4	12.6	33.8	80.4	3,965

Note: Total includes cases with information missing on education that are not shown separately.

5.18 HUSBAND/PARTNER'S KNOWLEDGE ABOUT WOMAN'S USE OF FAMILY PLANNING

The husband or partner's knowledge about a woman's use of family planning is an indication of their prior discussion of, interest in, and continued practice of family planning. Inter-spousal/ partner communication is an important intermediate step along the path to adopting a contraceptive method, as well as continuing to use that or other contraceptive methods in the future. Lack of

knowledge or discussion of family planning may be related to a number of factors including lack of interest in family planning, hostility to the subject of family planning, or customary reticence to talk about sex-related matters. To assess the extent to which women use contraception without informing their husband/partners, the 2008 GDHS asked married women whether their husband/partners know they are using a method of family planning.

Table 5.18 shows that the majority of married women (86 percent) who are using contraception say that their husband or partner knows about their use of family planning; only 11 percent said that their husband/partner does not know about their use of contraception, and 3 percent were unsure.

Table 5.18 Husband/partner's knowledge of women's use of contraception

Percent distribution of currently married women age 15-49 who are using a method of contraception, by whether their husband/partner knows about their use of contraception, according to background characteristics, Ghana 2008

Background characteristic	Husband/partner's knowledge of woman's use of contraception				Number of women
	Knows[1]	Does not know	Unsure whether knows/ missing	Total	
Age					
15-19	*	*	*	*	12
20-24	91.5	6.3	2.2	100.0	93
25-29	82.6	14.5	2.9	100.0	141
30-34	88.9	7.0	4.1	100.0	126
35-39	84.2	12.6	3.1	100.0	136
40-44	84.1	12.9	3.0	100.0	105
45-49	88.0	8.7	3.3	100.0	64
Residence					
Urban	85.9	11.8	2.3	100.0	330
Rural	86.8	9.4	3.8	100.0	347
Region					
Western	(90.1)	(9.4)	(0.5)	(100.0)	50
Central	87.3	10.7	2.1	100.0	58
Greater Accra	86.2	12.6	1.3	100.0	138
Volta	82.9	13.5	3.6	100.0	83
Eastern	82.5	15.8	1.8	100.0	61
Ashanti	84.5	7.7	7.8	100.0	147
Brong Ahafo	94.4	4.0	1.6	100.0	77
Northern	(76.2)	(19.0)	(4.7)	(100.0)	20
Upper East	(86.8)	(13.2)	(0.0)	(100.0)	25
Upper West	93.9	6.1	0.0	100.0	18
Education					
No education	89.7	9.1	1.2	100.0	116
Primary	83.2	12.5	4.3	100.0	170
Middle/JSS	86.9	9.3	3.8	100.0	290
Secondary+	86.0	12.8	1.3	100.0	99
Wealth quintile					
Lowest	86.8	8.9	4.4	100.0	81
Second	86.2	8.8	5.0	100.0	117
Middle	81.5	13.4	5.2	100.0	115
Fourth	85.3	13.5	1.3	100.0	174
Highest	90.2	8.1	1.8	100.0	189
Total	86.3	10.6	3.1	100.0	676

Note: Total includes cases with information missing on education that are not shown separately. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Includes women who reported use of male sterilisation, male condoms, or withdrawal

In Ghana, communication between couples about the use of family planning is high for almost all background characteristics and shows little variation by age, urban-rural residence, level of education, or wealth quintile. A larger proportion of women in the Brong Ahafo and Upper West regions say that their husband or partner is aware of their contraceptive use (94 percent each) than women in the Northern region (76 percent). About one in five current users in the Northern region (19 percent) report that their husband or partners does not know that they are using a method. Interestingly, women with less education and those in the lowest and highest wealth quintiles are more likely than other women to say that their husband or partner knows that they are using family planning.

5.19 ATTITUDES TOWARDS FAMILY PLANNING

The 2008 GDHS assessed respondent's attitudes towards contraception by asking currently married respondents whether they agreed or disagreed with two statements about family planning use: 1) contraception is women's business and a man should not have to worry about it; and 2) women who use contraception may become promiscuous. The results are shown in Table 5.19.1 for women and in Table 15.19.2 for men.

Table 5.19.1 Women's attitudes towards use of contraception by women

Percent distribution of currently married women age 15-49 by two common attitudes regarding women's use of contraception: "Contraception is a woman's business," and "Women who use contraception may become promiscuous" and by whether the woman agrees with these attitudes, according to background characteristics, Ghana 2008

Background characteristic	Contraception is a woman's business					Women who use contraception may become promiscuous					Number of women
	Disagree	Agree	Don't know	Missing	Total	Disagree	Agree	Don't know	Missing	Total	
Age											
15-19	56.3	36.0	7.4	0.3	100.0	47.4	38.3	13.9	0.3	100.0	85
20-24	61.8	34.5	3.4	0.3	100.0	57.8	34.8	7.2	0.3	100.0	414
25-29	62.5	33.5	4.0	0.0	100.0	60.6	29.7	9.7	0.0	100.0	612
30-34	65.0	31.3	3.7	0.0	100.0	65.2	27.2	7.6	0.0	100.0	539
35-39	61.2	36.1	2.7	0.1	100.0	63.9	30.6	5.4	0.1	100.0	527
40-44	63.3	31.2	5.3	0.2	100.0	60.5	31.5	8.1	0.0	100.0	380
45-49	65.6	28.1	6.3	0.0	100.0	60.2	31.3	8.5	0.0	100.0	319
Residence											
Urban	67.2	30.8	1.9	0.1	100.0	65.1	28.9	6.0	0.1	100.0	1,216
Rural	59.7	34.4	5.8	0.1	100.0	58.4	32.2	9.4	0.0	100.0	1,660
Region											
Western	39.6	58.9	1.3	0.2	100.0	56.2	41.9	1.7	0.2	100.0	261
Central	60.3	37.6	1.7	0.4	100.0	64.1	28.2	7.3	0.4	100.0	254
Greater Accra	73.3	25.9	0.8	0.0	100.0	72.0	22.3	5.8	0.0	100.0	422
Volta	82.1	13.9	3.6	0.3	100.0	50.8	41.1	8.1	0.0	100.0	290
Eastern	71.6	28.0	0.4	0.0	100.0	73.6	26.1	0.3	0.0	100.0	252
Ashanti	64.3	35.3	0.4	0.0	100.0	58.5	35.7	5.8	0.0	100.0	542
Brong Ahafo	61.8	35.7	2.5	0.0	100.0	58.5	38.8	2.7	0.0	100.0	267
Northern	50.0	35.1	14.8	0.0	100.0	60.2	22.7	17.0	0.0	100.0	338
Upper East	56.1	26.9	17.0	0.0	100.0	51.3	23.1	25.6	0.0	100.0	168
Upper West	57.0	31.4	11.3	0.3	100.0	62.5	16.3	20.9	0.3	100.0	82
Education											
No education	55.1	33.6	11.2	0.2	100.0	56.9	27.5	15.5	0.1	100.0	853
Primary	60.5	37.2	2.3	0.0	100.0	57.4	37.5	5.1	0.0	100.0	638
Middle/JSS	66.0	33.3	0.7	0.0	100.0	62.3	32.7	5.1	0.0	100.0	1,058
Secondary+	77.7	21.6	0.3	0.3	100.0	76.3	20.4	3.0	0.3	100.0	325
Wealth quintile											
Lowest	52.7	33.9	13.3	0.0	100.0	54.3	29.3	16.4	0.0	100.0	573
Second	58.9	38.2	2.8	0.1	100.0	59.9	33.3	6.8	0.1	100.0	577
Middle	63.7	33.1	3.0	0.2	100.0	61.6	32.7	5.7	0.0	100.0	525
Fourth	66.6	32.1	1.1	0.2	100.0	60.6	33.0	6.3	0.2	100.0	600
Highest	72.0	27.4	0.7	0.0	100.0	69.3	26.0	4.6	0.0	100.0	601
Total	62.9	32.9	4.1	0.1	100.0	61.2	30.8	7.9	0.1	100.0	2,876

Note: Total includes cases with information missing on education that are not shown separately.

The results on attitudes towards family planning show that the majority of currently married Ghanaian respondents age 15-49 think that men should take some responsibility towards family planning, with 63 percent of women and 78 percent of men rejecting the statement that contraception is a woman's business and men should not have to worry about it. However, 33 percent of women and 19 percent of men agree with the statement, and 4 and 2 percent, respectively say they don't know.

Older women and respondents with at least some secondary education are more likely than other respondents to disagree with the statement that contraception is a woman's business and men should not be involved. Similarly, urban respondents, those in the Volta region, and men in the Greater Accra region are more likely to disagree with the statement. The proportion of women and men who do not think that women alone should deal with family planning increases with increasing wealth quintile. On the other hand, the proportion of respondents who agree that men should not have to worry about contraception is particularly high in the Western region among women (59 percent) and in the Brong Ahafo region among men (31 percent).

Table 5.19.2 Men's attitudes towards use of contraception by women

Percent distribution of currently married men age 15-49 by two common attitudes regarding women's use of contraception: "Contraception is a woman's business," and "Women who use contraception may become promiscuous" and by whether the man agrees with these attitudes, according to background characteristics, Ghana 2008

Background characteristic	Contraception is a woman's business					Women who use contraception may become promiscuous					Number of men
	Disagree	Agree	Don't know	Missing	Total	Disagree	Agree	Don't know	Missing	Total	
Age											
15-19	*	*	*	*	100.0	*	*	*	*	100.0	7
20-24	82.1	11.2	5.9	0.9	100.0	40.1	48.7	10.4	0.9	100.0	106
25-29	73.6	24.0	2.4	0.0	100.0	44.5	50.2	5.3	0.0	100.0	296
30-34	82.5	15.9	1.6	0.0	100.0	48.6	45.9	5.4	0.0	100.0	412
35-39	73.9	22.9	3.0	0.3	100.0	43.9	48.2	7.9	0.0	100.0	445
40-44	82.6	16.1	1.3	0.0	100.0	49.7	41.6	8.8	0.0	100.0	353
45-49	76.4	20.0	2.9	0.7	100.0	48.0	45.0	6.6	0.4	100.0	331
Residence											
Urban	83.0	14.8	1.7	0.5	100.0	50.1	44.1	5.5	0.3	100.0	832
Rural	74.4	22.6	3.0	0.0	100.0	43.8	48.0	8.3	0.0	100.0	1,118
Region											
Western	83.8	14.8	1.4	0.0	100.0	49.4	45.7	4.9	0.0	100.0	205
Central	73.8	24.9	0.6	0.7	100.0	47.6	50.0	2.4	0.0	100.0	148
Greater Accra	87.3	9.8	2.2	0.7	100.0	50.0	42.5	7.2	0.3	100.0	302
Volta	87.1	12.9	0.0	0.0	100.0	48.0	51.6	0.5	0.0	100.0	166
Eastern	73.7	23.0	2.5	0.8	100.0	37.1	45.7	16.5	0.8	100.0	189
Ashanti	78.2	21.1	0.7	0.0	100.0	40.6	55.7	3.6	0.0	100.0	374
Brong Ahafo	68.3	31.3	0.4	0.0	100.0	50.0	46.6	3.5	0.0	100.0	172
Northern	66.5	23.1	10.4	0.0	100.0	50.3	35.2	14.5	0.0	100.0	237
Upper East	83.0	14.3	2.7	0.0	100.0	54.7	30.9	14.4	0.0	100.0	109
Upper West	73.9	22.9	3.1	0.0	100.0	36.0	61.0	3.0	0.0	100.0	47
Education											
No education	68.5	24.9	6.6	0.0	100.0	43.7	43.5	12.8	0.0	100.0	398
Primary	70.7	27.1	2.2	0.0	100.0	44.4	48.4	7.2	0.0	100.0	251
Middle/JSS	80.6	17.6	1.2	0.6	100.0	43.4	51.3	5.0	0.3	100.0	812
Secondary+	85.2	13.5	1.3	0.0	100.0	54.7	39.4	5.9	0.0	100.0	485
Wealth quintile											
Lowest	67.7	26.1	6.3	0.0	100.0	41.9	45.1	13.0	0.0	100.0	380
Second	74.0	24.3	1.7	0.0	100.0	43.0	49.1	7.9	0.0	100.0	368
Middle	76.7	21.9	1.0	0.5	100.0	45.6	49.0	5.0	0.5	100.0	310
Fourth	82.4	15.7	1.4	0.4	100.0	48.5	47.9	3.4	0.2	100.0	434
Highest	86.7	11.3	1.7	0.2	100.0	51.8	41.8	6.5	0.0	100.0	458
Total	78.1	19.3	2.4	0.2	100.0	46.5	46.3	7.1	0.1	100.0	1,950

Note: Total includes cases with information missing on education that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Regarding the statement that women who use contraception may become promiscuous, 31 percent of women agree with the statement and 61 percent disagree, while men are fairly evenly divided between those who agree and those who disagree with the statement (46 and 47 percent, respectively). Eight percent of women and 7 percent of men said they don't know. Women in the Western, Volta, Brong Ahafo, and Ashanti regions are more likely to agree with the statement than women in other regions. At least half of men in the Ashanti, Volta, and Central regions and 61 percent in the Northern region agree with the statement. Among those who disagree with the statement that women who use contraception may become promiscuous, differentials by age, urban-rural residence, level of education, and wealth status are similar to those for respondents who disagree with the statement on contraception being women's business.

In the 2003 GDHS, the table on men's attitudes towards contraception was based on all men age 15-59 who know a method of family planning, while in the 2008 GDHS the table was based on currently married men age 15-49 regardless of knowledge of a family planning method. To compare the two surveys, the 2008 GDHS table on men's attitudes towards contraception was re-calculated to be similar to the table in the 2003 GDHS report. The results indicate that over the past five years there has been a substantial decline in the proportion of men age 15-59 who know a method of family planning and agree with the statement that contraception is women's business (35 percent in 2003, compared with 20 percent in 2008). There has been a smaller decrease in the proportion of men who agree with the statement that women who use contraception may become promiscuous (53 percent in 2003, compared with 47 percent in 2008 [data not shown]). This indication of improved male attitudes towards contraception may be the result of the targeting of men by Information Education and Communication (IEC) programmes and male involvement/partnership programmes in reproductive health and family planning.

5.20 Attitudes towards Having too Many Children

Attitudes of men and women about the consequences of having too many children, and the benefits of smaller families, give an indication of the level of knowledge of the benefits of having smaller families and the motivation to practice family planning. When individuals and couples have a positive attitude towards family planning, they are more likely to adopt a family planning method.

In the 2008 GDHS, currently married women and men were asked whether they agreed or disagreed with specific statements about the consequences of having too many children, their opinion on having more children than they can afford, and the likelihood that children in smaller families will succeed. This information is important because it indicates the extent to which further education and publicity are needed to increase acceptance of family planning.

Tables 5.20.1 and 5.20.2 show the percent distribution of currently married women and men age 15-49 who agree or disagree with three statements about having many children: "*Having too many children may be dangerous for a woman"; "It is better not to have more children than we can afford" and "Children in smaller families are more likely to succeed"*.

The majority of married women and men age 15-49 agree with the three statements supportive of smaller families. The highest proportions are in agreement with the statement that it is better not to have more children than the parents can afford (92 percent of women and 91 percent of men). More women (17 percent) than men (12 percent) disagree that having too many children may be dangerous for the woman. Agreement on the three statements is higher among women in urban areas than women in rural areas, and increases with level of education and wealth quintile for both sexes. There is little variation in responses by age of respondent. Men in the Eastern region and women in the Northern region are more likely to disagree with all three statements than respondents in the other regions.

Table 5.20.1 Women's attitudes towards having too many children

Percent distribution of currently married women age 15-49 by three common attitudes regarding having too many children, according to background characteristics, Ghana 2008

Background characteristic	Having too many children may be dangerous for a woman					It is better not to have more children than we can afford					Children from smaller families are more likely to succeed					Number of women
	Disagree	Agree	Don't know	Missing	Total	Disagree	Agree	Don't know	Missing	Total	Disagree	Agree	Don't know	Missing	Total	
Age																
15-19	16.8	79.5	3.4	0.3	100.0	9.5	89.2	1.0	0.3	100.0	15.4	79.4	5.0	0.3	100.0	85
20-24	16.6	81.1	1.3	1.0	100.0	7.9	91.1	0.8	0.3	100.0	12.1	85.5	2.1	0.3	100.0	414
25-29	15.8	81.8	2.4	0.0	100.0	5.9	92.5	1.5	0.0	100.0	16.2	81.8	2.0	0.0	100.0	612
30-34	18.6	79.4	1.7	0.2	100.0	7.2	92.1	0.7	0.0	100.0	15.5	83.1	1.4	0.0	100.0	539
35-39	17.4	81.0	1.5	0.1	100.0	8.2	91.5	0.2	0.1	100.0	16.4	82.6	0.9	0.1	100.0	527
40-44	14.9	83.1	1.7	0.3	100.0	7.3	91.7	0.9	0.0	100.0	13.4	85.0	1.6	0.0	100.0	380
45-49	18.4	80.3	0.9	0.4	100.0	6.7	92.4	0.5	0.3	100.0	22.1	77.2	0.7	0.0	100.0	319
Residence																
Urban	14.8	83.6	1.2	0.4	100.0	5.9	93.6	0.4	0.2	100.0	14.3	84.5	1.1	0.1	100.0	1,216
Rural	18.5	79.2	2.1	0.2	100.0	8.3	90.5	1.1	0.0	100.0	16.9	81.1	1.9	0.0	100.0	1,660
Region																
Western	8.8	90.4	0.6	0.2	100.0	4.0	95.8	0.0	0.2	100.0	7.4	92.2	0.2	0.2	100.0	261
Central	18.7	79.7	1.2	0.4	100.0	1.4	98.1	0.0	0.4	100.0	5.9	93.2	0.5	0.4	100.0	254
Greater Accra	9.1	89.1	1.1	0.7	100.0	4.7	95.3	0.0	0.0	100.0	15.0	83.9	1.2	0.0	100.0	422
Volta	16.7	83.0	0.0	0.3	100.0	1.7	97.9	0.5	0.0	100.0	7.4	92.1	0.5	0.0	100.0	290
Eastern	18.9	80.4	0.7	0.0	100.0	8.3	91.7	0.0	0.0	100.0	18.5	81.2	0.3	0.0	100.0	252
Ashanti	14.5	84.6	0.5	0.4	100.0	4.9	94.9	0.0	0.2	100.0	15.8	83.0	1.2	0.0	100.0	542
Brong Ahafo	9.5	89.4	1.1	0.0	100.0	7.8	90.9	1.3	0.0	100.0	9.7	89.3	1.1	0.0	100.0	267
Northern	41.5	53.6	5.0	0.0	100.0	25.8	70.7	3.5	0.0	100.0	39.0	55.6	5.3	0.0	100.0	338
Upper East	9.9	85.4	4.7	0.0	100.0	5.2	92.9	1.9	0.0	100.0	21.8	74.6	3.6	0.0	100.0	168
Upper West	27.0	61.9	10.4	0.8	100.0	7.9	87.7	4.1	0.3	100.0	9.7	85.6	4.4	0.3	100.0	82
Education																
No education	24.4	71.8	3.6	0.2	100.0	12.6	84.9	2.4	0.1	100.0	23.6	72.8	3.5	0.1	100.0	853
Primary	14.8	83.5	1.5	0.3	100.0	6.0	93.7	0.3	0.0	100.0	12.8	86.0	1.2	0.0	100.0	638
Middle/JSS	13.4	85.5	0.9	0.2	100.0	4.5	95.3	0.1	0.1	100.0	11.0	88.4	0.6	0.0	100.0	1,058
Secondary+	12.7	86.5	0.1	0.7	100.0	4.5	95.2	0.0	0.3	100.0	16.7	82.6	0.4	0.3	100.0	325
Wealth quintile																
Lowest	25.9	69.8	4.3	0.0	100.0	14.8	82.2	3.0	0.0	100.0	23.8	71.9	4.2	0.0	100.0	573
Second	16.8	81.3	1.4	0.5	100.0	6.4	93.0	0.5	0.1	100.0	14.5	84.7	0.7	0.1	100.0	577
Middle	17.4	80.9	1.1	0.5	100.0	6.7	92.6	0.7	0.0	100.0	14.6	84.2	1.2	0.0	100.0	525
Fourth	12.7	86.0	1.1	0.2	100.0	4.4	95.2	0.0	0.4	100.0	11.8	86.9	1.1	0.2	100.0	600
Highest	12.5	86.6	0.8	0.2	100.0	4.2	95.8	0.0	0.0	100.0	14.3	84.8	0.8	0.0	100.0	601
Total	16.9	81.0	1.7	0.3	100.0	7.3	91.8	0.8	0.1	100.0	15.8	82.6	1.6	0.1	100.0	2,876

Note: Total includes cases with information missing on education that are not shown separately.

Table 5.20.2 Men's attitudes towards having too many children

Percent distribution of currently married men age 15-49 by three common attitudes regarding having too many children, according to background characteristics, Ghana 2008

Background characteristic	Having too many children may be dangerous for a woman					It is better not to have more children than we can afford					Children from smaller families are more likely to succeed					Number of men
	Disagree	Agree	Don't know	Missing	Total	Disagree	Agree	Don't know	Missing	Total	Disagree	Agree	Don't know	Missing	Total	
Age																
15-19	*	*	*	*	100.0	*	*	*	*	100.0	*	*	*	*	100.0	7
20-24	10.4	88.1	0.7	0.9	100.0	7.1	92.0	0.0	0.9	100.0	9.3	88.6	1.3	0.9	100.0	106
25-29	10.9	88.3	0.8	0.0	100.0	7.7	92.3	0.0	0.0	100.0	9.6	90.0	0.4	0.0	100.0	296
30-34	12.8	86.5	0.4	0.3	100.0	7.4	92.4	0.3	0.0	100.0	11.5	87.6	0.9	0.0	100.0	412
35-39	12.9	85.1	1.4	0.5	100.0	9.8	89.4	0.8	0.0	100.0	13.5	85.0	1.5	0.0	100.0	445
40-44	9.1	89.7	1.2	0.0	100.0	8.8	90.4	0.7	0.0	100.0	12.7	84.3	2.6	0.4	100.0	353
45-49	10.9	87.1	1.2	0.8	100.0	6.8	92.2	0.6	0.4	100.0	15.1	83.8	0.7	0.4	100.0	331
Residence																
Urban	11.2	87.3	0.8	0.7	100.0	6.1	93.1	0.5	0.3	100.0	10.8	87.5	1.3	0.4	100.0	832
Rural	11.7	87.0	1.2	0.1	100.0	9.9	89.6	0.4	0.0	100.0	13.5	85.2	1.3	0.0	100.0	1,118
Region																
Western	4.6	95.4	0.0	0.0	100.0	3.4	96.6	0.0	0.0	100.0	11.9	88.1	0.0	0.0	100.0	205
Central	6.7	92.5	0.0	0.8	100.0	3.1	96.9	0.0	0.0	100.0	9.5	90.5	0.0	0.0	100.0	148
Greater Accra	13.1	86.2	0.4	0.3	100.0	4.2	95.5	0.0	0.3	100.0	10.0	88.5	0.7	0.7	100.0	302
Volta	10.0	90.0	0.0	0.0	100.0	4.6	95.4	0.0	0.0	100.0	15.7	83.0	1.3	0.0	100.0	166
Eastern	21.9	76.2	1.2	0.8	100.0	24.9	74.3	0.0	0.8	100.0	26.5	70.8	1.9	0.8	100.0	189
Ashanti	10.1	89.6	0.3	0.0	100.0	0.9	99.1	0.0	0.0	100.0	13.2	86.1	0.7	0.0	100.0	374
Brong Ahafo	9.7	90.3	0.0	0.0	100.0	3.8	96.2	0.0	0.0	100.0	6.6	92.6	0.7	0.0	100.0	172
Northern	17.1	75.9	5.4	1.5	100.0	14.0	82.0	3.9	0.0	100.0	13.4	80.9	5.7	0.0	100.0	237
Upper East	9.7	88.4	2.0	0.0	100.0	34.0	66.0	0.0	0.0	100.0	1.9	98.1	0.0	0.0	100.0	109
Upper West	4.1	95.9	0.0	0.0	100.0	3.8	96.2	0.0	0.0	100.0	2.1	97.9	0.0	0.0	100.0	47
Education																
No education	13.8	82.5	2.8	0.9	100.0	13.5	84.7	1.8	0.0	100.0	12.0	85.1	2.9	0.0	100.0	398
Primary	12.4	87.4	0.2	0.0	100.0	8.8	91.2	0.0	0.0	100.0	12.8	87.2	0.0	0.0	100.0	251
Middle/JSS	11.0	88.0	0.7	0.3	100.0	6.9	92.7	0.1	0.3	100.0	12.7	86.0	0.9	0.4	100.0	812
Secondary+	10.1	89.2	0.5	0.2	100.0	5.9	93.9	0.2	0.0	100.0	11.9	86.7	1.4	0.0	100.0	485
Wealth quintile																
Lowest	14.6	82.8	2.0	0.6	100.0	15.8	83.3	0.9	0.0	100.0	12.1	85.1	2.8	0.0	100.0	380
Second	12.0	86.9	0.9	0.3	100.0	9.5	89.8	0.7	0.0	100.0	15.6	84.0	0.4	0.0	100.0	368
Middle	9.4	89.1	1.0	0.5	100.0	6.7	92.1	0.7	0.5	100.0	12.3	86.1	1.1	0.5	100.0	310
Fourth	11.5	87.3	1.0	0.2	100.0	5.7	93.9	0.3	0.2	100.0	10.6	87.9	1.0	0.5	100.0	434
Highest	10.1	89.4	0.2	0.3	100.0	4.6	95.4	0.0	0.0	100.0	11.5	87.3	1.2	0.0	100.0	458
Total	11.5	87.1	1.0	0.4	100.0	8.3	91.1	0.5	0.1	100.0	12.3	86.2	1.3	0.2	100.0	1,950

Note: Total includes cases with missing information on education which are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

OTHER PROXIMATE DETERMINANTS OF FERTILITY 6

This chapter addresses the principal factors, other than contraception, that affect a woman's risk of becoming pregnant. These factors include marriage, polygyny, sexual intercourse, post-partum amenorrhoea, abstinence from sexual relations, and termination of exposure to pregnancy. Direct measures of the onset of exposure to the risk of pregnancy and the level of exposure are also discussed in this chapter.

6.1 CURRENT MARITAL STATUS

Marriage is a primary indication of the regular exposure of women to the risk of pregnancy and therefore is important for the understanding of fertility. Populations in which age at first marriage is low tend to have early childbearing and high fertility. In Ghana, however, a union is not a prerequisite to childbearing because some childbearing occurs outside of union. There are various types of marriage in Ghana, ranging from customary, civil, and religious marriage to a variety of informal unions. In this report, the term 'married' refers to legal or formal marriage, and 'living together' refers to an informal union in which a man and a woman live together, even if a formal civil or religious ceremony has not occurred. In later tables that do not list 'living together' as a separate category, these women and men are included in the 'currently married' group. Respondents who are currently married, widowed, divorced, or separated are referred to as 'ever-married.'

Table 6.1 shows the percent distribution of women and men interviewed in the 2008 GDHS by current marital status, according to age. Table 6.1 shows that 32 percent of women age 15-49 have never married, 45 percent are formally married, 13 percent are living together, and 9 percent are divorced, separated, or widowed. Marriage occurs relatively early in Ghana, and one in four women age 20-24 are currently married.

Table 6.1 Current marital status

Percent distribution of women and men age 15-49 by current marital status, according to age, Ghana 2008

Age	Marital status						Total	Percentage of respondents currently in union	Number of respondents
	Never married	Married	Living together	Divorced	Separated	Widowed			
					WOMEN				
15-19	90.6	3.7	4.6	0.1	1.0	0.0	100.0	8.3	1,025
20-24	48.6	25.7	21.5	0.6	3.3	0.3	100.0	47.2	878
25-29	20.4	53.5	20.1	1.2	3.9	0.9	100.0	73.6	832
30-34	5.7	70.2	13.5	4.6	4.9	1.0	100.0	83.7	644
35-39	3.4	71.5	11.1	5.0	5.9	3.3	100.0	82.5	638
40-44	1.6	70.6	10.2	6.5	4.9	6.3	100.0	80.8	470
45-49	0.5	66.2	8.2	11.0	6.2	7.9	100.0	74.4	429
Total	32.4	45.4	13.1	3.2	3.9	2.1	100.0	58.5	4,916
					MEN				
15-19	99.1	0.4	0.3	0.0	0.2	0.0	100.0	0.8	911
20-24	83.2	8.8	6.2	0.2	1.6	0.0	100.0	15.0	704
25-29	49.0	36.9	10.6	1.5	2.1	0.0	100.0	47.4	624
30-34	15.3	67.8	9.5	3.2	3.7	0.4	100.0	77.4	533
35-39	8.6	78.6	5.6	3.4	3.2	0.6	100.0	84.3	528
40-44	3.0	85.6	4.1	4.0	2.8	0.5	100.0	89.7	394
45-49	0.9	86.3	4.7	3.5	2.5	2.1	100.0	91.0	364
Total 15-49	47.7	42.5	5.6	1.8	2.0	0.4	100.0	48.1	4,058
50-59	1.3	86.2	2.9	4.8	2.7	2.2	100.0	89.0	510
Total 15-59	42.5	47.4	5.3	2.2	2.1	0.6	100.0	52.6	4,568

A greater proportion of men (48 percent) than women (32 percent) have never married. Less than half of men (43 percent) are married, 6 percent are living together, and another 4 percent are divorced, separated, or widowed. Men tend to marry at older ages than women. While one in two women age 25-29 is married (54 percent), the proportion of men married in the same age group is one in three (37 percent). Similarly, in the same age cohort 25-29, the proportion of men in an informal union is about half that of women in the same cohort (11 and 20 percent, respectively).

Data from earlier GDHS show that there has been a marked increase in the proportion of never-married women, particularly in the younger age cohorts. Among women age 15-49, 20 percent were never married in 1993 (GSS and MI, 1994), 24 percent in 1998 (GSS and MI, 1999), 28 percent in 2003, and 32 percent in 2008. At the same time, the proportion of married women has declined sharply from 54 percent in 2003 to 45 percent in 2008. The decline is most noticeable among women in their 20s; for example, 40 percent of women age 20-24 were married in 2003, compared with 26 percent in 2008. The proportion of women living together with a man increased over the five-year period from 8 to 13 percent, while the proportion of women who are divorced (3 percent), separated (4 percent), and widowed (2 percent) has remained largely the same. The proportion of never-married men age 15-59 increased slightly from 41 percent in 2003 to 43 percent in 2008.

6.2 POLYGYNY

Polygyny, which is the practice of having more than one wife, is common in Ghana and has implications for the frequency of sexual activity and fertility levels. In the GDHS, the prevalence of polygyny was measured by asking all currently married women whether their husband or partner had other wives, and if so, how many. Married men were asked whether they had one or more wives or partners.

Table 6.2.1 shows the percent distribution of currently married women age 15-49 by number of co-wives, according to background characteristics: 18 percent of currently married women are in polygynous unions. Fifteen percent reported having one co-wife, and 3 percent said they had two or more co-wives. Older women are more likely than younger women to be in polygynous unions. The percentage of women in polygynous unions increases with age, from 7 percent among women age 15-19, to 30 percent among those age 45-49.

Rural women are more likely to be in polygynous unions than their urban counterparts and polygyny is more common among women with no education and those in the lowest wealth quintile. Regional variation in the prevalence of polygyny ranges from 6 percent in Greater Accra to 37-38 percent in the Northern and Upper West regions, and 31-32 percent in the Volta and Upper East regions.

Overall, the level of polygyny among women decreased from 23 percent in 1998 and 2003 (GSS and MI, 1999; GSS and ORC Macro, 2004) to 18 percent in 2008. At the same time, the proportion of women who reported having two or more co-wives increased from 5 percent in 1998 to 13 percent in 2003, but declined sharply to 3 percent in 2008.

Table 6.2.1 Number of women's co-wives

Percent distribution of currently married women age 15-49 by number of co-wives, according to background characteristics, Ghana 2008

Background characteristic	Number of co-wives				Total	Number of women
	0	1	2+	Missing		
Age						
15-19	93.2	6.3	0.5	0.0	100.0	85
20-24	90.7	8.1	0.5	0.7	100.0	414
25-29	84.0	13.4	1.1	1.6	100.0	612
30-34	81.9	14.4	3.0	0.6	100.0	539
35-39	75.9	18.3	4.5	1.3	100.0	527
40-44	76.7	17.1	5.0	1.2	100.0	380
45-49	69.6	24.2	5.7	0.4	100.0	319
Residence						
Urban	87.1	8.9	3.0	1.0	100.0	1,216
Rural	76.2	19.8	3.0	1.0	100.0	1,660
Region						
Western	85.7	10.8	0.2	3.2	100.0	261
Central	81.0	14.5	2.2	2.3	100.0	254
Greater Accra	93.1	5.0	1.3	0.5	100.0	422
Volta	68.3	26.5	4.7	0.6	100.0	290
Eastern	90.0	9.2	0.8	0.0	100.0	252
Ashanti	86.0	11.5	1.4	1.1	100.0	542
Brong Ahafo	88.5	9.1	1.3	1.0	100.0	267
Northern	61.3	31.3	6.9	0.4	100.0	338
Upper East	68.4	24.2	7.4	0.0	100.0	168
Upper West	62.3	22.1	14.9	0.7	100.0	82
Education						
No education	67.6	25.5	5.6	1.3	100.0	853
Primary	79.8	15.0	4.1	1.1	100.0	638
Middle/JSS	87.6	10.8	0.9	0.8	100.0	1,058
Secondary+	95.0	2.9	1.2	0.9	100.0	325
Wealth quintile						
Lowest	65.7	28.4	5.2	0.6	100.0	573
Second	76.8	19.7	2.4	1.2	100.0	577
Middle	79.9	13.6	5.2	1.4	100.0	525
Fourth	86.7	10.4	1.6	1.3	100.0	600
Highest	93.9	4.5	1.0	0.6	100.0	601
Total	80.8	15.2	3.0	1.0	100.0	2,876

Note: Total includes cases with information missing on education that are not shown separately.

Table 6.2.2 shows the percent distribution of currently married men age 15-49 by number of wives, according to background characteristics: 9 percent of currently married men are in polygynous unions. The discrepancy between the number of wives reported by men and the number of co-wives reported by women may in part be due to differences in definition or conceptual views about who a wife is. At the same time however, the difference is expected because for every polygynous household only one husband is reporting multiple wives while at least two women are reporting co-wives. Conceptual differences may arise from the tendency for some women to describe their husband's mistresses or girlfriends as wives, whereas men are less likely to classify such persons as wives. The proportion of married men who reported having two or more wives is higher among older men, men in rural areas, those who reside in the Volta, Northern, Upper East, and Upper West regions, those with no education, and those in the lowest wealth quintile (Figure 6.1).

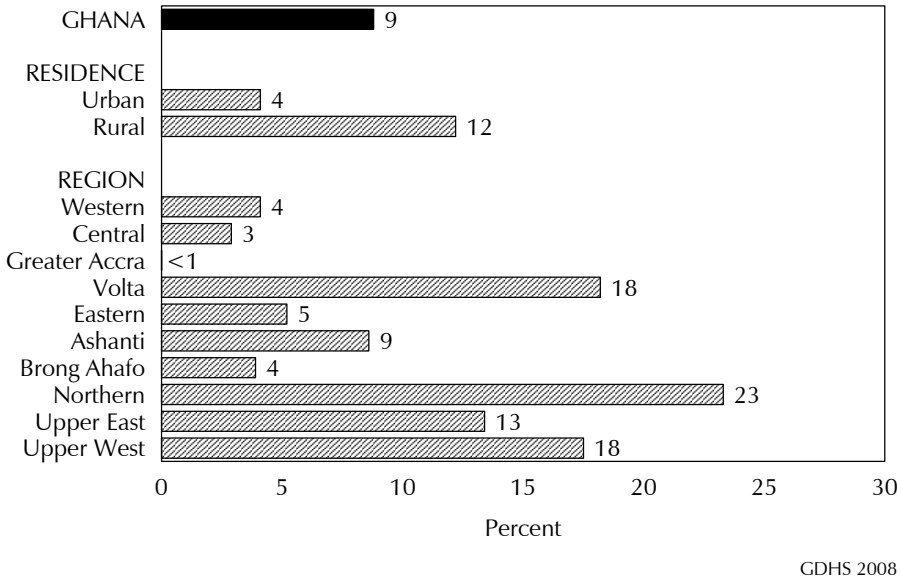
Table 6.2.2 Number of men's wives

Percent distribution of currently married men age 15-49 by number of wives, according to background characteristics, Ghana 2008

Background characteristic	Number of wives		Total	Number of men
	1	2+		
Age				
15-19	*	*	100.0	7
20-24	99.6	0.4	100.0	106
25-29	95.4	4.6	100.0	296
30-34	95.2	4.8	100.0	412
35-39	91.1	8.9	100.0	445
40-44	88.8	11.2	100.0	353
45-49	82.5	17.5	100.0	331
Residence				
Urban	95.9	4.1	100.0	832
Rural	87.8	12.2	100.0	1,118
Region				
Western	95.9	4.1	100.0	205
Central	97.1	2.9	100.0	148
Greater Accra	99.6	0.4	100.0	302
Volta	81.8	18.2	100.0	166
Eastern	94.8	5.2	100.0	189
Ashanti	91.4	8.6	100.0	374
Brong Ahafo	96.1	3.9	100.0	172
Northern	76.7	23.3	100.0	237
Upper East	86.6	13.4	100.0	109
Upper West	82.5	17.5	100.0	47
Education				
No education	81.3	18.7	100.0	398
Primary	88.7	11.3	100.0	251
Middle/JSS	93.9	6.1	100.0	812
Secondary+	96.1	3.9	100.0	485
Wealth quintile				
Lowest	79.6	20.4	100.0	380
Second	89.4	10.6	100.0	368
Middle	91.2	8.8	100.0	310
Fourth	96.1	3.9	100.0	434
Highest	97.9	2.1	100.0	458
Total 15-49	91.2	8.8	100.0	1,950
50-59	85.9	14.1	100.0	454
Total 15-59	90.2	9.8	100.0	2,404

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Total includes cases with information missing on education and are not shown separately.

Figure 6.1 Percentage of Married Men Age 15-49 with Two or More Wives, by Region



GDHS 2008

6.3 AGE AT FIRST MARRIAGE

Marriage marks the point in a woman's life when childbearing becomes socially acceptable in Ghana. Marriage is closely associated with fertility because women who marry early will, on average, have more births than women who marry later. Early age at first marriage is an important fertility indicator not only because it increases the length of time a woman is exposed to the risk of pregnancy, but it also tends to lead to early childbearing and higher fertility. Information on age at first marriage was obtained by asking respondents the month and year, or age, at which they started living with their first husband/partner. Older respondents are less likely to recall with accuracy marriage dates and ages, therefore, the data for older respondents should be interpreted with caution.

Table 6.3 shows the percentage of women and men who were first married by specific exact ages, and the median age at first marriage, according to current age. The median age at first marriage for women age 25-49 is 19.8 years, which represents a slight increase over the median reported from the 2003 GDHS (19.4 years). There is a general trend towards later marriage. Thirty-four percent and 52 percent of women age 25-49 were married by exact age 18 and 20, respectively, compared with 35 percent and 56 percent of women in the same age group in the 2003 survey (GSS and ORC Macro, 2004). By age 22, about two-thirds (67 percent) of women age 25-49 were married and by age 25, the proportion married in that age group was 80 percent. The increase in the median age at first marriage is seen most sharply when older and younger age cohorts are compared. There is an almost two-year difference in age at first marriage between women age 45-49 (19.1 years) and women age 25-29 (21.0 years).

Men generally marry later in life. Among men age 25-49, no man was married until age 18, and then it was only one in twenty men (5 percent) who were married. By age 20, only 13 percent of men were married and less than half (44 percent) were married by age 25. Across all age groups, the proportions of women married are larger than the proportions of men married. The median age at first marriage for men age 30-34 is 25.7 years, compared with 20.0 years for women in this age group.

Table 6.3 Age at first marriage

Percentage of women and men age 15-49 who were first married by specific exact ages and median age at first marriage, according to current age, Ghana 2008

Current age	Percentage first married by exact age					Percentage never married	Number of respondents	Median age at first marriage
	15	18	20	22	25			
				WOMEN				
15-19	2.6	na	na	na	na	90.6	1,025	a
20-24	4.9	24.6	38.6	na	na	48.6	878	a
25-29	4.6	27.0	42.3	57.4	72.5	20.4	832	21.0
30-34	9.2	32.2	50.4	65.6	79.8	5.7	644	20.0
35-39	7.8	35.8	54.9	68.9	80.4	3.4	638	19.4
40-44	8.0	37.6	59.4	75.4	86.3	1.6	470	19.1
45-49	8.2	39.9	61.6	75.2	87.4	0.5	429	19.1
20-49	6.8	31.5	49.1	na	na	17.1	3,891	a
25-49	7.3	33.5	52.1	66.9	80.0	7.9	3,014	19.8
				MEN				
15-19	0.0	na	na	na	na	99.1	911	a
20-24	0.0	24.6	38.6	na	na	83.2	704	a
25-29	0.0	4.7	13.8	23.6	40.3	49.0	624	a
30-34	0.0	4.1	11.7	22.9	44.8	15.3	533	25.7
35-39	0.0	7.4	12.2	23.3	42.2	8.6	528	26.3
40-44	0.0	5.7	15.3	24.4	45.6	3.0	394	25.8
45-49	0.0	5.0	13.0	24.9	47.6	0.9	364	25.3
20-49	0.0	5.0	12.0	na	na	32.8	3,147	a
25-49	0.0	5.4	13.1	23.7	43.6	18.3	2,443	a
20-59	0.0	4.8	11.4	na	na	28.4	3,657	a
25-59	0.0	5.1	12.2	22.4	43.0	15.4	2,953	a

Note: The age at first marriage is defined as the age at which the respondent began living with her/his first spouse/partner
na = Not applicable due to censoring
a = Omitted because less than 50 percent of the women/men were married for the first time before reaching the beginning of the age group

Table 6.4.1 shows the median age at first marriage among women age 25-49 by current age and background characteristics. The median age at first marriage is consistently lower among women in rural areas than those in urban areas. Regional differentials show that the Greater Accra region has the highest median age at first marriage (22.9 years) among women age 25-49, while the Upper East region has the lowest median age at first marriage (17.8 years). Women with little or no education are more likely to marry at a younger age than those with a higher level of education. Similarly, women in households in the lower wealth quintiles are likely to marry earlier than women in the higher wealth quintiles.

Table 6.4.1 Median age at first marriage: Women

Median age at first marriage among women age 25-49 by five-year age groups, according to background characteristics, Ghana 2008

Background characteristic	Current age					Women age 25-49
	25-29	30-34	35-39	40-44	45-49	
Residence						
Urban	23.5	21.9	20.5	20.0	19.3	21.3
Rural	18.9	18.5	18.7	18.5	19.0	18.7
Region						
Western	19.9	20.6	20.4	(19.7)	(20.3)	20.3
Central	(20.3)	(18.8)	20.3	(19.4)	(20.1)	19.7
Greater Accra	a	23.2	21.0	21.2	(19.0)	22.9
Volta	18.9	18.3	20.1	(19.2)	18.9	19.2
Eastern	22.1	20.2	18.3	(18.7)	(20.2)	19.9
Ashanti	20.9	19.2	19.3	18.6	18.8	19.5
Brong Ahafo	19.1	19.4	(18.4)	(16.9)	(17.8)	18.4
Northern	19.9	19.4	18.7	(19.2)	(18.9)	19.3
Upper East	17.9	(17.6)	(17.3)	17.8	(18.4)	17.8
Upper West	19.1	18.9	17.8	(17.3)	(16.7)	18.1
Education						
No education	18.6	18.4	18.6	18.6	18.8	18.6
Primary	18.9	18.3	18.4	17.8	17.8	18.3
Middle/JSS	20.8	20.6	19.8	19.4	19.4	20.1
Secondary+	a	25.8	25.8	(22.2)	(21.5)	a
Wealth quintile						
Lowest	18.5	18.5	18.5	18.8	18.7	18.6
Second	18.6	18.2	18.0	18.3	19.1	18.4
Middle	20.1	19.1	19.3	17.9	19.4	19.2
Fourth	22.0	20.2	20.2	19.8	18.6	20.3
Highest	a	23.4	22.8	21.3	19.4	23.4
Total	21.0	20.0	19.4	19.1	19.1	19.8

Note: The age at first marriage is defined as the age at which the respondent began living with her first spouse/partner. Total includes cases with information missing on education that are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.
a = Omitted because less than 50 percent of the women were married for the first time before reaching the beginning of the age group
na = Not applicable

Table 6.4.2 shows the median age at first marriage for men age 30-59 by current age and background characteristics. The median age at first marriage is consistently lower among men in rural areas (24.9 years) than those in urban areas (27.2 years). Regional differentials show that the highest median age at first marriage among men age 30-59 is in the Greater Accra region (27.9 years), where men marry three years later than those in the Central, Ashanti, and the Upper East regions (24.5-24.8 years). The Ashanti region has the lowest (24.5 years) median age at first marriage for men. Men with primary education are more likely to marry at an earlier age (24.4 years) than those with no education, middle or JSS education, and secondary or higher education. Likewise, men in the three lowest wealth quintiles were married at a younger age than those in the two highest wealth quintiles.

Comparing the results from the 2003 GDHS and the 2008 GDHS surveys indicates that, in general, women and men are marrying at a later age than five years ago; the difference for women is 0.4 years while for men the difference is 1.2 years (GSS and ORC Macro, 2004).

Table 6.4.2 Median age at first marriage: Men

Median age at first marriage among men age 30-59 by five-year age groups, according to background characteristics, Ghana 2008

Background characteristic	Current age					Men age
	30-34	35-39	40-44	45-49	50-59	30-59
Residence						
Urban	27.3	28.1	28.2	26.1	26.1	27.2
Rural	23.9	24.9	24.0	25.0	26.1	24.9
Region						
Western	(28.4)	26.7	(25.3)	(24.1)	26.0	26.0
Central	(24.0)	(24.6)	*	*	(24.7)	24.7
Greater Accra	27.7	29.4	28.3	(27.1)	27.1	27.9
Volta	(25.0)	(25.7)	(25.1)	(26.0)	(25.4)	25.5
Eastern	(26.2)	(24.7)	(26.5)	(24.1)	26.6	25.6
Ashanti	24.0	26.2	(24.7)	23.6	24.2	24.5
Brong Ahafo	25.5	(26.5)	(25.3)	*	(27.4)	26.0
Northern	25.6	25.8	(26.0)	26.9	27.2	26.1
Upper East	(23.5)	(25.2)	(23.6)	*	(27.8)	24.8
Upper West	(25.8)	(25.2)	(26.7)	(24.7)	(26.7)	25.8
Education						
No education	25.2	24.0	25.2	26.3	27.2	25.7
Primary	23.9	24.7	(23.8)	24.1	(25.2)	24.4
Middle/JSS	24.9	25.6	26.1	25.0	25.1	25.3
Secondary+	27.6	29.8	27.0	25.5	26.7	27.6
Wealth quintile						
Lowest	23.8	24.2	24.8	26.5	27.4	25.5
Second	23.8	24.0	22.8	23.9	26.6	24.0
Middle	24.1	24.8	24.2	25.0	25.2	24.7
Fourth	27.2	27.2	28.4	26.0	25.2	26.5
Highest	27.6	29.7	27.3	26.8	26.8	27.7
Total	25.7	26.3	25.8	25.3	26.1	25.9

Note: The age at first marriage is defined as the age at which the respondent began living with his first spouse/partner. Total includes cases with information missing on education that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

6.4 AGE AT FIRST SEXUAL INTERCOURSE

Age at first marriage is sometimes seen as a proxy for a woman's first exposure to intercourse but the two events need not occur at the same time. Because women and men may engage in sexual relations prior to marriage, age at first sexual intercourse is a more reliable indicator of a woman's exposure to the risk of pregnancy than age at first marriage. In the 2008 GDHS, women and men were asked how old they were when they first had sexual intercourse. Table 6.5 shows the median age at first sexual intercourse by specific exact ages.

Women are likely to experience first sexual intercourse at an earlier age than men. The median age at first sexual intercourse for women age 25-49 is 18.4 years, compared with 20.0 years for men. Eight percent of women and 5 percent of men reported having sexual intercourse by age 15. By age 18, more than two-fifths of women (44 percent) and 26 percent of men have had sexual intercourse. Sixty-three percent of women and 78 percent of men age 15-19 have never had sex.

Table 6.5 Age at first sexual intercourse

Percentage of women and men age 15-49 who had first sexual intercourse by specific exact ages, percentage who never had intercourse, and median age at first intercourse, according to current age, Ghana 2008

Current age	Percentage who had first sexual intercourse by exact age					Percentage who never had intercourse	Number of respondents	Median age at first intercourse
	15	18	20	22	25			
				WOMEN				
15-19	8.2	na	na	na	na	62.7	1,025	a
20-24	7.2	41.2	71.4	na	na	11.5	878	18.5
25-29	6.6	39.7	64.6	79.3	90.8	3.4	832	18.6
30-34	9.3	43.7	66.1	80.5	87.0	0.2	644	18.4
35-39	7.6	45.7	67.4	80.7	87.5	0.2	638	18.3
40-44	8.3	45.2	67.9	82.2	89.7	0.0	470	18.3
45-49	8.8	51.4	72.9	85.7	90.6	0.0	429	17.9
20-49	7.8	43.7	68.2	na	na	3.4	3,891	18.4
25-49	8.0	44.4	67.2	81.2	89.1	1.0	3,014	18.4
15-24	7.8	na	na	na	na	39.1	1,902	a
				MEN				
15-19	3.6	na	na	na	na	78.1	911	a
20-24	5.2	26.8	54.9	na	na	26.2	704	19.6
25-29	4.7	25.2	51.6	72.5	87.7	6.9	624	19.9
30-34	4.9	25.2	51.2	73.5	86.4	1.4	533	19.9
35-39	6.3	28.2	47.9	71.8	84.6	1.0	528	20.1
40-44	2.8	27.4	51.5	70.2	83.2	0.0	394	19.9
45-49	3.1	22.8	46.0	70.7	82.9	0.3	364	20.2
20-49	4.7	26.1	51.0	na	na	7.7	3,147	19.9
25-49	4.5	25.8	49.9	71.9	85.3	2.3	2,443	20.0
15-24	4.3	na	na	na	na	55.4	1,615	a
20-59	4.6	25.2	49.9	na	na	6.7	3,657	a
25-59	4.4	24.8	48.7	71.1	84.5	2.1	2,953	20.1

na = Not applicable due to censoring
a = Omitted because less than 50 percent of the respondents had intercourse for the first time before reaching the beginning of the age group

Nearly all women and men are sexually active by age 25. Younger women are likely to experience first sexual intercourse at a later age than older women, suggesting that age at first sexual intercourse is rising among women. For example, the proportion of women age 20-24 who were sexually active by age 18 is 41 percent, compared with 51 percent among women age 45-49. In contrast, the trend among men is towards younger age at first sexual intercourse. Among men age 20-24, 27 percent were sexually active by age 18 compared with 23 percent among men age 45-49.

Table 6.6.1 shows the median age at first sexual intercourse for women age 20-49 and age 25-49 by current age and background characteristics. Women in urban areas experience first sexual intercourse at slightly later ages than those in rural areas, except for women age 45-49. Women in the Greater Accra and Northern regions are more likely to experience first sexual intercourse about two years later their counterparts in the Upper West region. Women with secondary or higher education begin sexual relations at least three years later than women with primary education. Similarly, women in the highest wealth quintile experience first sexual intercourse at least a year later than women in the lower wealth quintiles.

Table 6.6.1 Median age at first sexual intercourse: Women

Median age at first sexual intercourse among women age 20-49 and age 25-49 by five-year age groups, according to background characteristics, Ghana 2008

Background characteristic	Current age						Women age 20-49	Women age 25-49
	20-24	25-29	30-34	35-39	40-44	45-49		
Residence								
Urban	18.9	19.4	19.0	18.7	18.6	17.8	18.9	18.8
Rural	18.0	18.0	17.8	17.8	18.0	18.0	17.9	17.9
Region								
Western	18.8	18.8	18.4	18.6	(19.3)	(18.1)	18.6	18.6
Central	18.5	(18.3)	(17.5)	17.7	(17.7)	(18.1)	18.0	17.8
Greater Accra	19.0	20.0	19.1	19.1	18.6	(18.2)	19.0	19.0
Volta	18.4	17.4	17.5	19.1	(18.4)	18.0	18.1	18.0
Eastern	18.0	18.2	17.9	17.7	(17.4)	(17.5)	17.9	17.9
Ashanti	18.4	18.7	18.1	18.1	18.2	17.4	18.3	18.2
Brong Ahafo	18.1	18.5	19.0	(18.3)	(18.2)	(17.7)	18.3	18.4
Northern	18.4	19.0	19.8	19.0	(20.1)	(19.3)	19.2	19.4
Upper East	18.0	17.9	(17.7)	(18.1)	17.7	(17.9)	17.9	17.9
Upper West	18.0	16.8	17.8	17.6	(17.0)	(16.6)	17.5	17.2
Education								
No education	17.6	17.6	18.2	17.9	18.4	18.1	18.0	18.1
Primary	17.5	17.7	17.3	17.6	17.2	17.0	17.5	17.5
Middle/JSS	18.2	18.7	18.4	18.4	18.3	17.8	18.4	18.4
Secondary+	19.9	21.2	20.5	20.6	(19.4)	(18.9)	a	20.5
Wealth quintile								
Lowest	17.5	17.9	18.1	17.7	19.1	18.3	18.0	18.1
Second	18.3	17.8	17.6	17.6	17.6	17.5	17.8	17.7
Middle	18.2	18.3	17.6	17.9	17.8	18.2	18.1	18.0
Fourth	18.4	18.9	18.5	18.2	18.4	17.7	18.4	18.4
Highest	19.3	20.0	19.6	19.3	18.8	17.8	19.3	19.3
Total	18.5	18.6	18.4	18.3	18.3	17.9	18.4	18.4

Note: Total includes cases with information missing on education that are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.
a = Omitted because less than 50 percent of the women had intercourse for the first time before reaching the beginning of the age group

Table 6.6.2 shows that the median age at first sexual intercourse for men age 25-59 is 20.1 years. Men in urban and rural areas experience first sexual intercourse at about the same age (20.3 and 19.9 years, respectively). Men in the Northern region have first sexual relations at least two years later than their counterparts in the Eastern, Ashanti, and Central regions. Differentials by education are small, ranging from 19.7 years among men with primary education to 20.5 years among men with no education. Differentials by household wealth status are also small, with median age at first sexual intercourse being almost the same for men in the lowest wealth quintile (20.4 years) as for those in the highest wealth quintile (20.3 years).

Table 6.6.2 Median age at first intercourse: Men

Median age at first sexual intercourse among men age 25-59 by five-year age groups, according to background characteristics, Ghana 2008

Background characteristic	Current age						Men age
	25-29	30-34	35-39	40-44	45-49	50-59	25-59
Residence							
Urban	20.2	20.1	20.3	20.2	20.4	20.3	20.3
Rural	19.6	19.5	19.9	19.6	20.1	20.5	19.9
Region							
Western	(18.8)	(20.6)	19.5	(20.1)	(20.2)	20.3	20.0
Central	(19.8)	(18.7)	(20.1)	*	*	(20.0)	19.5
Greater Accra	19.8	19.6	20.1	21.0	(20.8)	19.8	20.1
Volta	20.2	(18.6)	(19.4)	(19.7)	(20.6)	(20.2)	20.0
Eastern	18.9	(19.2)	(19.4)	(18.5)	(19.0)	19.5	19.0
Ashanti	19.6	19.0	19.7	(18.4)	19.4	20.1	19.4
Brong Ahafo	19.9	20.8	(20.4)	(18.9)	*	(21.3)	20.4
Northern	20.8	20.9	21.7	(20.9)	21.7	25.0	21.6
Upper East	(19.7)	(20.3)	(20.7)	(20.3)	*	(23.3)	20.6
Upper West	20.6	(20.3)	(20.0)	(20.2)	(23.5)	(23.2)	20.8
Education							
No education	20.0	20.5	20.3	20.4	20.6	21.5	20.5
Primary	19.6	18.7	19.9	(19.2)	(19.1)	(20.5)	19.7
Middle/JSS	19.5	19.8	19.8	19.5	20.0	20.1	19.8
Secondary+	20.2	19.8	20.4	20.3	20.4	20.3	20.2
Wealth quintile							
Lowest	19.7	20.3	20.4	20.5	20.3	22.1	20.4
Second	19.7	19.7	19.5	18.7	20.1	20.2	19.7
Middle	19.2	19.0	19.7	19.4	19.5	20.1	19.5
Fourth	20.0	19.8	20.2	19.8	20.3	20.6	20.1
Highest	20.4	20.0	20.3	20.8	20.7	19.8	20.3
Total	19.9	19.9	20.1	19.9	20.2	20.4	20.1

Note: Total includes cases with information missing on education that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

6.5 RECENT SEXUAL ACTIVITY

In the absence of contraception, the risk of pregnancy is related to the frequency of intercourse. Information on sexual activity, therefore, can be used to refine measures of exposure to pregnancy. Women and men were asked how long ago their last sexual activity occurred, to assess whether they had a sexual intercourse in the past four weeks. The results are shown in Tables 6.7.1 and 6.7.2 for women and men, respectively.

Table 6.7.1 shows that in the four weeks preceding the survey, 40 percent of women age 15-49 were sexually active, 28 percent were sexually active in the past 12 months but not in the past four weeks, and 16 percent had not had sex for more than one year. Another 16 percent of women had never had sexual intercourse. The proportion of women who were sexually active in the four weeks preceding the survey increases with age, but declines at age 45-49.

Teenagers and women who are not currently in a marital union, as well as women who used to be married, were less likely to be sexually active in the four weeks preceding the survey than older women and women who are currently married or living with a man. Among currently married women, the proportion that had recent sexual intercourse increases slightly with marital duration up to a peak of 63 percent among those married for 20-24 years. Women in urban areas were less likely to be sexually active over the past four weeks (37 percent) than their rural counterparts (43 percent). Among the regions, the Brong Ahafo region has the highest proportion of women who were sexually active in the four weeks before the survey (46 percent) and the Northern region has the lowest proportion (30 percent). Women with at least some secondary education are less likely to be sexually active than less educated women. Differences by wealth status are not large and show no clear pattern.

Table 6.7.1 Recent sexual activity: Women

Percent distribution of women age 15-49 by timing of last sexual intercourse, according to background characteristics, Ghana 2008

Background characteristic	Timing of last sexual intercourse: Within the past 4 weeks	Within 1 year[1]	One or more years	Missing	Never had sexual intercourse	Total	Number of women
Age							
15-19	12.6	16.3	8.3	0.0	62.7	100.0	1,025
20-24	35.4	38.5	14.1	0.4	11.5	100.0	878
25-29	49.2	31.9	14.9	0.5	3.4	100.0	832
30-34	51.3	32.1	15.9	0.6	0.2	100.0	644
35-39	52.5	29.4	17.5	0.4	0.2	100.0	638
40-44	53.2	25.3	20.9	0.5	0.0	100.0	470
45-49	46.0	23.3	30.0	0.7	0.0	100.0	429
Marital status							
Never married	14.4	23.2	13.7	0.2	48.6	100.0	1,593
Married or living together	58.4	30.6	10.6	0.4	0.0	100.0	2,876
Divorced/separated/ widowed	12.4	30.3	56.4	0.9	0.0	100.0	446
Marital duration[2]							
Married only once							
0-4 years	54.6	37.5	7.0	0.9	0.0	100.0	509
5-9 years	57.8	31.0	11.0	0.2	0.0	100.0	486
10-14 years	59.3	28.1	12.4	0.2	0.0	100.0	387
15-19 years	60.2	26.3	13.4	0.1	0.0	100.0	317
20-24 years	62.5	27.2	9.4	0.8	0.0	100.0	259
25+ years	53.7	29.3	16.4	0.7	0.0	100.0	210
Married more than once	60.0	30.3	9.4	0.3	0.0	100.0	708
Residence							
Urban	36.8	27.8	17.1	0.3	18.0	100.0	2,383
Rural	42.9	28.5	14.5	0.5	13.6	100.0	2,533
Region							
Western	42.8	24.5	16.4	0.0	16.3	100.0	447
Central	37.0	36.0	12.9	0.8	13.3	100.0	424
Greater Accra	37.6	27.9	14.9	0.1	19.5	100.0	853
Volta	41.6	29.7	12.1	0.2	16.5	100.0	431
Eastern	41.2	28.7	15.6	0.2	14.2	100.0	483
Ashanti	44.2	26.9	14.0	0.1	14.8	100.0	1,011
Brong Ahafo	46.4	27.4	14.6	0.0	11.6	100.0	425
Northern	29.9	28.2	23.6	1.9	16.4	100.0	467
Upper East	36.7	25.3	19.2	0.8	18.0	100.0	253
Upper West	32.2	27.6	23.8	1.4	14.9	100.0	122
Education							
No education	43.7	28.8	22.3	0.7	4.5	100.0	1,042
Primary	42.0	30.5	13.9	0.2	13.4	100.0	988
Middle/JSS	40.5	26.2	13.4	0.4	19.5	100.0	2,039
Secondary+	31.6	29.1	15.6	0.3	23.4	100.0	844
Wealth quintile							
Lowest	38.5	27.3	20.5	0.7	12.9	100.0	783
Second	42.5	29.7	14.8	0.4	12.6	100.0	900
Middle	38.3	31.1	15.6	0.6	14.5	100.0	979
Fourth	38.0	29.5	16.8	0.1	15.6	100.0	1,119
Highest	42.2	23.7	12.4	0.2	21.5	100.0	1,135
Total	39.9	28.2	15.8	0.4	15.7	100.0	4,916

Note: Total includes cases with information missing on education that are not shown separately.
[1] Excludes women who had sexual intercourse within the past 4 weeks
[2] Excludes women who are not currently married

Table 6.7.2 shows that about two in five men age 15-49 (40 percent) were sexually active in the four weeks preceding the survey, while 27 percent reported having sexual intercourse in the past year (but not within the past 4 weeks). Nine percent had not been sexually active in the past year, and 24 percent had never had sex. As with women, sexual activity increases with age among men, with the highest level among men age 40 and above. Men in union were much more likely to be sexually active than those who were not. There was no difference in recent sexual activity between men in urban and rural areas (about 39 percent); however, there was substantial variation by region, from 27 percent in the Northern and Upper West regions to 46 percent in the Brong Ahafo region. Recent

sexual activity is lower among men with primary education (32 percent) than other men, and it generally increases with wealth status: men in the lowest wealth quintile (34 percent) were least likely to be sexually active in the past four weeks while men in the highest wealth quintile (45 percent) were most likely to be sexually active.

Table 6.7.2 Recent sexual activity: Men

Percent distribution of men age 15-49 by timing of last sexual intercourse, according to background characteristics, Ghana 2008

Background characteristic	Timing of last sexual intercourse: Within the past 4 weeks	Within 1 year[1]	One or more years	Missing	Never had sexual intercourse	Total	Number of men
Age							
15-19	7.1	8.7	5.9	0.2	78.1	100.0	911
20-24	25.6	32.9	15.0	0.3	26.2	100.0	704
25-29	47.5	34.3	10.7	0.6	6.9	100.0	624
30-34	54.5	33.4	10.0	0.7	1.4	100.0	533
35-39	58.8	31.9	7.9	0.4	1.0	100.0	528
40-44	60.4	31.0	8.1	0.6	0.0	100.0	394
45-49	60.8	29.6	8.0	1.3	0.3	100.0	364
Marital status							
Never married	16.4	22.0	12.2	0.2	49.2	100.0	1,936
Married or living together	63.0	30.8	5.3	0.9	0.0	100.0	1,950
Divorced/separated/ widowed	32.0	42.8	25.1	0.0	0.1	100.0	172
Marital duration[2]							
Married only once							
0-4 years	60.7	31.5	6.7	1.1	0.0	100.0	399
5-9 years	60.3	31.7	6.5	1.5	0.0	100.0	398
10-14 years	66.4	30.0	2.9	0.7	0.0	100.0	284
15-19 years	57.5	35.2	6.6	0.7	0.0	100.0	209
20-24 years	60.8	30.7	7.6	0.9	0.0	100.0	153
25+ years	74.3	18.6	4.5	2.6	0.0	100.0	64
Married more than once	67.1	29.8	3.0	0.2	0.0	100.0	443
Residence							
Urban	39.5	27.2	10.4	0.4	22.5	100.0	1,866
Rural	39.4	27.1	8.6	0.7	24.3	100.0	2,191
Region							
Western	41.1	27.4	6.6	0.3	24.5	100.0	403
Central	44.1	23.4	8.2	0.3	24.0	100.0	326
Greater Accra	44.2	26.7	10.1	0.7	18.3	100.0	649
Volta	32.9	28.9	10.0	0.0	28.2	100.0	373
Eastern	41.8	27.8	6.7	0.7	23.0	100.0	411
Ashanti	43.5	26.6	8.2	0.0	21.8	100.0	785
Brong Ahafo	46.1	28.1	10.3	0.0	15.4	100.0	347
Northern	26.9	25.9	15.8	1.8	29.6	100.0	435
Upper East	28.2	32.3	8.8	1.4	29.3	100.0	219
Upper West	27.4	26.5	8.7	0.6	36.7	100.0	108
Education							
No education	41.3	31.3	14.8	2.0	10.6	100.0	540
Primary	32.2	25.8	6.9	0.5	34.5	100.0	619
Middle/JSS	41.9	24.1	7.3	0.2	26.4	100.0	1,721
Secondary+	38.7	30.3	11.5	0.1	19.4	100.0	1,167
Wealth quintile							
Lowest	34.1	27.3	11.0	1.5	26.1	100.0	708
Second	38.1	27.7	8.1	0.6	25.6	100.0	738
Middle	38.1	25.9	10.1	0.0	25.9	100.0	699
Fourth	40.4	28.1	9.5	0.2	21.7	100.0	974
Highest	44.6	26.4	8.6	0.5	19.9	100.0	939
Total 15-49	39.5	27.1	9.4	0.5	23.5	100.0	4,058
50-59	57.0	26.7	14.0	1.5	0.8	100.0	510
Total 15-59	41.4	27.1	9.9	0.6	20.9	100.0	4,568

Note: Total includes cases with information missing on education that are not shown separately.
[1] Excludes men who had sexual intercourse within the past 4 weeks
[2] Excludes men who are not currently married

Comparing the results of the 2008 GDHS and the 2003 GDHS (GSS and ORC Macro, 2004) shows that there has been a slight decline in the proportion of women age 15-49 who were sexually active in the four weeks preceding the survey, from 42 percent in 2003 to 40 percent in 2008, and among men age 15-59, from 45 to 41 percent during the same period.

6.6 AMENORRHOEA, ABSTINENCE, AND INSUSCEPTIBILITY

Post-partum amenorrhoea is the interval between the birth of a child and the return of the menstrual cycle. It is the period during which the woman becomes temporarily and involuntarily infecund following childbirth. Post-partum protection from conception can be prolonged by breastfeeding, which can lengthen the duration of amenorrhoea. Delaying the resumption of post-partum sexual relations can also prolong protection. The period of voluntary sexual inactivity after childbirth is referred to as post-partum abstinence. A woman is said to be insusceptible to the risk of pregnancy if she is either amenorrhoeic or abstaining from sexual intercourse following childbirth. Women who gave birth during the three years prior to the survey were asked about their breastfeeding practices, the duration of amenorrhoea, and post-partum sexual abstinence.

Table 6.8 Post-partum amenorrhoea, abstinence and insusceptibility

Percentage of births in the three years preceding the survey for which mothers are post-partum amenorrhoeic, abstaining, and insusceptible, by number of months since birth, and median and mean durations, Ghana 2008

Months since birth	Percentage of births for which the mother is:			Number of births
	Amenorrhoeic	Abstaining	Insusceptible[1]	
<2	94.6	96.2	97.6	86
2-3	83.5	82.2	93.8	122
4-5	69.3	71.2	86.3	112
6-7	62.5	58.6	80.9	103
8-9	52.1	40.8	70.6	93
10-11	42.0	30.4	55.8	112
12-13	31.3	39.6	52.4	95
14-15	26.1	25.3	40.1	106
16-17	15.6	24.1	33.3	122
18-19	18.3	22.9	31.8	90
20-21	6.1	17.6	22.9	75
22-23	4.7	15.5	17.9	86
24-25	2.6	14.6	17.3	84
26-27	0.5	12.5	13.0	102
28-29	0.4	13.9	14.3	107
30-31	0.0	8.0	8.0	88
32-33	1.8	4.4	6.2	76
34-35	2.7	2.9	5.6	66
Total	30.6	34.1	44.0	1,724
Median	8.9	7.5	12.4	na
Mean	10.6	11.9	15.2	na

Note: Estimates are based on status at the time of the survey.
na = Not applicable
[1] Includes births for which mothers are either still amenorrhoeic or still abstaining (or both) following birth

Table 6.8 shows the percentage of births in the three years preceding the survey for which mothers were post-partum amenorrhoeic, abstaining, and insusceptible, by number of months since the birth. Mean and median durations are also shown. In Ghana, the median duration of amenorrhoea is 9 months; the median duration of post-partum abstinence is slightly lower at 8 months. Women are insusceptible to pregnancy for about one year after a birth (median of 12 months and a mean of 15 months). Ninety-six percent of women who gave birth in the two months preceding the survey were still abstaining from sex at the time of the survey. The proportion of women abstaining decreases with increasing months since delivery, particularly during the first year after a birth. Almost all women are insusceptible to the risk of pregnancy during the first two months after a birth because of post-partum amenorrhoea and post-partum abstinence. At 8 to 9 months after a birth, about half of women are still amenorrhoeic but only 41 percent are abstaining. By 12 to 13 months, about one-third of women (31 percent) are still amenorrhoeic, two-fifth are still abstaining, but only half are insusceptible—the latter because of loss of the combined effect of amenorrhoea and abstinence. By 34 to 35 months, the effect of post-partum amenorrhoea is almost completely gone (3 percent) and insusceptibility to pregnancy is low (6 percent).

A comparison of data from the 1998, 2003, and 2008 GDHS surveys indicates that the median duration of post-partum amenorrhoea, abstinence, and insusceptibility remained unchanged between 1998 (GSS an MI, 1999) and 2003 (GSS and ORC Macro, 2004) but decreased between 2003 and 2008.

Table 6.9 shows the median duration of amenorrhoea, post-partum abstinence, and post-partum insusceptibility by background characteristics. Differentials are not strong; however, the period of post-partum insusceptibility is shorter among women in urban areas than those in rural areas. There is an inverse relationship between level of education and wealth quintile on the one hand and women's insusceptibility to pregnancy on the other. However, women with no education and those in the lowest wealth quintile are more likely to experience a longer period of post-partum amenorrhoea and abstinence—and therefore a longer period of post-partum insusceptibility (17 and 19 months, respectively).

Table 6.9 Median duration of amenorrhoea, post-partum abstinence and post-partum insusceptibility

Median number of months of post-partum amenorrhoea, post-partum abstinence, and post-partum insusceptibility following births in the three years preceding the survey, by background characteristics, Ghana 2008

Background characteristic	Post-partum amenorrhoea	Post-partum abstinence	Post-partum insusceptibility[1]
Mother's age			
15-29	7.9	6.6	11.8
30-49	10.1	8.5	13.8
Residence			
Urban	7.9	8.1	10.4
Rural	9.9	7.4	13.9
Education			
No education	12.6	10.9	16.9
Primary	8.6	8.9	11.9
Middle/JSS	6.8	6.6	9.8
Secondary+	(8.1)	(6.9)	(9.9)
Wealth quintile			
Lowest	13.3	12.1	18.5
Second	7.8	7.3	12.6
Middle	(8.5)	(8.3)	(10.2)
Fourth	7.5	6.1	10.1
Highest	(7.5)	(5.8)	(8.4)
Total	8.9	7.5	12.4

Note: Medians are based on the status at the time of the survey (current status). Total includes cases with information missing on education that are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.
[1] Includes births for which mothers are either still amenorrhoeic or still abstaining (or both) following birth

6.7 MENOPAUSE

Menopause marks the onset of infecundity and is another factor influencing the risk of pregnancy. In this report, women are considered menopausal if they are neither pregnant nor post-partum amenorrhoeic, and have not had a menstrual period in the past six months.

Table 6.10 shows that overall, 9 percent of women age 30-49 are menopausal. The proportion of women who are menopausal increases with age from 2 percent among women age 30-34 to 45 percent among women age 48-49. Compared with the results from the 2003 GDHS, the proportion of women who are menopausal has declined considerably among women age 46-47, from 33 percent in 2003 to 22 percent in 2008. Less than one in two women age 48-49 are menopausal, which is almost the same as in 2003 (GSS and ORC Macro, 2004).

Table 6.10 Menopause

Percentage of women age 30-49 who are menopausal, by age, Ghana 2008

Age	Percentage menopausal[1]	Number of women
30-34	2.2	644
35-39	2.7	638
40-41	3.2	214
42-43	8.7	185
44-45	19.7	209
46-47	22.3	145
48-49	45.1	146
Total	8.9	2,181

[1] Percentage of all women who are not pregnant and not post-partum amenorrhoeic whose last menstrual period occurred six or more months preceding the survey

FERTILITY PREFERENCES 7

A principal objective of the 1994 Population Policy was to promote a small family norm through information and education campaigns and to target for a two-year minimum birth interval for all births by 2020. The government has since actively promoted the voluntary acceptance of family planning methods. All couples are being encouraged to decide freely and responsibly on the timing, number, and spacing of their children for a family size that can be managed (NPC, 1994).

In the 2008 GDHS, women and men were asked specific questions about their desire to have another child, the length of time they would like to wait before having another child, and what they considered to be the ideal number of children. The questions were designed to ascertain individual fertility preferences. Although survey information on fertility preferences can be influenced by the respondent's current family size, it is still useful to family planning programmes for assessing the need for spacing and limiting births and the extent of mistimed and unwanted births.

7.1 DESIRE FOR MORE CHILDREN

Table 7.1 shows fertility preferences among currently married women and currently married men by the number of living children at the time of the survey. The findings indicate that there is considerable desire among married Ghanaians to control the timing and number of births. Thirty-six percent of currently married women would like to wait for two or more years for the next birth, and another 36 percent do not want to have another child or are sterilised, totalling about 72 percent who want to delay or limit the next birth. Only about one-fifth (19 percent) would like to have a child soon (within two years). The remaining women are uncertain about their fertility desires or say they are unable to get pregnant (infecund). A similar pattern of fertility preferences is seen for currently married men.

Table 7.1 also shows that fertility preferences and the number of children a woman has are closely related. About three in four currently married women (74 percent) without a child would like to have one soon, compared with 63 percent in 2003. However, interest in controlling the pace of childbearing once the first child is born is high; almost two-thirds (60 percent) of women with one child want to delay the next birth. Interest in controlling the number of births grows substantially as the number of children increases; the proportion of married women wanting no more children or who are sterilised increases from 2 percent among women with one child to 77 percent among women with six or more children. Men without a child are more likely to want to delay the first birth (i.e., wait at least two years), compared with women (34 and 13 percent, respectively). Conversely, women who have not started childbearing are more likely to want a child within two years than men (74 and 56 percent, respectively).

A comparison of the findings from the five GDHS surveys shows that the desire to space births among currently married Ghanaian women has declined while the desire to limit births has risen. Over the past 20 years, the desire to space births has decreased from 45 percent in 1988 (GSS and IRD, 1989) to 36 percent in 2008; however, this change has been minimal in the past ten years. Over the same period, the desire to limit births (excluding sterilised women) has increased from 23 percent in 1988 to 35 percent in 2008. Again this change has been minimal over the past 10 years.

Table 7.1 Fertility preferences by number of living children

Percent distribution of currently married women and currently married men age 15-49 by desire for children, according to number of living children, Ghana 2008

Desire for children	Number of living children[1]							Total 15-49	Total 15-59
	0	1	2	3	4	5	6+		
WOMEN[1]									
Have another soon[2]	73.7	30.1	21.7	15.5	8.3	6.4	5.2	19.3	na
Have another later[3]	12.8	59.9	53.6	38.7	26.7	16.1	7.8	35.7	na
Have another, undecided when	10.8	4.7	2.5	1.4	0.7	0.3	0.7	2.4	na
Undecided	1.8	2.1	2.5	6.6	4.7	6.1	5.9	4.3	na
Want no more	0.0	1.7	17.3	34.0	55.6	66.0	73.5	34.8	na
Sterilised[4]	0.0	0.0	0.4	2.2	1.9	4.5	3.2	1.6	na
Declared infecund	0.8	1.5	1.8	1.3	1.9	0.2	3.0	1.6	na
Missing	0.0	0.0	0.2	0.3	0.0	0.4	0.6	0.2	na
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	na
Number of women	167	476	608	523	438	297	368	2,876	na
MEN[5]									
Have another soon[2]	55.8	35.5	22.3	16.7	12.5	14.1	14.9	22.7	20.8
Have another later[3]	34.4	57.6	50.4	41.7	29.9	29.1	22.3	40.0	34.0
Have another, undecided when	4.0	1.4	1.6	3.3	1.0	1.7	3.0	2.2	1.9
Undecided	4.1	1.7	3.2	3.9	5.7	7.6	2.7	3.8	3.8
Want no more	0.0	2.8	21.8	32.1	49.9	47.6	56.0	30.3	38.4
Sterilised[4]	0.0	0.8	0.6	1.6	0.6	0.0	0.7	0.7	0.7
Declared infecund	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.1	0.2
Missing	1.7	0.3	0.0	0.0	0.3	0.0	0.4	0.3	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	141	325	398	340	308	167	272	1,950	2,404

na = Not applicable
[1] The number of living children includes current pregnancy for women
[2] Wants next birth within 2 years
[3] Wants to delay (next) birth for 2 or more years
[4] Includes both female and male sterilisation
[5] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

Table 7.2.1 shows the percentage of currently married women who want no more children or have been sterilised by the number of living children and background characteristics. Women in urban areas are more likely than those in rural areas to want no more children, irrespective of the number of children a woman has, although the overall urban-rural difference is slightly less than one percentage point (37 and 36 percent, respectively). Men show a similar pattern regarding desire to limit births (Table 7.2.2). The desire to limit the number of children is higher among urban than rural men, highest among men with middle/JSS education, and men in the highest wealth quintile.

Women in the Eastern region and men in the Western region are most likely than women and men in the other regions to want to limit the number of children they have (47 percent and 41 percent, respectively). The desire to limit childbearing is lowest in the Northern region among both women and men (20 percent and 9 percent, respectively).

Table 7.2.1 Desire to limit childbearing: Women

Percentage of currently married women age 15-49 who want no more children, by number of living children, according to background characteristics, Ghana 2008

Background characteristic	Number of living children[1]						Total
	1	2	3	4	5	6+	
Residence							
Urban	2.3	21.9	51.0	66.4	72.7	79.5	36.8
Rural	1.2	13.4	23.4	51.6	69.4	76.0	36.2
Region							
Western	3.9	26.4	35.2	63.8	74.7	88.0	44.8
Central	0.0	7.3	26.3	59.0	91.8	91.5	41.3
Greater Accra	1.9	36.6	67.6	87.9	91.6	84.5	45.7
Volta	2.0	22.2	38.9	66.2	73.6	70.6	39.0
Eastern	2.7	14.8	55.6	67.5	79.5	96.5	46.7
Ashanti	2.2	14.1	31.0	58.9	75.3	80.3	34.9
Brong Ahafo	1.2	7.7	32.5	38.4	50.2	78.2	26.1
Northern	0.0	1.7	14.5	15.7	32.2	53.4	20.0
Upper East	1.9	8.6	16.7	51.4	69.2	74.6	34.4
Upper West	1.4	0.4	10.7	37.3	33.0	77.5	23.8
Education							
No education	1.0	11.3	23.6	34.9	62.8	67.3	36.4
Primary	0.0	17.2	32.0	52.7	63.0	86.5	36.8
Middle/ JSS	2.2	16.5	44.0	76.8	84.6	88.8	38.8
Secondary+	2.9	32.7	46.1	84.7	90.3	100.0	28.4
Wealth quintile							
Lowest	0.0	12.5	12.5	37.6	48.9	66.8	32.0
Second	1.9	11.8	23.6	49.7	76.1	81.1	37.7
Middle	3.6	13.8	36.9	53.7	70.4	77.5	37.1
Fourth	0.9	16.7	47.5	72.2	84.0	90.0	37.3
Highest	2.2	29.3	53.1	78.7	82.0	88.8	38.0
Total	1.7	17.7	36.1	57.5	70.5	76.7	36.5

Note: Women who have been sterilised or who have stated their current method is male sterilisation are considered to want no more children. Total includes women with information missing on education who are not shown separately.
[1] The number of living children includes current pregnancy.

When the number of living children is taken into account, educational differences are more striking. For example, among women with three children, the percentage who want to limit childbearing increases from 24 percent among those with no education to 46 percent among women with secondary or higher education. A similar pattern is seen by wealth quintile. In general, women and men in the lowest wealth quintile are least likely to want to limit the number of children.

Table 7.2.2 Desire to limit childbearing: Men

Percentage of currently married men age 15-49 who want no more children, by number of living children, according to background characteristics, Ghana 2008

Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
Residence								
Urban	0.0	3.8	29.1	44.7	64.9	62.1	57.2	32.1
Rural	0.0	3.3	15.3	25.8	41.9	42.7	56.5	30.1
Region								
Western	0.0	8.3	21.1	47.7	58.4	55.9	84.7	41.3
Central	0.0	0.0	30.8	20.5	55.1	78.4	66.4	37.9
Greater Accra	0.0	3.1	41.9	57.2	78.8	57.9	83.3	38.1
Volta	0.0	3.9	24.0	25.2	44.7	94.1	49.9	31.2
Eastern	0.0	0.0	28.6	31.7	62.4	39.8	62.7	39.3
Ashanti	0.0	5.5	16.9	42.1	49.9	53.5	73.9	33.4
Brong Ahafo	0.0	4.4	15.4	36.3	32.1	55.8	82.2	29.5
Northern	0.0	2.4	0.0	11.7	15.9	3.7	17.8	8.7
Upper East	0.0	1.9	3.5	6.3	32.6	33.2	38.2	17.5
Upper West	0.0	0.0	2.4	8.4	37.5	23.9	41.4	14.4
Education								
No education	0.0	0.5	10.0	9.4	31.3	23.2	39.7	20.2
Primary	0.0	0.0	21.6	29.6	43.0	37.7	51.8	29.3
Middle/ JSS	0.0	4.4	24.1	41.4	56.1	52.1	71.8	37.7
Secondary+	0.0	4.7	26.4	40.8	64.6	88.2	57.2	29.3
Wealth quintile								
Lowest	0.0	3.2	8.6	15.2	25.2	21.5	33.0	18.9
Second	0.0	0.0	17.9	19.7	40.3	51.3	72.3	34.7
Middle	0.0	3.3	20.1	31.6	53.8	65.4	63.0	36.4
Fourth	0.0	3.7	21.4	41.7	65.9	65.5	66.1	31.6
Highest	0.0	5.5	34.0	52.1	67.5	62.1	66.2	33.8
Total 15-49	0.0	3.6	22.4	33.7	50.5	47.6	56.6	31.0
50-59	14.8	33.2	64.8	68.4	79.8	80.6	75.5	73.8
Total 15-59	0.4	4.4	26.5	37.6	56.4	57.1	64.8	39.1

Note: Men who have been sterilised or who state in response to the question about desire for children that their wife has been sterilised are considered to want no more children. Total includes men with information missing on education who are not shown separately.
[1] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

7.2 NEED AND DEMAND FOR FAMILY PLANNING

This section discusses the extent of the need for family planning in Ghana and the potential demand for contraception to space or limit childbearing. Currently married women who do not want any more children or who want to wait two or more years before having another child, but are not using contraception, are considered to have an unmet need for family planning. Women who are using a family planning method are said to have a met need for family planning. The total demand for family planning comprises women with unmet need and met need for family planning.

Table 7.3 shows the need for family planning among currently married women by background characteristics. Thirty-five percent of married women have an unmet need for family planning. Unmet need for spacing is higher than unmet need for limiting children (23 and 13 percent, respectively). Overall, about one in four currently married women is using a method of contraception (12 percent for spacing births and 11 percent for limiting births). The total demand for family planning among women is 59 percent (35 percent for spacing births and 24 percent for limiting births). Only 40 percent of the demand for family planning is currently being met, which implies that the contraceptive needs of three-fifths of currently married women are not being met.

Table 7.3 Need and demand for family planning: Currently married women

Percentage of currently married women age 15-49 with unmet need for family planning, percentage with met need for family planning, the total demand for family planning, and percentage with demand for contraception satisfied, by background characteristics, Ghana 2008

Background characteristic	Unmet need for family planning[1]			Met need for family planning (currently using)[2]			Total demand for family planning			Percentage of demand satisfied	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total		
Age											
15-19	58.8	2.9	61.7	12.9	0.7	13.6	71.7	3.6	75.3	18.1	85
20-24	36.9	5.2	42.2	21.4	1.0	22.4	58.3	6.2	64.5	34.7	414
25-29	34.1	5.9	40.0	18.4	4.7	23.0	52.4	10.6	63.0	36.6	612
30-34	22.1	11.1	33.2	15.1	8.2	23.3	37.2	19.2	56.5	41.3	539
35-39	14.5	20.5	35.0	8.7	17.1	25.9	23.2	37.6	60.9	42.5	527
40-44	7.5	23.4	30.9	2.6	25.0	27.6	10.1	48.4	58.5	47.2	380
45-49	3.5	16.7	20.1	1.1	19.0	20.2	4.6	35.7	40.3	50.1	319
Residence											
Urban	19.4	12.9	32.3	13.8	13.3	27.1	33.3	26.2	59.4	45.6	1,216
Rural	24.7	12.8	37.6	11.1	9.8	20.9	35.8	22.6	58.4	35.7	1,660
Region											
Western	22.3	17.0	39.4	8.6	10.5	19.1	31.0	27.5	58.5	32.7	261
Central	33.8	15.9	49.7	10.4	12.5	22.9	44.3	28.4	72.6	31.6	254
Greater Accra	13.0	13.4	26.5	12.7	20.0	32.6	25.7	33.4	59.1	55.2	422
Volta	21.4	12.8	34.2	15.5	13.1	28.6	37.0	25.9	62.9	45.6	290
Eastern	22.5	17.1	39.6	10.0	14.2	24.2	32.6	31.3	63.9	37.9	252
Ashanti	22.7	13.8	36.5	15.8	11.2	27.0	38.5	25.0	63.5	42.6	542
Brong Ahafo	24.8	10.5	35.3	20.0	8.9	29.0	44.9	19.4	64.3	45.0	267
Northern	25.2	6.7	31.9	4.6	1.3	5.9	29.8	8.0	37.8	15.7	338
Upper East	22.7	9.4	32.1	7.2	7.4	14.7	29.9	16.8	46.7	31.4	168
Upper West	19.4	8.6	28.1	15.9	5.8	21.7	35.3	14.4	49.8	43.6	82
Education											
No education	22.3	12.8	35.1	5.7	7.9	13.6	27.9	20.7	48.6	27.9	853
Primary	25.1	15.9	41.0	16.0	10.6	26.6	41.1	26.5	67.6	39.4	638
Middle/ JSS	21.9	12.5	34.4	13.3	14.2	27.4	35.2	26.7	61.9	44.4	1,058
Secondary+	20.0	8.3	28.3	18.8	11.6	30.4	38.8	19.9	58.6	51.8	325
Wealth quintile											
Lowest	25.6	10.6	36.2	7.5	6.7	14.2	33.1	17.4	50.5	28.2	573
Second	26.6	16.2	42.8	12.4	7.9	20.3	39.0	24.1	63.1	32.2	577
Middle	25.3	14.1	39.4	11.7	10.1	21.8	37.0	24.3	61.2	35.6	525
Fourth	20.9	14.0	34.9	15.1	13.9	29.0	36.0	27.9	64.0	45.4	600
Highest	14.6	9.5	24.2	14.4	17.0	31.4	29.0	26.6	55.6	56.5	601
Total	22.5	12.9	35.3	12.3	11.2	23.5	34.8	24.1	58.9	40.0	2,876

Note: Total includes women with information missing on education who are not shown separately.

[1] *Unmet need for spacing*: Includes women who are fecund and not using family planning and who say they want to wait two or more years for their next birth, or who say they are unsure whether they want another child, or who want another child but are unsure when to have the child. In addition, unmet need for spacing includes pregnant women whose current pregnancy was mistimed, or whose current pregnancy was unwanted but who now say they want more children. Unmet need for spacing also includes amenorrhoeic women whose last birth was mistimed, or whose last birth was unwanted but who now say they want more children. *Unmet need for limiting*: Includes women who are fecund and not using family planning and who say they do not want another child. In addition, unmet need for limiting includes pregnant women whose current pregnancy was unwanted but who now say they do not want more children or who are undecided whether they want another child. Unmet need for limiting also includes amenorrhoeic women whose last birth was unwanted but who now say they do not want more children or who are undecided whether they want another child.

[2] Using for spacing is defined as women who are using some method of family planning and say they want to have another child or are undecided whether to have another. Using for limiting is defined as women who are using and who want no more children. Note that the specific methods used are not taken into account here.

A comparison of the findings from the 2003 and the 2008 GDHS surveys shows that there has been little change in unmet need for family planning among currently married women over the five-year period. Likewise, the total demand for family planning did not show any substantial change. There was, however, a decrease of three percentage points in the level of demand satisfied: from 43 percent in 2003 to 40 percent in 2008.

Unmet need generally decreases with age; in Ghana, the sharpest declines are between the two youngest age groups (from 62 to 42 percent) and the two oldest age groups (from 31 to 20 percent). As can be seen in Table 7.3, younger women have a greater unmet need for spacing, while older women have a greater unmet need for limiting. Women in rural areas have a greater unmet need for family planning than their urban counterparts (38 percent, compared with 32 percent). It is also interesting to note that women in rural areas have higher unmet need for spacing than their urban counterparts. Unmet need is highest in the Central region (50 percent) and lowest in the Greater Accra region (27 percent). Not surprisingly, the percentage of demand satisfied is highest in Greater Accra (55 percent) and lowest in the Northern region (16 percent). With the exception of the Greater Accra region—where unmet need and met need for spacing are almost equal (13 percent)—unmet need for spacing is higher than the unmet need for limiting in all regions.

Women with secondary or higher education have a lower level of unmet need for family planning (28 percent) than women with primary education (41 percent) or no education (35 percent). Total demand for family planning is highest for women with primary education (68 percent) and lowest for women with no education (49 percent). The percentage of demand satisfied ranges from 28 percent among women with no education to 52 percent among women with secondary or higher level education.

Unmet need for family planning is highest among women in the second wealth quintile and lowest among women in the highest wealth quintile (43 and 24 percent, respectively). In all wealth quintiles, unmet need for spacing is higher than unmet need for limiting. Also, the percentage of demand satisfied ranges from 28 percent for women in the lowest wealth quintile to 57 percent for women in the highest wealth quintile.

7.3 IDEAL FAMILY SIZE

Respondents were asked to consider a hypothetical situation independent of their current family size and to report the number of children they would choose to have. Information on what women and men believe to be the ideal family size was elicited through two questions. Respondents who had no living children were asked, "If you could choose exactly the number of children to have in your whole life, how many would that be?" Respondents who had children were asked, "If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?" Nevertheless, even though these questions are based on hypothetical situations, they give an idea of the total number of children women who have not started childbearing will have in the future, while among older women and high parity women this information provides a measure of the level of unwanted fertility.

Table 7.4 shows that 98 percent of women and 99 percent of men gave a numeric response to the questions on ideal number of children.

Table 7.4 Ideal number of children

Percent distribution of women and men age 15-49 by ideal number of children, and mean ideal number of children for all women and men and for currently married women and men, according to number of living children, Ghana 2008

Ideal number of children	Number of living children							Total
	0	1	2	3	4	5	6+	
WOMEN[1]								
0	0.4	0.5	0.1	0.4	0.3	0.9	0.4	0.4
1	0.5	1.0	0.7	0.6	0.6	0.3	0.0	0.6
2	12.9	11.6	9.7	3.9	4.1	3.2	4.1	8.8
3	33.6	34.7	23.1	17.6	8.0	10.0	3.9	23.5
4	36.1	31.1	41.4	43.1	40.6	25.1	23.9	35.7
5	9.1	9.1	9.6	14.0	12.3	21.5	15.3	11.5
6+	6.4	10.6	14.6	18.3	32.2	36.5	48.0	17.9
Non-numeric responses	1.0	1.4	0.9	2.1	1.9	2.7	4.4	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	1,591	749	728	589	507	341	412	4,916
Mean ideal number children for:[2]								
All women	3.7	3.8	4.2	4.5	5.0	5.2	6.0	4.3
Number	1,576	738	721	577	497	332	394	4,835
Currently married women	3.5	3.9	4.2	4.5	5.0	5.3	6.1	4.6
Number	163	470	603	511	432	288	351	2,818
MEN[3]								
0	0.4	0.0	0.2	0.4	0.6	0.0	0.3	0.3
1	0.7	0.7	1.9	0.3	0.0	0.5	0.6	0.7
2	12.1	16.1	11.3	4.3	4.1	3.0	1.3	10.0
3	29.9	35.0	21.5	19.3	11.6	9.5	6.7	24.7
4	31.9	29.0	36.3	36.2	30.8	14.4	18.7	30.7
5	13.0	9.1	15.9	16.9	15.0	22.3	8.4	13.5
6+	11.5	9.6	12.2	21.5	36.6	47.4	60.7	19.1
Non-numeric responses	0.6	0.5	0.8	1.1	1.3	3.0	3.2	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	2,035	449	443	366	320	168	277	4,058
Mean ideal number children for men 15-49:[2]								
All men	4.0	3.8	4.2	4.6	5.4	6.5	7.8	4.5
Number	2,023	446	440	362	316	163	268	4,018
Currently married men	4.1	3.9	4.2	4.6	5.4	6.5	7.9	5.1
Number	138	323	394	336	303	162	264	1,921
Mean ideal number children for men 15-59:[2]								
All men	4.0	3.8	4.2	4.6	5.3	6.3	7.8	4.7
Number	2,027	456	483	404	390	229	467	4,512
Currently married	4.1	3.9	4.1	4.6	5.3	6.3	7.8	5.3
Number	142	333	438	378	377	228	463	2,360

[1] The number of living children includes current pregnancy for women
[2] Means are calculated excluding respondents who gave non-numeric responses.
[3] The number of living children includes one additional child if respondent's wife is pregnant (or if any wife is pregnant for men with more than one current wife).

The mean ideal number of children for all women age 15-49 is 4.3, while for men age 15-49 it is 4.5, indicating that men's ideal number of children is slightly higher than women's ideal number of children. Currently married women and currently married men prefer larger ideal family sizes (4.6 and 5.1, respectively) than all women and all men. There are two likely reasons for this pattern. First, to the extent that women and men are able to implement their fertility preferences, those who want smaller families will tend to achieve smaller families. At the same time, however, some women and men who already have children may find it difficult to say that they would have preferred to have had fewer children than they have. These women and men are likely to report the number of children they

have as their preferred number of children. In general, women and men have similar patterns regarding ideal number of children. However, the percentages for women and men diverge after an ideal family size of three: 36 percent of all women consider four children as ideal, compared with 31 percent of all men. On the other hand 12 percent of women consider five children to be ideal, compared with 14 percent of men.

The preference for a larger family size is higher for men than women, irrespective of the number of living children. The mean ideal number of children increases with the number of living children. Among all women, the ideal number of children ranges from 3.7 for those with no children to 6.0 for those with six or more children. As with women, the mean ideal number of children among all men increases with the number of children and ranges from 4.0 for those with no children to 7.8 for those with six or more children.

The results of the GDHS surveys conducted over the past 20 years show that, although there has been an overall decline in ideal family size among currently married women—from a mean of 5.5 children in 1988 (GSS and MI, 1989) to 4.6 children in 2008—there has been little change in the past 15 years. And, while there appears to have been a slight increase in ideal family size among both women and men over the past ten years (GSS and MI, 1999), a downward trend can be seen in the five years preceding the survey.

Table 7.5 shows the mean ideal number of children for all women by background characteristics. Ideal family size increases with age, from 3.8 children among women age 15-24 to 5.3 children among women age 45-49. This pattern suggests a trend towards smaller family size. The ideal family size for women in rural areas is higher, compared to their urban counterparts. Mean ideal number of children is highest in the Northern region (6.6); women residing in the Greater Accra region have the lowest ideal family size (3.4). There are variations in mean ideal number of children by level of education: women with no education have the highest ideal number of children (5.8), while those with secondary or higher education have the lowest ideal number of children (3.4). A similar pattern is seen by wealth quintile, with women in the lowest wealth quintile wanting an ideal number of 5.8 children and those in the highest wealth quintile wanting 3.5 children.

Table 7.5 Mean ideal number of children

Mean ideal number of children for all women age 15-49 by background characteristics, Ghana 2008

Background characteristic	Mean ideal number of children	Number of women[1]
Age		
15-19	3.8	1,014
20-24	3.8	875
25-29	4.0	814
30-34	4.6	634
35-39	4.6	626
40-44	5.0	457
45-49	5.3	416
Residence		
Urban	3.9	2,351
Rural	4.7	2,484
Region		
Western	4.2	447
Central	3.8	414
Greater Accra	3.4	843
Volta	4.2	426
Eastern	3.9	479
Ashanti	4.2	995
Brong Ahafo	4.2	424
Northern	6.6	448
Upper East	4.9	235
Upper West	5.7	122
Education		
No education	5.8	996
Primary	4.3	969
Middle/ JSS	3.9	2,025
Secondary+	3.4	841
Wealth quintile		
Lowest	5.8	758
Second	4.6	882
Middle	4.2	969
Fourth	3.9	1,100
Highest	3.5	1,126
Total	4.3	4,835

Note: Total includes women with information missing on education who are not shown separately.
[1] Number of women who gave a numeric response

7.4 FERTILITY PLANNING

Women were asked a series of questions about all their children born in the five years preceding the survey, as well as any current pregnancy, to determine whether the pregnancy was planned, mistimed, or unwanted. The answers to these questions provide insight into the degree to which couples are able to control their fertility.

Table 7.6 shows the percent distribution of births (including current pregnancy) in the five years preceding the survey by fertility planning status, according to birth order and mother's age at birth. The results show that 62 percent of births in the five years preceding the survey were planned

(wanted then) while 37 percent were unplanned—23 percent were mistimed (wanted later) and 14 percent were not wanted.

The proportion of planned births increases from 57 percent for birth order one to 71 percent for birth order three, then decreases sharply for subsequent births. The proportion of mistimed births decreases with increasing birth order, and the proportion of unwanted births decreases between the first and second birth and then increases for subsequent births. A similar pattern is seen by women's age, with mistimed births generally decreasing as age increases. The proportion of births that were not wanted declines among women in their 20s and then increases with age. One in four births to women in their 40s was not wanted.

Table 7.6 Fertility planning status

Percent distribution of births to women age 15-49 in the five years preceding the survey (including current pregnancies), by planning status of the birth, according to birth order and mother's age at birth, Ghana 2008

Birth order and mother's age at birth	Planning status of birth: Wanted then	Wanted later	Wanted no more	Missing	Total	Number of births
Birth order						
1	57.2	27.7	15.0	0.0	100.0	781
2	68.0	25.9	5.8	0.3	100.0	700
3	70.5	19.4	9.5	0.6	100.0	556
4+	58.6	20.3	20.5	0.6	100.0	1,232
Mother's age at birth						
<20	41.2	38.9	19.9	0.0	100.0	369
20-24	59.4	29.6	10.5	0.5	100.0	846
25-29	69.3	22.6	7.9	0.1	100.0	825
30-34	70.0	14.5	14.6	0.9	100.0	664
35-39	62.2	16.4	21.0	0.4	100.0	371
40-44	58.5	9.0	32.1	0.4	100.0	170
45-49	(65.0)	(8.2)	(26.9)	(0.0)	100.0	24
Total	62.3	23.1	14.2	0.4	100.0	3,269

Note: Figures in parentheses are based on 25-49 unweighted cases.

The proportion of unplanned births decreased from 42 percent in 1993 to 36 percent in 1998 but increased to 40 percent in 2003. Unplanned births decreased again to 37 percent in 2008. Although the proportion of unwanted births increased markedly from the 1993 and 1998 level of 9 percent to 16 percent in 2003, it had decreased to 14 percent in 2008.

Table 7.7 provides information on total "wanted" fertility rates and total fertility rates for the three years preceding the survey, by background characteristics. Unwanted births are defined as births that exceed the number considered ideal. Women who did not report a numeric ideal family size were assumed to want all their births. The total wanted fertility rate represents the level of fertility that would have prevailed in the three years preceding the survey if all unwanted births were prevented. A comparison of the total wanted fertility and total fertility rate suggests the potential demographic impact of the elimination of unwanted births.

The total wanted fertility rate, which was 4.2 in 1993, fell to 3.7 in 1998 and remained at 3.7 in 2003. In the three years preceding the 2008 GDHS, the total wanted fertility rate had declined to 3.5. During the same period, the total fertility rate fell from 5.2 children per woman in 1993 to 4.4 in 1998, remained unchanged at 4.4 in 2003 and decreased to 4.0 in 2008.

The wanted fertility rate in rural areas is 1.5 children more than in urban areas (4.2 and 2.7, respectively). The gap between wanted and actual fertility in rural areas is larger than in urban areas, suggesting that urban women may be better able to translate their ideal family size into their actual family size.

At the regional level, women in the Greater Accra region want the fewest children (2.2) while women in the Northern region want the most children (6.3). However, the Upper West region has the smallest gap between desired and actual fertility (0.2), while the Central region has the largest gap (about 1.1 children), which suggests that women in the Central region are less able to translate their desired family size into practice.

Women's education has an inverse relationship with fertility, with the largest gap between wanted and actual fertility (0.7 children) observed for those with no education and those with primary education. There is also an inverse relationship between women's wealth status and fertility, with the largest gap between wanted and actual fertility (0.8 children) observed for those in the lowest quintile and second quintile.

Table 7.7 Wanted fertility rates

Total wanted fertility rates and total fertility rates for the three-year period preceding the survey, by background characteristics, Ghana 2008

Background characteristic	Total wanted fertility rate	Total fertility rate
Residence		
Urban	2.7	3.1
Rural	4.2	4.9
Region		
Western	3.4	4.2
Central	4.3	5.4
Greater Accra	2.2	2.5
Volta	3.4	3.8
Eastern	3.0	3.6
Ashanti	3.0	3.6
Brong Ahafo	3.6	4.1
Northern	6.3	6.8
Upper East	3.6	4.1
Upper West	4.8	5.0
Education		
No education	5.3	6.0
Primary	4.2	4.9
Middle/ JSS	2.9	3.5
Secondary+	1.8	2.1
Wealth quintile		
Lowest	5.7	6.5
Second	4.1	4.9
Middle	3.3	4.0
Fourth	3.0	3.4
Highest	2.0	2.3
Total	3.5	4.0

Note: Rates are calculated based on births to women age 15-49 in the period 1-36 months preceding the survey. The total fertility rates are the same as those presented in Table 4.2. Total includes women with information missing on education who are not shown separately.

INFANT AND CHILD MORTALITY 8

This chapter presents estimates on levels, trends, and differentials in neonatal, post-neonatal, infant, child, and under-five mortality in Ghana. The information used to measure these childhood mortality rates was collected from the birth history section of the Women's Questionnaire. Women of reproductive age (15-49) were asked a series of questions including, the number of biological sons and daughters living with them, the number living elsewhere, and the number who have died. In addition, for each live birth, women were asked to provide information on the sex, date of birth, whether the birth was single or multiple, and the survival status of the child. Current age was collected for living children, and age at death was collected for dead children.

Infant and child mortality rates are basic indicators of a country's socio-economic situation and quality of life, as well as specific measures of health status. Measures of childhood mortality are also useful in population projections and monitoring and evaluating population and health programmes and policies. Characteristics of childhood mortality such as age patterns and socio-economic and demographic differentials are used to highlight factors that have positive or negative impacts on child survival. Analysis of mortality measures is useful in identifying promising directions for health programmes and improving child survival efforts in Ghana.

8.1 DEFINITION, DATA QUALITY, AND METHODOLOGY

Childhood mortality estimates in DHS surveys measure the risk of dying from birth through age five. The rates of childhood mortality presented in this chapter are defined as follows:

Neonatal mortality (NN): the probability of dying between birth and the first month of life

Post-neonatal mortality (PNN): the difference between infant and neonatal mortality

Infant mortality ($_1q_0$): the probability of dying between birth and exact age one

Child mortality ($_4q_1$): the probability of dying between exact age one and five

Under-five mortality ($_5q_0$): the probability of dying between birth and exact age five.

All rates are expressed per 1,000 live births, except child mortality, which is expressed per 1,000 children surviving to age 12 months.

The reliability of mortality estimates depends on the sampling variability of the estimates and on non-sampling errors. Sampling errors for the 2008 GDHS are presented in Appendix B. Non-sampling errors arise from problems associated with the quality of data collection and include the completeness with which births and deaths are reported and recorded. The most common problems are misreporting of age at death, misreporting of dates of birth, and event underreporting (of both the birth and death of a child). The possible occurrence of these data problems in the 2008 GDHS is discussed with reference to the data quality tables in Appendix C.

A typical problem with survey data is the misreporting of infant deaths that occur in the late post-neonatal period, as well as deaths at 12 months or one year of age (digit preference in the reporting of age). Such misreporting results in underestimation of the infant mortality rates and overestimation of child mortality rates. Table C.6 in Appendix C displays some digit preferences in reported deaths at 12 months or one year. This 'heaping' took place despite the care taken in the GDHS to minimise errors of this type by requiring that age at death be recorded in days if the death took place within one month of birth, in months if the child died within 24 months of birth, and in

years if the child died between age two and five. Nevertheless, age heaping at 12 months is not markedly different from the level seen in the data collected in the previous GDHS surveys.

Misreporting of the date of birth of children is common in many surveys that include both demographic and health information for children born since a specified date. The effect of such an error is to distort time trends in fertility and mortality. In the 2008 GDHS, the cut-off date for asking health questions was 2003, that is, for births since January 2003. An examination of Table C.4 suggests that there is evidence of misreporting of dates of birth for both living and dead children. The calendar year ratios for living and dead children are 74 and 76 percent, respectively, for 2003, compared with 128 and 135 percent, respectively, in 2002. The deficit in calendar year 2003 is believed to be the result of some interviewers increasing children's ages to avoid having to collect their health information. This transference of children (especially dead children) out of the five-year period preceding the survey is likely to understate the true level of childhood mortality for that period. The data also show heaping in 2004 for births of children who have died that is more severe than the heaping in 2002.

Event underreporting is usually more severe for deaths that occur early in infancy. Omission of deaths may also be more common among women who have had several children or in cases where the death took place a long time ago. To assess the impact of omission on measures of child mortality, two indicators are used: the percentage of deaths that occurred under seven days to the number that occurred under one month, and the percentage of neonatal to infant deaths. It is hypothesised that omission will be more prevalent among children who died immediately after birth than among those who lived longer, and that omission will be more serious for events that took place in the distant past than for those in the recent past. Table C.5 shows that the percentage of early neonatal deaths ranges from 81 percent for the period 10-14 years preceding the survey to 85 percent for the period 0-4 years before the survey. These results are similar to the results from the 1988 GDHS (GSS and MI, 1998) and the 2003 GDHS (GSS and ORC Macro, 2004). Similarly, Table C.6 shows that neonatal deaths comprise 59 to 64 percent of all infant deaths. These figures are considered plausible.[1] Over time, the figures vary within a narrow range for the 20 years preceding the survey, suggesting that there has not been selective omission of early infant deaths.

In addition to recall errors for the more distant retrospective periods, there are structural reasons for limiting mortality estimation to recent periods, preferably to the periods 0-4, 5-9, and 10-14 years before the survey. In fact, except for the first period (0-4 years), the others are slightly biased estimates because they are based on the child mortality experiences of women age 15-44 and 15-39, respectively, instead of women age 15-49 as in the period 0-4 years preceding the survey. Therefore, estimating mortality for periods more than 10-15 years before the survey is not advisable.

8.2 Levels and Trends in Infant and Child Mortality

Table 8.1 presents mortality rates for cohorts of children born in three five-year periods preceding the survey. Under-five mortality in Ghana is 80 deaths per 1,000 live births in the most recent five-year period. This means one in every thirteen Ghanaian children dies before the fifth birthday. Infant mortality is 50 deaths per 1,000 live births and child mortality is 31 deaths per 1,000 children age one year. Neonatal mortality is 30 deaths per 1,000 live births in the most recent five-year period, while the risk of post-neonatal mortality is 21 deaths per 1,000 live births. Neonatal deaths account for 60 percent of the deaths in infancy.

[1] There are no model mortality patterns for the neonatal period. However, one review of data from several developing countries concluded that at levels of neonatal mortality of 20 per 1,000 or higher, approximately 70 percent of neonatal deaths occur within the first six days of life (Boerma, 1988).

Table 8.1 Early childhood mortality rates

Neonatal, post-neonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey, Ghana 2008

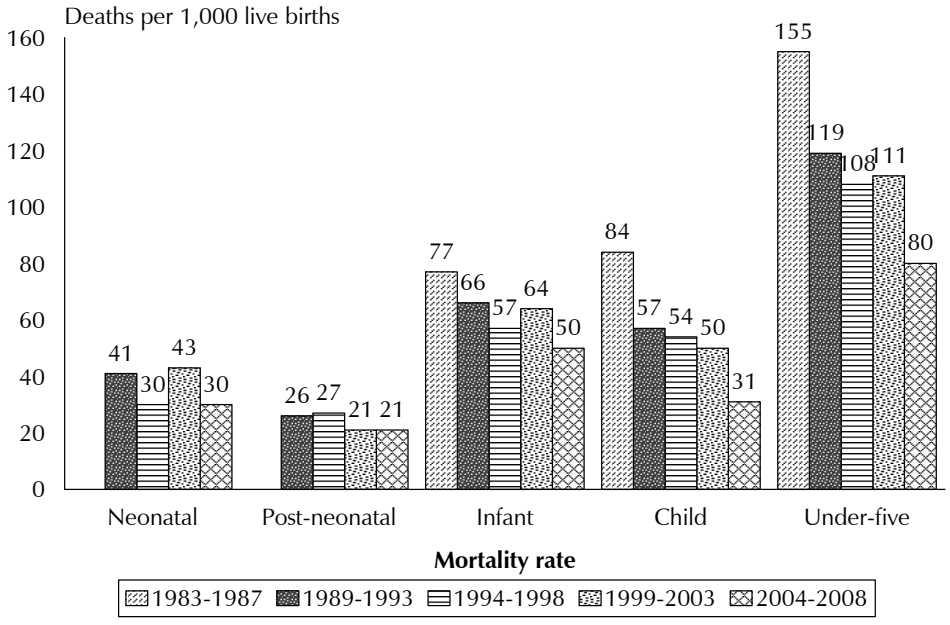
Years preceding the survey	Neonatal mortality (NN)	Post-neonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
0-4	30	21	50	31	80
5-9	35	22	57	35	90
10-14	35	27	61	46	105

[1] Computed as the difference between the infant and neonatal mortality rates

Trends in mortality can be examined in two ways: by comparing mortality rates for three five-year periods preceding a single survey, and by comparing mortality estimates obtained from various surveys. However, mortality data have to be interpreted with caution because sampling errors associated with mortality estimates are large. Data from the 2008 GDHS show that infant mortality has declined from 61 deaths per 1,000 live births in the period 10-14 years before the survey to 50 deaths per 1,000 live births in the period 0-4 years before the survey. Over the same period, child mortality declined from 46 deaths per 1,000 children to 31 deaths per 1,000 children, and under-five mortality declined from 105 deaths per 1,000 live births to 80 deaths per 1,000 live births. Neonatal mortality declined slightly, from 35 deaths per 1,000 live births in the period 5-14 years preceding the survey to 30 deaths per 1,000 live births in the period 0-4 years before the survey. Post-neonatal mortality also fell slightly from 27 deaths per 1,000 live births in the period 10-14 years preceding the survey to 21 deaths per 1,000 live births in the period 0-4 years before the survey.

Results from the five GDHS surveys (conducted in 1988, 1993, 1998, 2003, and 2008) show a marked decline in childhood mortality over the past 20 years (Figure 8.1). This decline appeared to have halted during the period 1999-2003 but then declined further during the past five years from 2003 to 2008. For example the infant mortality rate has declined from 64 per 1,000 for the 0-4 years preceding the 2003 GDHS to 50 per 1,000 during the same period prior to the 2008 GDHS. This is caused principally by a decrease in the neonatal mortality rate from about 43 per 1,000 for the 0-4 years preceding the 2003 GDHS to 30 per 1,000 during the same period prior to the 2008 GDHS. Similarly, under-five mortality rate decreased from 111 per 1,000 for the 0-4 years preceding the 2003 GDHS to 80 per 1,000 during the same period prior to the 2008 GDHS.

Figure 8.1 **Mortality Trends, Ghana 1988-2008**



The under-five mortality rate for the period 5-9 years before the 2008 GDHS (90) is slightly lower than rate for the 0-4 years before the 2003 GDHS (111), while the under-five mortality rate for the period 10-14 years before the 2008 GDHS (105) is nearly identical to the rate for 5-9 years before the 2003 GDHS (108). Similarly, infant mortality rate for the period 5-9 years before the 2008 GDHS (57) is slightly lower than rate for the 0-4 years before the 2003 GDHS (64), while the under-five mortality rate for the period 10-14 years before the 2008 GDHS (61) is close to the rate for 5-9 years before the 2003 GDHS (65) (GSS and ORC Macro, 2004).

The decline in both infant and under-five mortality in the five years preceding the 2008 GDHS indicates that the targets set by the Ghana Poverty Reduction Strategy—an infant mortality rate of 50 per 1,000 and an under-five mortality rate of 95 per 1,000 by 2005 (World Bank, 2003)—have been achieved and the Millennium Development Goals' target for childhood mortality is on track.

8.3 SOCIO-ECONOMIC DIFFERENTIALS IN MORTALITY

Child survival is closely related to socio-economic and demographic characteristics of mothers and children. Table 8.2 shows differentials in childhood mortality by four socio-economic variables: residence, region, mother's education, and household wealth status (quintile). When interpreting mortality data, it is useful to bear in mind that sampling errors are quite large. To ensure a sufficient number of cases for statistical reliability, mortality rates were calculated for a ten-year period.

Mortality levels in rural areas are consistently higher than those in urban areas. In the ten-year period before the survey, infant mortality in rural areas was 56 deaths per 1,000 live births, compared with 46 deaths per 1,000 live births in urban areas. The under-five mortality rate during the same period was 90 deaths per 1,000 live births in rural areas and 75 deaths per 1,000 live births in urban areas.

Table 8.2 Early childhood mortality rates by socio-economic characteristics

Neonatal, post-neonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey, by background characteristic, Ghana 2008

Background characteristic	Neonatal mortality (NN)	Post-neonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Residence					
Urban	30	19	49	27	75
Rural	34	23	56	36	90
Region					
Western	40	11	51	(14)	(65)
Central	(47)	(26)	(73)	(38)	(108)
Greater Accra	21	(15)	(36)	(14)	(50)
Volta	26	(11)	(37)	(13)	(50)
Eastern	29	(25)	(53)	(30)	(81)
Ashanti	35	19	54	28	80
Brong Ahafo	27	(10)	(37)	(41)	(76)
Northern	35	35	70	72	137
Upper East	(17)	(30)	(46)	(33)	(78)
Upper West	45	52	97	(50)	(142)
Mother's education					
No education	38	23	61	44	102
Primary	35	20	55	35	88
Middle/JSS	23	23	46	23	68
Secondary+	(38)	(11)	(49)	(15)	(64)
Wealth quintile					
Lowest	31	28	59	47	103
Second	27	18	45	35	79
Middle	44	26	70	34	102
Fourth	31	14	45	25	68
Highest	31	16	46	14	60

Note: Numbers in parentheses are based on 250-499 unweighted exposed persons; an asterisk indicates that a rate is based on fewer than 250 unweighted exposed persons and has been suppressed.
[1] Computed as the difference between the infant and neonatal mortality

Differences in mortality by region are marked. The infant mortality rate varies from 36 deaths per 1,000 live births in Greater Accra to 97 deaths per 1,000 live births in the Upper West region. Differentials in under-five mortality show a similar pattern. For example, under-five mortality ranges from a low of 50 deaths per 1,000 live births in the Greater Accra and Volta regions to a high of 142 and 137 deaths per 1,000 live births in the Upper West and the Northern regions, respectively. These estimates should be interpreted with caution because of the small number of exposed persons they are based on.

As expected, mother's education is inversely related to a child's risk of dying. Under-five mortality among children of mothers with no education (102 deaths per 1,000 live births) is substantially higher than under-five mortality among children of women with middle/JSS level education (68 deaths per 1,000 live births). The direct association between level of education and under-five mortality is also seen in infant mortality. Children of women with no education (61 deaths per 1,000 live births) are much more likely to die in the first year than children of women with middle/JSS education (46 deaths per 1,000 live births).

Children in households in the highest wealth quintile have the lowest mortality rates for both child mortality and under-five mortality. Infant mortality is lowest among children in the second, fourth, and fifth wealth quintiles.

8.4 Demographic Characteristics and Child Mortality

Studies have shown that a number of demographic factors are strongly associated with the survival chances of young children. These factors include sex of child, age of mother at birth, birth order, length of preceding birth interval, and size of child at birth. Table 8.3 shows the relationship between childhood mortality and these demographic variables. Again, for all variables except birth size, mortality estimates are calculated for the ten-year period preceding the survey to reduce sampling variability. Mortality rates by birth size are for the five-year period preceding the survey because information on birth size was collected only for children born in the past five years.

Childhood mortality is higher for males than females (Table 8.3). Under-five mortality rates for male and female children are 93 and 76 deaths per 1,000 live births, respectively. The excess mortality among male children is most likely due to their higher biological risk during the first month of life.

Findings from the World Fertility Survey and DHS surveys indicate that births to young mothers (under age 20 years) and older mothers (35 years and over) are at an elevated risk of dying. Results from the 2008 GDHS confirm the expected curvilinear relationship between mother's age at birth and childhood mortality.

First births and higher-order births typically have an elevated risk of dying. Results from the 2008 GDHS generally confirm this pattern. With the exception of child mortality, births of order four and higher experience the highest levels of childhood mortality. Neonatal, infant, and under-five mortality is lowest for second- and third-order births.

Mortality among children is negatively associated with the length of the previous birth interval. This is particularly the case when the birth interval is less than two years. The results of the GDHS 2008 indicate that this pattern holds for all levels of childhood mortality except post-neonatal mortality. For example, under-five mortality among children born less than two years after a previous birth is more than twice the mortality among children born after an interval of four years or more.

A child's size at birth has often been found to be an important indicator of the chances of survival during infancy. The majority of births in Ghana take place outside of a health facility setting, and these babies are seldom weighed at birth. The mother's assessment of the size of the baby at birth is used as a proxy for birth weight. The GDHS results indicate that among babies assessed by their mother as 'small or very small,' infant mortality is twice the level observed for babies assessed as 'average or larger' at birth. The difference in infant mortality between the two groups is largely attributed to neonatal mortality, which is almost twice as high among small or very small babies as among average or larger babies.

Table 8.3 Early childhood mortality rates by demographic characteristics

Neonatal, post-neonatal, infant, child, and under-five mortality rates for the 10-year period preceding the survey, by demographic characteristics, Ghana 2008

Demographic characteristic	Neonatal mortality (NN)	Post-neonatal mortality[1] (PNN)	Infant mortality ($_1q_0$)	Child mortality ($_4q_1$)	Under-five mortality ($_5q_0$)
Sex of child					
Male	36	22	58	38	93
Female	29	20	49	28	76
Mother's age at birth					
<20	43	26	69	43	109
20-29	28	19	46	28	73
30-39	35	25	60	37	95
40-49	(40)	*	*	*	*
Birth order					
1	35	18	52	33	84
2-3	24	24	48	29	75
4-6	36	18	54	38	90
7+	49	31	80	(33)	(110)
Previous birth interval[2]					
<2 years	60	28	88	47	131
2 years	24	30	53	35	86
3 years	30	26	56	29	83
4+ years	23	11	33	25	58
Birth size[3]					
Small/very small	(49)	(35)	(84)	*	*
Average or larger	25	17	42	*	*

Note: Numbers in parentheses are based on 250-499 unweighted exposed persons; an asterisk indicates that a rate is based on fewer than 250 unweighted exposed persons and has been suppressed.
[1] Computed as the difference between the infant and neonatal mortality
[2] Excludes first-order births
[3] Rates are for the five-year period preceding the survey

8.5 PERINATAL MORTALITY

The perinatal mortality rate serves as a good indicator of the state of health of a population generally, and at delivery in particular. It reflects the level of utilisation of health services and the ability of women to cope with the demands of childbirth, to deliver a healthy baby. Women in the 2008 GDHS were asked to report on any pregnancy loss that occurred in the five years preceding the survey. For each pregnancy that did not end in a live birth, the duration of pregnancy was recorded. In this report, perinatal deaths include pregnancy losses of at least seven months' gestation (stillbirths) and deaths among live births that occurred within the first seven days of life (early neonatal deaths). The perinatal mortality rate is the sum of stillbirths and early neonatal deaths divided by the sum of all stillbirths and live births. Information on stillbirths and infant deaths that occurred within the first week of life is highly susceptible to omission and misreporting. However, retrospective surveys such as the 2008 GDHS generally provide more representative and accurate perinatal death rates than the vital registration system.

Table 8.4 shows that out of the 2,949 reported pregnancies of at least seven months' gestation, 40 were stillbirths and 75 were early neonatal deaths, yielding an overall perinatal mortality rate of 39 per 1,000 pregnancies of 7 months or more duration. Perinatal mortality is highest among mothers age 30-39 (45 per 1,000 pregnancies) and lowest among mothers age 20-29 (33 per 1,000 pregnancies).

Table 8.4 Perinatal mortality

Number of stillbirths and early neonatal deaths, and the perinatal mortality rate for the five-year period preceding the survey, by background characteristics, Ghana 2008

Background characteristic	Number of stillbirths[1]	Number of early neonatal deaths[2]	Perinatal mortality rate[3]	Number of pregnancies of 7+ months duration
Mother's age at birth				
<20	6	9	(44)	339
20-29	18	33	33	1,511
30-39	15	27	45	933
40-49	1	7	*	166
Previous pregnancy interval in months[4]				
First pregnancy	13	15	43	649
<15	2	7	*	119
15-26	4	19	45	523
27-38	6	12	30	586
39+	16	22	35	1,072
Residence				
Urban	12	26	34	1,116
Rural	28	49	42	1,834
Mother's education				
No education	10	25	37	962
Primary	13	20	44	735
Middle/JSS	13	25	39	983
Secondary+	4	5	(36)	267
Wealth quintile				
Lowest	8	17	33	752
Second	4	13	27	646
Middle	10	24	61	559
Fourth	7	13	36	568
Highest	11	8	(44)	425
Total	40	75	39	2,949

Note: Figures in parentheses are based on 250 to 499 unweighted pregnancies of 7+ months duration. An asterisk indicates that a figure is based on fewer than 250 unweighted pregnancies of 7+ months duration and has been suppressed. Total includes 3 weighted pregnancies with information missing on maternal education.

[1] Stillbirths are foetal deaths in pregnancies lasting seven or more months.

[2] Early neonatal deaths are deaths at age 0-6 days among live-born children.

[3] The sum of the number of stillbirths and early neonatal deaths divided by the number of pregnancies of seven or more months' duration, expressed per 1000.

[4] Categories correspond to birth intervals of <24 mos., 24-35 mos., 36-47 mos., and 48+ mos.

Perinatal mortality is highest when the previous pregnancy interval is 15 to 26 months (45 per 1,000 pregnancies). Perinatal mortality is also higher among women in rural areas than those in urban areas (42 and 34 per 1,000 pregnancies, respectively). There is no clear relationship between perinatal mortality and women's level of education or household wealth status.

8.6 HIGH-RISK FERTILITY BEHAVIOUR

The survival of infants and children depends in part on the demographic and biological characteristics of their mothers. These characteristics are of particular importance because many health problems are easily avoidable at a relatively low cost. Infants and children have an elevated risk of dying if their mothers are too young (under 18 years of age) or too old (over 35 years old), if they are born after too short a birth interval (less than 24 months), and if they are of high birth order (has three or more children). Although first births are commonly associated with higher mortality risk, they are not included in the high-risk category because the risks associated with first births are unavoidable.

Table 8.5 shows the percent distribution of children born in the five years preceding the survey and the percent distribution of currently married women, by risk factors. The table also shows the risk ratio (of dying) for children, by comparing the proportion of dead children in each risk category with the proportion of dead children not in any high-risk category.

Table 8.5 shows the percentage of births in the five years preceding the survey that fall into the various risk categories. Exactly half (50 percent) of births in Ghana have elevated mortality risks that are avoidable, and about three in ten (31 percent) are not in any high-risk category. Among those who are at risk, 31 percent of births are in a single high-risk category, while 19 percent of births are in a multiple high-risk category. In general, risk ratios are higher for children in a multiple high-risk category than for those in a single high-risk category.

Table 8.5 High-risk fertility behaviour

Percent distribution of children born in the five years preceding the survey by category of elevated risk of mortality and the risk ratio, and percent distribution of currently married women by category of risk if they were to conceive a child at the time of the survey, Ghana 2008

Risk category	Births in the 5 years preceding the survey		Percentage of currently married women[1]
	Percentage of births	Risk ratio	
Not in any high-risk category	30.8	1.00	20.5[a]
Unavoidable risk category			
First-order births between ages 18 and 34	19.6	1.22	6.3
Single high-risk category			
Mother's age <18	4.2	1.13	0.3
Mother's age >34	1.8	1.26	6.3
Birth interval <24 months	5.1	0.99	8.9
Birth order >3	19.6	1.03	11.6
Subtotal	30.6	1.05	27.2
Multiple high-risk category			
Age <18 and birth interval <24 months[2]	0.2	*	0.1
Age >34 and birth interval <24 months	0.1	*	0.5
Age >34 and birth order >3	13.4	1.67	31.0
Age >34 and birth interval <24 months and birth order >3	1.8	2.45	5.5
Birth interval <24 months and birth order >3	3.5	2.80	9.0
Subtotal	19.0	2.02	46.1
In any avoidable high-risk category	49.7	1.42	73.3
Total	100.0	na	100.0
Number of births/women	2,909	na	2,876

Note: Risk ratio is the ratio of the proportion dead among births in a specific high-risk category to the proportion dead among births not in any high-risk category. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
na = Not applicable
[1] Women are assigned to risk categories according to the status they would have at the birth of a child if they were to conceive at the time of the survey: current age less than 17 years and 3 months or older than 34 years and 2 months, latest birth less than 15 months ago, or latest birth being of order 3 or higher.
[2] Includes the category *age <18 and birth order >3*
[a] Includes sterilised women

The most vulnerable births are those to women who are age 35 or older, with a birth interval less than 24 months. These children are eight times more likely to die than children not in any high-risk category. Twenty percent of births occur to mothers who have three or more births, and another 13 percent of births occur to mothers who are 35 years or older and have had three or more children. These children whose mothers are 35 years or older and have had three or more children are about two times more likely to die than children with no risk.

The final column of Table 8.5 shows the distribution of currently married women who have the potential for having a high-risk birth, by category of risk. Thirty-one percent of these women are (or would be) too old and have (or would have) too many children. The potential for having a birth in a multiple high-risk category is much higher (46 percent) than the potential for having a birth in a single high-risk category (27 percent).

MATERNAL HEALTH 9

The health care that a mother receives during pregnancy, at the time of delivery, and soon after delivery is important for the survival and well-being of both the mother and her child. This chapter presents findings on several areas related to maternal health—antenatal, delivery, and postnatal care—as well as problems in accessing care. These findings are important for designing appropriate strategies and interventions to improve maternal and newborn health care services.

9.1 ANTENATAL CARE

9.1.1 Antenatal Care Coverage

The major objective of antenatal care is to identify and treat problems during pregnancy such as anaemia and infections. It is during an antenatal care visit that screening for complications and advice on a range of issues including birth preparedness, place of delivery, and referral of mothers with complications occur. Information on antenatal care is of great value in identifying subgroups of women who do not use such services and is useful in planning improvements in the services. The antenatal care findings from the 2008 Ghana Demographic and Health Survey (GDHS) provide information on the type of service provider, the number of antenatal care visits, the stage of pregnancy at the time of the first visit, and the services and information provided during antenatal care, including whether tetanus toxoid was received.

Table 9.1 presents the percent distribution of women age 15-49 who had a live birth in the five years preceding the survey by the type of antenatal care provider consulted during the pregnancy for the most recent birth, according to background characteristics. If a woman received antenatal care from more than one provider, the provider with the highest qualifications was recorded. Since the last survey in 2003, the Ghana Health Service has included another category of health care providers (community health officers) within the health care delivery system. Community health officers provide services in the community-based health planning and services (CHPS) compounds. Services received from community health officers are included in the 2008 GDHS.

The survey shows that over nine in ten mothers (95 percent) receive antenatal care from a health professional (doctor, nurse, midwife, or community health officer). Almost no mothers receive antenatal care from a traditional midwife, and 4 percent of mothers do not receive any antenatal care.

Differences in antenatal care coverage by women's age at birth are not large; however, there are some differences by birth order. Mothers in Ghana are somewhat more likely to receive antenatal care from a health professional for the first birth (99 percent) than for births of order six or higher (92 percent).

There are some differences in the use of antenatal care services between women in urban and rural areas. Health professionals provide antenatal care services for 98 percent of mothers in urban areas, compared with 94 percent of mothers in rural areas. The vast majority of mothers receive antenatal care services from health professionals regardless of region of residence (96-98 percent); however, mothers in the Volta and Central regions are less likely than other women to have access to antenatal care (91 and 92 percent, respectively).

Table 9.1 Antenatal care

Percent distribution of women age 15-49 who had a live birth in the five years preceding the survey by antenatal care (ANC) provider during pregnancy for the most recent birth, and the percentage receiving antenatal care from a skilled provider for the most recent birth, according to background characteristics, Ghana 2008

Background characteristic	Doctor	Nurse/ midwife	Auxiliary midwife	Community health officer	Traditional birth attendant (trained)	Traditional birth attendant (untrained)	Other	No one	Missing	Total	Percentage receiving antenatal care from a skilled provider[1]	Number of women
Mother's age at birth												
<20	16.1	67.5	6.6	7.1	0.0	0.0	0.5	2.3	0.0	100.0	97.3	214
20-34	24.6	63.6	2.6	4.6	0.2	0.1	0.7	3.4	0.1	100.0	95.5	1,475
35-49	23.1	59.5	4.4	7.3	0.2	0.0	0.9	4.4	0.2	100.0	94.3	410
Birth order												
1	26.6	63.8	4.1	4.0	0.0	0.0	0.0	1.5	0.0	100.0	98.5	467
2-3	26.1	62.3	2.6	4.4	0.3	0.2	0.5	3.5	0.0	100.0	95.5	786
4-5	22.6	63.8	2.4	6.3	0.3	0.1	1.3	3.0	0.3	100.0	95.0	498
6+	14.5	63.6	5.5	8.2	0.3	0.0	1.3	6.5	0.2	100.0	91.8	348
Residence												
Urban	33.9	60.1	2.0	1.8	0.3	0.0	0.3	1.4	0.2	100.0	97.8	844
Rural	16.4	65.3	4.3	7.8	0.2	0.1	1.0	4.8	0.1	100.0	93.9	1,255
Region												
Western	12.4	74.6	5.8	2.9	0.0	0.0	0.0	4.3	0.0	100.0	95.7	189
Central	17.2	74.1	1.1	0.0	0.7	0.0	2.3	3.8	0.8	100.0	92.4	200
Greater Accra	47.6	46.9	1.3	0.0	0.8	0.5	0.7	2.3	0.0	100.0	95.7	262
Volta	17.1	53.9	10.4	9.6	0.0	0.0	0.0	8.9	0.0	100.0	91.1	181
Eastern	41.0	52.1	0.0	2.9	0.5	0.2	0.3	2.9	0.0	100.0	96.0	185
Ashanti	27.0	68.6	1.4	0.3	0.0	0.0	0.6	2.2	0.0	100.0	97.3	396
Brong Ahafo	14.5	75.8	5.8	0.3	0.0	0.0	1.1	2.4	0.0	100.0	96.4	218
Northern	13.5	56.5	4.4	21.2	0.0	0.0	1.1	3.3	0.0	100.0	95.6	291
Upper East	14.3	67.9	0.7	12.9	0.0	0.0	0.0	3.7	0.6	100.0	95.7	119
Upper West	14.0	67.0	6.5	10.1	0.0	0.0	0.0	2.4	0.0	100.0	97.6	58
Mother's education												
No education	11.4	66.1	4.4	11.6	0.1	0.1	1.2	5.0	0.1	100.0	93.5	647
Primary	21.3	64.4	3.7	4.1	0.5	0.3	0.7	4.7	0.3	100.0	93.5	511
Middle/JSS	28.2	64.5	2.9	2.0	0.1	0.0	0.5	1.9	0.0	100.0	97.6	738
Secondary+	50.2	46.2	1.3	1.3	0.0	0.0	0.0	1.1	0.0	100.0	98.9	201
Wealth quintile												
Lowest	9.5	62.2	6.0	14.8	0.2	0.1	1.3	5.8	0.1	100.0	92.5	480
Second	17.3	65.9	4.4	5.6	0.3	0.3	1.0	5.1	0.0	100.0	93.2	461
Middle	21.0	71.2	1.3	2.6	0.3	0.0	0.5	3.1	0.0	100.0	96.1	400
Fourth	28.2	65.9	2.8	0.8	0.2	0.0	0.4	1.7	0.0	100.0	97.7	436
Highest	49.7	47.3	1.4	0.7	0.0	0.0	0.0	0.4	0.5	100.0	99.1	322
Total	23.5	63.2	3.4	5.4	0.2	0.1	0.7	3.5	0.1	100.0	95.4	2,099

Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation. Total includes cases with information missing on mother's education

[1] Skilled provider includes doctor, nurse, midwife, auxiliary midwife, and community health officer

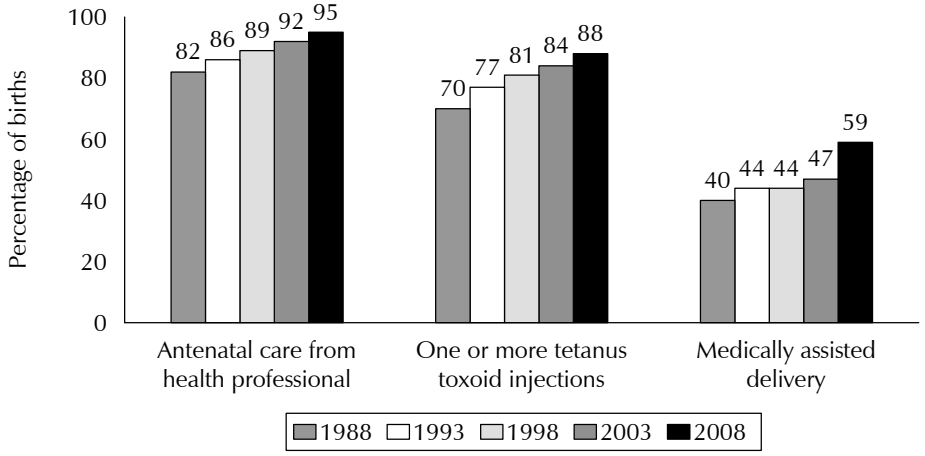
The proportion of women receiving no antenatal care declined slightly from 6 percent in 2003 to 4 percent in 2008. In the Volta region, however, about one in 10 pregnant women did not receive any antenatal care in the five years preceding the survey (as in the previous survey of 2003). The availability of community health officers has substantially increased access to professional care for women during the antenatal period in the three northern regions and, consequently, reduced the proportion of women who receive no antenatal care. For instance, 16 percent of women received no antenatal care in the Northern region in 2003, compared with just 3 percent in 2008. The same trend is seen in the Upper East and Upper West regions, where the percentage of women receiving no antenatal care dropped from 14 and 9 percent, respectively, in 2003 to 4 and 2 percent, respectively, in 2008.

According to the survey results, the use of antenatal care services is related to women's educational level. Almost all mothers with at least some secondary education receive prenatal care services from a health professional, compared with 94 percent of mothers with primary or no

education. There is also a positive relationship between professional antenatal care coverage and wealth quintile, with women in the highest wealth quintile more likely to receive care from a health professional than those in the lowest wealth quintile, although the difference is small (99 and 93 percent, respectively).

Midwives and other mid-level providers make up the largest proportion of health professionals providing antenatal care in all regions except in the Greater Accra region, where antenatal care provided by midwives and other mid-level providers is almost equal to that provided by doctors. Although doctors tend to provide antenatal care for wealthier and more educated women, it is gratifying to note that the majority of women have access to professional care during pregnancy. The results indicate that there has been a marked improvement in antenatal care coverage in Ghana over the past 20 years. In 1988, 82 percent of mothers received antenatal care for all births in the five years preceding the survey, compared with 95 percent of mothers in 2008 for their most recent birth (Figure 9.1).

Figure 9.1 **Trends in Maternity Care Indicators Ghana 1988-2008**



Note: Data for 1988, 1993, and 1998 are with reference to births, whereas data for antenatal care and tetanus toxoid for 2003 and 2008 are with reference to women who had a live birth. The reference period is five years preceding the survey except for 1993, which refers to the three years preceding the survey. In the 2008 GDHS, a skilled provider includes a doctor, nurse, midwife, auxiliary midwife, and a community health officer, while in all previous surveys a community health officer was not included.

9.1.2 Number and Timing of Antenatal Care Visits

Antenatal care is more beneficial in preventing adverse outcomes when it is sought early in the pregnancy and is continued through to delivery. Under normal circumstances, the World Health Organisation (WHO) recommends that a woman without complications have at least four antenatal care visits, the first of which should take place during the first trimester. Table 9.2 presents information on antenatal care visits including the number of visits and the timing of the first visit.

In Ghana, there is an increasing trend among pregnant women to have four or more antenatal care visits. Among women age 15-49 years who had a live birth in the five years preceding the survey, about four in five (78 percent) pregnant women had four or more antenatal care visits for the most recent live birth. This is an increase over the 2003 survey when about seven in ten (69 percent) pregnant women had four or more visits during their pregnancy. Although women in urban areas are more likely than women in rural areas to make four or more antenatal care visits, the increase between 2003 and 2008 was larger for women in rural areas (from 61 to 72 percent) than for women in urban areas (from 84 to 88 percent).

Table 9.2 Number of antenatal care visits and timing of first visit

Percent distribution of women age 15-49 who had a live birth in the five years preceding the survey by number of antenatal care (ANC) visits for the most recent live birth, and by the timing of the first visit, and among women with ANC, median months pregnant at first visit, according to residence, Ghana 2008

Number and timing of ANC visits	Residence		Total
	Urban	Rural	
Number of ANC visits			
None	1.4	4.8	3.5
1	1.2	3.8	2.8
2-3	6.8	17.7	13.3
4+	88.1	71.5	78.2
Don't know/ missing	2.5	2.2	2.3
Total	100.0	100.0	100.0
Number of months pregnant at time of first ANC visit			
No antenatal care	1.4	4.8	3.5
<4	61.3	50.8	55.0
4-5	30.0	33.2	31.9
6-7	5.8	9.4	8.0
8+	0.8	1.2	1.1
Don't know/missing	0.6	0.5	0.6
Total	100.0	100.0	100.0
Number of women	844	1,255	2,099
Median months pregnant at first visit (for those with ANC)	3.7	3.9	3.8
Number of women with ANC	830	1,194	2,024

There is also an increasing trend for women to have their first antenatal care visit before the fourth month of pregnancy (55 percent in 2008, compared with 46 percent in 2003), and the urban-rural gap is narrowing. Sixty-one percent of women in urban areas and 51 percent of women in rural areas had their first antenatal visit before their fourth month of pregnancy (56 and 41 percent, respectively, in 2003) while 30 percent of women in urban areas and 33 percent of women in rural areas have their first visit between the fourth and fifth month of pregnancy (34 and 35 percent, respectively, in 2003). Among women who received antenatal care, the median number of months pregnant at first visit is 3.7 months for women in urban areas, and 3.9 months for women in rural areas, compared with 3.8 and 4.2 months, respectively, in 2003.

9.1.3 Components of Antenatal Care

The quality of antenatal care is measured to a large extent by the essential service package provided to pregnant women. The components of this package include prevention and management of anaemia and malaria, which are achieved through screening and appropriate management. Micronutrient supplementation, tetanus immunisation, and monitoring of certain vital signs to help in the early detection and management of complications that may arise are also included in this important care package. Pregnancy complications are a primary source of maternal and newborn morbidity and mortality. Therefore, ensuring that pregnant women receive information on the signs of complications is an important component of antenatal care.

To help assess antenatal care services, respondents were asked whether they had been advised of possible pregnancy complications and whether they had received certain screening tests during at least one of their antenatal care visits. Caution should be used in considering this information on the components of antenatal care because it is dependent on pregnant women's recall of events during antenatal care that may have taken place a number of years before the interview. Nevertheless, the results are useful in providing insights into the content of antenatal care.

Table 9.3 presents information on the percentage of pregnant women who took iron tablets or syrup, were informed of the signs of pregnancy complications, and received selected services during antenatal care visits for their most recent birth in the past five years. Information on pregnant women who took malaria preventive treatment is covered in Chapter 12.

The data show that irrespective of whether women attended an antenatal clinic or not, the vast majority (87 percent) of women with a recent birth took iron supplements during pregnancy, but only 35 percent took de-worming medicine during the pregnancy. Although pregnant women are generally cautioned to take medication only on the advice of a health professional, the taking of supplements appears to be a good practice for women in their childbearing years, in view of the relatively high levels of anaemia in pregnant women. De-worming, which is also one of the anaemia-prevention strategies, is done with caution, especially in pregnant women, because of the possible side effects particularly when taken in early pregnancy. In accordance with policy, health professionals prescribe de-worming tablets for pregnant women either based on laboratory findings or the prevalence of the parasites in a specific locality.

Variation in iron supplementation by age of woman at birth is minimal. However, there is a slight decrease in the proportion of women who take iron supplements as birth order increases. Substantial variations in use of iron supplements are noted by urban-rural residence, region, education, and wealth quintile. For example, 90 percent of women in urban areas took iron tablets or syrup during pregnancy, compared with 84 percent of women in rural areas. Women in the Greater Accra, Western and Ashanti regions, those who are better educated, and those living in wealthier households are much more likely than other women to have taken iron supplements during pregnancy. Women in the Northern and Upper West regions are the least likely to have taken iron supplements during pregnancy. Women in the Greater Accra are the least likely to have taken de-worming medicine during pregnancy.

The proportion of women who undergo basic tests during pregnancy is nearly universal throughout Ghana: virtually all women who gave birth in the five years preceding the 2008 GDHS reported that, for the most recent birth, they were weighed and had their blood pressure measured; about 90 percent of mothers had a blood sample taken and had their urine tested.

On the other hand, just over two-thirds (68 percent) of these women were informed of the signs of pregnancy complications. The likelihood of receiving the information about the signs of pregnancy complications is related to women's level of education, household wealth status, age, residence (urban-rural), and region. For instance, women with middle/JSS and secondary and higher education, women in the highest wealth quintile, and women living in urban areas are more likely than other women to be informed about pregnancy complications. The proportion of women who reported that they received information about complications increases with age, with women under age 20 being least likely to receive this information. Regional differences in the receipt of information about pregnancy are especially marked. For example, about four in five women (85 percent) in the Volta region were informed about the signs of complications, compared with about two in five women (46 percent) in the Northern region.

The findings from the 2008 GDHS indicate that there has been only a slight increase in the quality of antenatal care, compared with the previous survey. One area of antenatal care that needs strengthening is providing information on the signs of pregnancy complications. Another area that needs strengthening is access to basic laboratory services such as urine and blood testing in the Northern and Upper West regions; these two regions are disproportionately affected by limited access to these components of antenatal care. For instance, while at the national level access to urine and blood testing for pregnant women is 90 percent, only six in ten pregnant women in the Northern region have access to these components of care, and in the Upper West region, about two in three pregnant women have access to urine testing and three in four have access to blood testing.

Table 9.3 Components of antenatal care

Among women age 15-49 with a live birth in the five years preceding the survey, the percentage who took iron tablets or syrup and drugs for intestinal parasites during the pregnancy of the most recent birth, and among women receiving antenatal care (ANC) for the most recent live birth in the five years preceding the survey, the percentage receiving specific antenatal services, according to background characteristics, Ghana 2008

Background characteristic	Among women with a live birth in the past five years, the percentage who during the pregnancy for their last birth:		Number of women with a live birth in the past five years	Among women who received antenatal care for their most recent birth in the past five years, the percentage who received specific services					Number of women with ANC for their most recent birth
	Took iron tablets or syrup	Took intestinal parasite drugs		Informed of signs of pregnancy complica-tions	Weighed	Blood pressure measured	Urine sample taken	Blood sample taken	
Mother's age at birth									
<20	86.8	33.2	214	57.6	96.9	92.9	89.3	86.2	209
20-34	86.7	35.2	1,475	70.9	96.9	97.5	92.0	91.7	1,424
35-49	85.6	34.6	410	64.8	97.4	97.8	84.9	87.9	391
Birth order									
1	88.6	34.5	467	70.4	96.6	95.4	92.5	91.9	460
2-3	86.7	35.7	786	69.7	97.1	97.6	92.2	90.9	758
4-5	86.7	36.8	498	70.6	97.5	97.8	91.4	91.3	482
6+	82.8	30.9	348	58.9	96.7	97.1	81.5	85.9	324
Residence									
Urban	89.9	34.4	844	76.6	97.7	98.5	96.3	96.0	830
Rural	84.2	35.2	1,255	62.6	96.6	96.1	86.2	86.5	1,194
Region									
Western	92.2	39.1	189	69.5	97.2	99.5	97.5	97.3	181
Central	88.8	41.4	200	73.7	96.1	95.4	92.7	91.7	191
Greater Accra	93.9	14.5	262	74.7	96.4	98.7	96.7	96.5	256
Volta	90.4	33.7	181	84.8	99.4	99.8	96.8	94.7	165
Eastern	89.5	38.0	185	75.3	96.0	97.3	96.0	96.2	180
Ashanti	91.5	37.4	396	68.8	97.6	97.4	96.2	94.8	387
Brong Ahafo	84.5	51.0	218	64.5	97.7	95.7	95.1	96.2	213
Northern	69.3	25.7	291	45.5	95.2	93.0	62.3	63.9	282
Upper East	83.8	35.9	119	64.9	98.7	98.8	95.0	96.0	114
Upper West	69.2	51.5	58	79.7	98.8	97.9	66.4	74.9	56
Mother's education									
No education	78.6	30.4	647	57.6	96.0	95.5	79.4	81.5	614
Primary	88.0	35.2	511	66.9	97.4	97.3	93.2	92.2	485
Middle/JSS	91.2	39.3	738	75.6	97.3	97.4	95.7	94.6	724
Secondary+	90.4	32.1	201	78.5	98.2	100.0	97.7	98.2	199
Wealth quintile									
Lowest	77.4	30.9	480	54.8	95.7	93.8	77.3	79.0	451
Second	85.0	40.9	461	63.3	96.7	97.5	88.3	89.1	437
Middle	87.6	37.2	400	68.8	97.5	97.8	94.5	92.0	388
Fourth	92.1	35.4	436	79.2	97.9	97.6	95.8	96.2	429
Highest	93.0	28.7	322	79.5	97.5	99.5	99.2	98.8	319
Total	86.5	34.9	2,099	68.4	97.0	97.1	90.3	90.4	2,024

Note: Total includes cases with information missing on mother's education

9.1.4 Tetanus Immunisation

Neonatal tetanus is a leading cause of neonatal death in developing countries where a high proportion of deliveries are conducted at home or in places where hygienic conditions may be poor. Tetanus toxoid (TT) immunisation is given to pregnant women to prevent neonatal tetanus. If a woman has received no previous TT injections, for full protection a pregnant woman needs two doses of TT during pregnancy. However, if a woman was immunised before she became pregnant, she may require one or no TT injections during pregnancy, depending on the number of injections she has ever received and the timing of the last injection. For a woman to have lifetime protection, a total of five doses is required. The 2008 GDHS collected information on whether women received at least two TT injections and whether the pregnancy for the most recent live birth in the five years preceding the survey was protected against neonatal tetanus.

Table 9.4 shows that more than half of women (56 percent) in Ghana receive two or more tetanus injections during pregnancy and that 72 percent of births are protected against neonatal tetanus. Older women and those with six or more births are the least likely to receive two or more tetanus injections during the pregnancy for their last live birth, possibly because by that time they already have received all five doses required for lifetime protection, compared with younger and lower parity women. There is little variation in tetanus toxoid coverage by age at birth and birth order; however, there are differences by residence. For example, 76 percent of births in urban areas are protected against tetanus, compared with 70 percent of births in rural areas. There are also marked differences by region. In the Volta region, 81 percent of births are protected against neonatal tetanus, compared with 61 percent of births in the Upper West region.

Education of the mother is positively related to tetanus toxoid coverage in Ghana; 83 percent of births to women with secondary or higher education are protected against neonatal tetanus, compared with 64 percent of births to women with no education. Similarly, women living in wealthier households are more likely to have received two or more tetanus toxoid injections during their last pregnancy and their births are more likely to be protected against tetanus than women in the lowest wealth quintiles.

A comparison between the 2003 and 2008 surveys on the percentage of women who had two or more TT injections during their last pregnancy that ended in a live birth shows that there has been an increase from 50 percent in 2003 to 56 percent in 2008 (Figure 9.2). The most marked increase is seen in the Upper East region (46 percent in 2003, compared with 62 percent in 2008) and the Greater Accra region (52 percent in 2003, compared with 66 percent in 2008). Contrary to the general trend, during the same period the proportion of women who had two or more TT injections during their last pregnancy that ended in a live birth declined in the Central and Upper West regions by about 4 or 5 percentage points.

Table 9.4 Tetanus toxoid injections

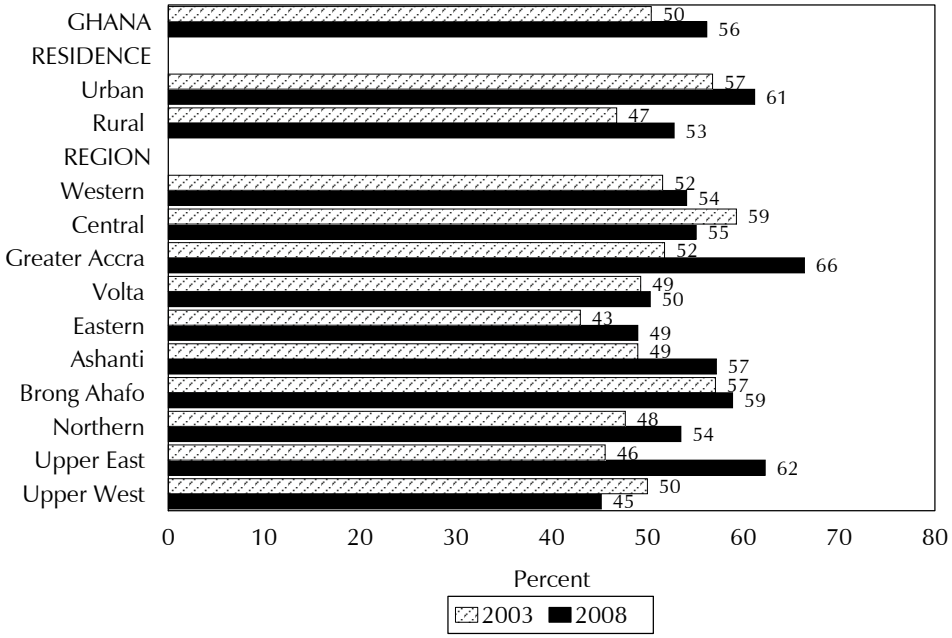
Among mothers age 15-49 with a live birth in the five years preceding the survey, the percentage receiving two or more tetanus toxoid injections (TTI) during the pregnancy for the last live birth and the percentage whose last live birth was protected against neonatal tetanus, according to background characteristics, Ghana 2008

Background characteristic	Percentage receiving two or more injections during last pregnancy	Percentage whose last live birth was protected against neonatal tetanus[1]	Number of mothers
Mother's age at birth			
<20	56.4	68.3	214
20-34	57.7	72.8	1,475
35-49	50.7	70.8	410
Birth order			
1	64.3	73.7	467
2-3	56.2	72.2	786
4-5	54.0	72.9	498
6+	48.3	67.7	348
Residence			
Urban	61.2	75.5	844
Rural	52.8	69.6	1,255
Region			
Western	54.1	63.8	189
Central	55.1	70.8	200
Greater Accra	66.4	76.7	262
Volta	50.3	81.4	181
Eastern	49.0	72.9	185
Ashanti	57.2	77.4	396
Brong Ahafo	58.9	73.1	218
Northern	53.5	62.5	291
Upper East	62.3	68.7	119
Upper West	45.2	60.5	58
Mother's education			
No education	52.6	64.2	647
Primary	53.7	71.8	511
Middle/JSS	58.3	75.7	738
Secondary+	65.7	82.9	201
Wealth quintile			
Lowest	49.8	64.6	480
Second	51.4	67.2	461
Middle	51.4	70.4	400
Fourth	65.7	79.6	436
Highest	65.4	81.3	322
Total	56.2	71.9	2,099

Note: Total includes cases with information missing on mother's education

[1] Includes mothers with two injections during the pregnancy of her last birth, or two or more injections (the last within 3 years of the last live birth), or three or more injections (the last within 5 years of the last birth), or four or more injections (the last within ten years of the last live birth), or five or more injections prior to the last birth.

Figure 9.2 **Trends in Tetanus Toxoid Injections, Ghana 2003 and 2008**



9.2 DELIVERY CARE

Labour and delivery is the shortest and most critical period of the pregnancy-childbirth continuum because most maternal deaths arise from complications during delivery. Even with the best possible antenatal care, any delivery can become a complicated one and, therefore, skilled assistance is essential to safe delivery care. For numerous reasons many women do not seek skilled care even when they understand the safety reasons for doing so. Some reasons include cost of service, the distance to the health facility, and quality of care. The introduction of free maternity services and locating CHPS compounds closer to where people live are some of the efforts that have been made to remove barriers to accessing skilled maternity care. The CHPS compounds are manned by community health officers, some of whom are midwives or have midwifery skills to attend deliveries and make referrals should complications arise.

9.2.1 Place of Delivery

Respondents in the 2008 GDHS were asked to report the place of birth for all their children born in the five years preceding the survey. Table 9.5 shows the percent distribution of live births in the five years preceding the survey by place of delivery, according to background characteristics.

Overall, 57 percent of births were delivered in health facilities, with the public sector accounting for the largest proportion; this is an increase since the 2003 GDHS (46 percent). Low parity women are more likely than high parity women to deliver at a health facility. A child born in an urban area is twice as likely to have been delivered at a health facility as a child living in a rural area. One in four children in the Northern region is delivered at a health facility, compared with four in five children in the Greater Accra region. Use of delivery facilities rises with level of mother's education from 35 percent of births among women with no education to 91 percent among women with at least a secondary education. The same pattern is seen by wealth status; births in health facilities increase from 24 percent among women in the lowest wealth quintile to 93 percent among those in the highest wealth quintile.

Table 9.5 Place of delivery

Percent distribution of live births in the five years preceding the survey by place of delivery and percentage delivered in a health facility, according to background characteristics, Ghana 2008

Background characteristic	Health facility: Public sector	Health facility: Private sector	Home	Other	Missing	Total	Percentage delivered in a health facility	Number of births
Mother's age at birth								
<20	46.0	4.9	48.8	0.3	0.0	100.0	50.9	333
20-34	49.1	9.9	40.2	0.4	0.5	100.0	58.9	2,079
35-49	47.2	6.6	45.2	0.6	0.4	100.0	53.8	497
Birth order								
1	57.6	11.5	30.6	0.3	0.0	100.0	69.1	688
2-3	49.8	9.6	39.5	0.6	0.4	100.0	59.4	1,107
4-5	46.0	5.6	47.6	0.3	0.6	100.0	51.6	659
6+	34.5	6.9	57.4	0.5	0.7	100.0	41.4	455
Antenatal care visits[1]								
None	13.1	0.0	82.6	4.3	0.0	100.0	13.1	72
1-3	29.0	5.5	64.9	0.6	0.0	100.0	34.4	338
4+	56.9	10.9	31.9	0.3	0.0	100.0	67.8	1,640
Residence								
Urban	66.8	15.6	16.8	0.4	0.4	100.0	82.4	1,104
Rural	37.1	4.6	57.5	0.5	0.4	100.0	41.7	1,806
Region								
Western	43.2	15.1	40.4	0.5	0.9	100.0	58.3	271
Central	46.8	4.8	47.0	0.3	1.1	100.0	51.7	292
Greater Accra	62.2	21.5	15.1	1.2	0.0	100.0	83.7	346
Volta	48.0	5.6	46.3	0.0	0.0	100.0	53.7	244
Eastern	55.3	3.6	39.0	2.1	0.0	100.0	59.0	254
Ashanti	57.2	12.8	29.8	0.0	0.2	100.0	70.0	545
Brong Ahafo	57.3	7.4	35.3	0.0	0.0	100.0	64.7	272
Northern	23.9	2.4	72.8	0.0	0.9	100.0	26.3	456
Upper East	46.1	0.0	52.6	0.9	0.5	100.0	46.1	148
Upper West	44.2	1.1	53.8	0.5	0.4	100.0	45.3	82
Mother's education								
No education	30.7	3.8	64.4	0.3	0.8	100.0	34.6	952
Primary	44.7	8.6	45.8	0.5	0.4	100.0	53.3	722
Middle/JSS	61.7	11.1	26.4	0.6	0.1	100.0	72.8	970
Secondary+	73.2	17.7	8.5	0.5	0.0	100.0	90.9	263
Wealth quintile								
Lowest	22.1	1.4	75.7	0.2	0.6	100.0	23.5	744
Second	41.7	7.0	50.2	1.0	0.1	100.0	48.7	641
Middle	53.5	8.6	36.5	0.7	0.7	100.0	62.1	549
Fourth	68.8	11.3	19.6	0.0	0.3	100.0	80.1	560
Highest	71.5	21.2	6.6	0.3	0.3	100.0	92.8	415
Total	48.4	8.7	42.0	0.5	0.4	100.0	57.1	2,909

Note: Total includes cases with information missing on mother's education and number of ANC visits
[1] Includes only the most recent birth in the five years preceding the survey

9.2.2 Assistance at Delivery

Table 9.6 shows the percent distribution of live births in the five years preceding the survey by person providing assistance, according to background characteristics.

The survey results show that 59 percent of births in Ghana are delivered with the assistance of a health professional (i.e., doctor, nurse/midwife, community health officer/nurse), 30 percent are delivered by a traditional birth attendant, and about one in ten births is assisted by a relative, or receives no assistance.

Table 9.6 Assistance during delivery

Percent distribution of live births in the five years preceding the survey by person providing assistance during delivery, percentage of births assisted by a skilled provider, and the percentage delivered by caesarean-section, according to background characteristics, Ghana 2008

	Person providing assistance during delivery												
Background characteristic	Doctor	Nurse/ midwife	Auxiliary midwife	Community health officer	Traditional birth attendant (trained)	Traditional birth attendant (untrained)	Relative/ other	No one	Don't know/ missing	Total	Percentage delivered by a skilled provider[1]	Percentage delivered by C-section	Number of births
Mother's age at birth													
<20	7.3	40.2	2.8	1.9	22.8	16.5	6.9	1.7	0.0	100.0	52.2	3.3	333
20-34	11.8	45.0	2.2	1.5	15.5	13.3	8.1	2.0	0.5	100.0	60.6	7.4	2,079
35-49	10.3	40.7	3.1	0.9	14.4	15.7	9.1	5.3	0.6	100.0	54.9	7.4	497
Birth order													
1	16.3	50.3	2.8	1.3	12.2	10.4	6.2	0.5	0.0	100.0	70.7	10.0	688
2-3	10.7	45.5	2.4	2.0	16.4	13.9	7.5	0.9	0.6	100.0	60.6	6.3	1,107
4-5	8.9	42.3	1.6	1.1	16.4	15.6	8.8	4.9	0.6	100.0	53.8	5.8	659
6+	7.0	31.7	3.0	1.0	21.2	17.8	11.3	6.2	0.8	100.0	42.6	5.2	455
Place of delivery													
Health facility	19.3	73.9	3.5	2.1	0.6	0.1	0.4	0.1	0.0	100.0	98.8	12.1	1,662
Elsewhere	0.0	3.6	0.9	0.7	37.3	32.9	18.5	5.9	0.2	100.0	5.2	0.0	1,236
Residence													
Urban	19.6	61.6	2.6	0.6	8.6	3.5	2.0	1.2	0.4	100.0	84.3	10.6	1,104
Rural	5.8	32.8	2.3	2.0	20.8	20.5	11.9	3.4	0.5	100.0	43.0	4.7	1,806
Region													
Western	7.6	47.7	4.9	1.5	21.3	4.4	8.2	3.6	0.9	100.0	61.7	5.4	271
Central	12.4	39.1	2.5	0.0	25.7	7.7	9.6	1.5	1.5	100.0	54.0	10.0	292
Greater Accra	29.7	52.3	2.3	0.0	10.0	1.8	2.4	1.5	0.0	100.0	84.3	10.2	346
Volta	6.0	41.9	4.3	1.4	14.9	25.4	4.3	1.7	0.0	100.0	53.7	6.0	244
Eastern	9.4	48.5	0.3	2.5	21.0	11.0	4.1	3.1	0.0	100.0	60.8	7.6	254
Ashanti	16.0	54.6	1.0	1.0	11.7	7.5	6.8	1.2	0.2	100.0	72.6	10.7	545
Brong Ahafo	8.7	53.0	3.9	0.0	9.8	15.5	4.9	4.2	0.0	100.0	65.5	4.9	272
Northern	1.1	22.9	1.2	2.1	20.1	35.5	12.6	3.6	0.9	100.0	27.2	2.5	456
Upper East	1.4	33.7	3.8	7.8	6.5	16.0	27.7	2.2	0.9	100.0	46.7	1.1	148
Upper West	6.8	32.6	4.0	2.8	26.9	11.7	8.6	6.3	0.4	100.0	46.1	3.5	82
Mother's education													
No education	4.1	28.5	1.8	2.0	18.9	27.0	12.8	4.0	0.9	100.0	36.3	3.4	952
Primary	7.9	41.4	3.1	2.2	22.3	10.8	9.0	2.9	0.4	100.0	54.6	4.5	722
Middle/JSS	15.7	55.9	2.3	0.5	11.8	7.5	4.6	1.5	0.3	100.0	74.4	9.4	970
Secondary+	27.9	59.9	3.3	1.2	5.7	0.4	1.5	0.0	0.0	100.0	92.4	16.8	263
Wealth quintile													
Lowest	2.2	19.4	0.8	1.8	21.4	34.5	15.0	4.2	0.7	100.0	24.2	1.3	744
Second	5.8	37.0	4.2	3.1	20.9	13.3	12.1	3.4	0.4	100.0	50.0	5.0	641
Middle	9.2	52.1	2.6	1.0	17.7	8.6	6.3	2.0	0.7	100.0	64.8	8.4	549
Fourth	17.6	60.8	2.8	0.6	11.8	2.8	1.7	1.6	0.3	100.0	81.7	9.1	560
Highest	28.6	63.8	1.9	0.3	3.2	1.1	0.6	0.3	0.3	100.0	94.6	15.0	415
Total	11.0	43.7	2.4	1.5	16.2	14.1	8.1	2.5	0.5	100.0	58.7	6.9	2,909

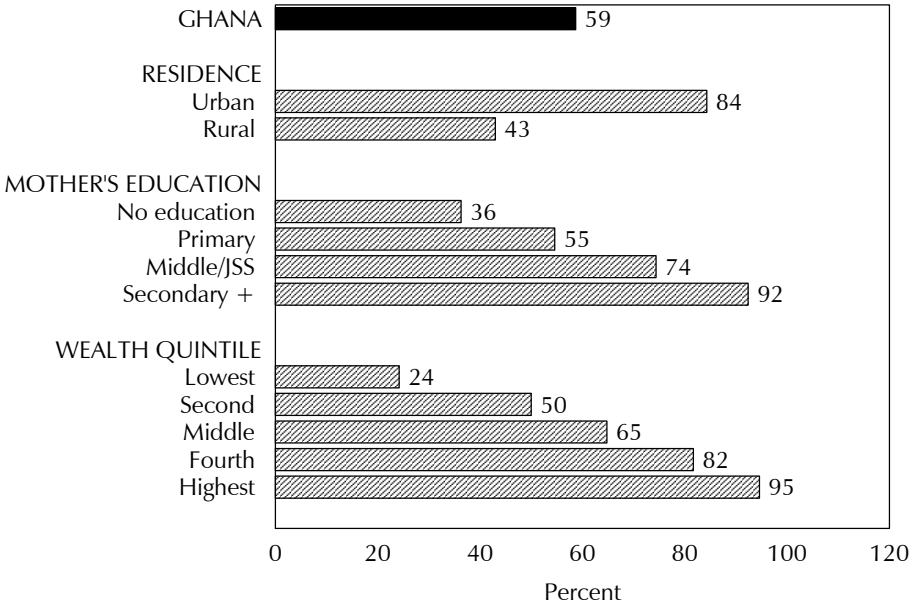
Note: If the respondent mentioned more than one person attending during delivery, only the most qualified person is considered in this tabulation. Total includes cases with information missing on place of delivery and mother's education

[1] Skilled provider includes doctor, nurse, midwife, auxiliary midwife, and community health officer.

As in the case of antenatal care, the use of community health officers provides women with access to professional assistance during childbirth. Although the overall effect of using community health officers is much lower for delivery than antenatal care, this arrangement is proving the most beneficial for the Upper East region, where community health officers' contribution to delivery care is eight times higher than that provided by doctors (8 and 1 percent, respectively).

Delivery assistance by a health professional shows little association with women's age, but it is related to how many children a woman has: the more children a woman has the less likely is she to have a health professional attending her delivery. A woman giving birth in an urban area is twice as likely to be delivered by a health professional as a woman giving birth in a rural area. Professional assistance at birth also tends to increase with mother's level of education and wealth quintile (Figure 9.3).

Figure 9.3 Assistance by Skilled Provider during Childbirth



GDHS 2008

There has been a 12 percentage point increase in access to professional assistance at delivery over the past five years, from 47 percent in 2003 to 59 percent in 2008. During the same period, there was a decrease from 21 to 11 percent in the use of relatives or no one for delivery assistance. However, there is still lack of clarity about the midwifery competence of the new category of health professionals, community health officers. If their contribution to skilled attendance at delivery (about 2 percent) in the 2008 GDHS were removed, there would still be a 10 percentage point increase in skilled attendance at delivery, with the Western region having the largest increase (22 percentage points), followed by the Central region (16 percentage points). The smallest increase in skilled attendance at delivery was in the Greater Accra region (3 percentage points) (data not shown separately).

9.2.3 Complications of Delivery

Access to caesarean section operations is a measure of access to emergency care for childbirth complications. The global estimate of a 5 to 15 percent access to caesarean sections is considered adequate in any given population. The denominator used in calculating access to caesarean sections in the surveys conducted over the years is based on live births, not on total deliveries. This should be kept in mind when interpreting the results.

Table 9.6 presents data on the prevalence of births by caesarean section. Nationally, access to caesarean section has increased from 4 percent in 2003 to 7 percent in 2008. Caesarean sections are more common in urban areas (11 percent) than in rural areas (5 percent), probably because of the greater access to doctors in urban areas. There are regional differences in access to caesarean sections, with the women in the Ashanti region having the greatest access, followed by women in the Greater Accra and Central regions. Women in the Upper East region have the least access to caesarean sections (1 percent), about the same as five years earlier in the 2003 GDHS. The largest increase in

access to caesarean section is in the Central region (from 1 to 10 percent). The Greater Accra region is the only region where there has actually been a decrease in access to caesarean sections (from 12 to 10 percent). As expected, women with higher levels of education and those living in wealthier households tend to have greater access to caesarean section than their less educated and less wealthy counterparts, the main reason for this being that they are more likely to deliver with the assistance of a health professional who is able to perform C-sections. Women in the highest wealth quintile are about fifteen times more likely to have access to caesarean section than women in the lowest wealth quintile (15 and 1 percent, respectively).

9.3 POSTNATAL CARE

Skilled care for mothers is critical in the days after they give birth. Up to 45 percent of all maternal deaths occur within one day of delivery, and 65 percent occur within the first week. This period is also critical to newborn survival because 50 to 70 percent of life-threatening newborn illnesses occur within the first week of life (AED, the Manoff Group, and USAID, 2005). A postnatal check-up within the first week of delivery is therefore an important strategy for ensuring optimal maternal and newborn health. In Ghana, the first postnatal check-up is advised within the first three days of delivery and subsequent check-ups are made as appropriate. To assess the extent of postnatal care utilisation, women who were interviewed in the GDHS were asked about their most recent birth in the five years preceding the survey, specifically, whether they received a health check-up after the delivery, the timing of the first postnatal check-up, and the type of health provider performing the postnatal check-up. This information is shown in Tables 9.7 and 9.8 according to background characteristics.

9.3.1 Timing of First Postnatal Check-up

The survey results on postnatal care indicate that about three in five women (57 percent) receive a postnatal check-up within 24 hours of delivery, and about seven in ten (68 percent) are checked within the first two days. Seven percent of women receive postnatal care 3 to 41 days after delivery.

Having a postnatal check-up within the most crucial period (first two days) is primarily associated with how many children a woman has; women with fewer children are more likely to have an early postnatal check-up than women with more children. Women delivering in a health facility are more than twice as likely to have a postnatal check-up within the first two days, compared with women delivering elsewhere. Women in the highest wealth quintile are about twice as likely to have an early postnatal check-up as women in the lowest wealth quintile, and a similar pattern is seen by level of education. Women in the Northern region (45 percent) are least likely to have access to a postnatal check-up within the first two days, probably because facility-based delivery care is also lowest in this region.

Table 9.7 Timing of first postnatal check-up

Among women age 15-49 with a birth in the five years preceding the survey, the percent distribution of mother's first postnatal check-up for the last live birth by time after delivery, according to background characteristics, Ghana 2008

Background characteristic	Time after delivery of mother's first postnatal check-up							
	Less than 4 hours	4-23 hours	1-2 days	3-41 days	Don't know/ missing	No postnatal check-up[1]	Total	Number of women
Mother's age at birth								
<20	42.1	8.4	10.6	9.8	0.6	28.5	100.0	214
20-34	48.3	11.4	11.4	6.5	1.5	21.0	100.0	1,475
35-49	42.7	10.5	9.4	8.9	1.1	27.4	100.0	410
Birth order								
1	54.2	12.2	9.7	6.1	0.6	17.2	100.0	467
2-3	46.1	12.9	11.5	7.4	1.1	21.1	100.0	786
4-5	44.7	10.1	11.6	8.5	1.8	23.4	100.0	498
6+	40.0	6.0	10.4	7.1	2.0	34.5	100.0	348
Place of delivery								
Health facility	61.3	15.4	10.9	4.0	1.9	6.6	100.0	1,263
Elsewhere	24.3	4.2	11.1	12.3	0.5	47.6	100.0	835
Residence								
Urban	56.2	15.7	10.0	4.8	1.6	11.8	100.0	844
Rural	40.1	7.7	11.5	9.0	1.1	30.5	100.0	1,255
Region								
Western	36.1	18.4	7.7	5.3	1.9	30.6	100.0	189
Central	41.9	13.9	10.8	6.3	0.8	26.2	100.0	200
Greater Accra	57.5	15.3	16.0	0.9	0.8	9.5	100.0	262
Volta	22.6	7.8	18.2	17.2	1.2	33.0	100.0	181
Eastern	53.7	10.8	11.3	7.6	0.0	16.6	100.0	185
Ashanti	61.5	9.3	9.1	4.2	1.7	14.3	100.0	396
Brong Ahafo	56.1	9.5	6.4	3.1	1.9	23.0	100.0	218
Northern	32.3	6.1	6.4	12.7	2.1	40.4	100.0	291
Upper East	34.7	10.5	19.9	16.1	0.8	18.0	100.0	119
Upper West	56.5	9.1	9.4	5.9	0.6	18.4	100.0	58
Education								
No education	35.8	6.8	8.8	10.6	1.4	36.5	100.0	647
Primary	43.4	10.2	12.0	6.7	0.8	26.9	100.0	511
Middle/JSS	55.5	13.3	10.7	5.6	1.2	13.7	100.0	738
Secondary+	55.6	17.2	16.1	4.7	2.8	3.7	100.0	201
Wealth quintile								
Lowest	30.1	4.0	11.1	12.7	1.4	40.7	100.0	480
Second	40.9	8.0	11.0	7.7	0.6	31.9	100.0	461
Middle	52.8	9.7	12.4	5.4	1.2	18.4	100.0	400
Fourth	56.7	17.2	8.0	4.2	1.9	12.0	100.0	436
Highest	57.6	18.6	12.6	5.3	1.6	4.3	100.0	322
Total	46.5	10.9	10.9	7.3	1.3	23.0	100.0	2,099

Note: Total includes cases with information missing on mother's education and place of delivery
[1] Includes women who received a check-up after 41 days

9.3.2 Type of Provider of First Postnatal Check-up

Table 9.8 presents information on the types of postnatal care providers used, according to mothers' background characteristics. In Ghana, 63 percent of mothers obtain postnatal care from a health professional, and 12 percent get postnatal care from traditional birth attendants. About one in four women (23 percent) do not receive any postnatal care within 41 days, which almost marks the end of the postnatal period.

Table 9.8 Type of provider of first postnatal check-up

Among women age 15-49 with a birth in the five years preceding the survey, the percent distribution by type of provider of the mother's first postnatal health check for the last live birth, according to background characteristics, Ghana 2008

Background characteristic	Type of health provider of mother's first postnatal check-up									
	Doctor/ nurse/ midwife	Auxiliary midwife	Community health officer	Traditional birth attendant (trained)	Traditional birth attendant (untrained)	Other	Don't know/ missing	No postnatal check-up[1]	Total	Number of women
Mother's age at birth										
<20	52.3	1.7	1.9	8.3	3.8	3.5	0.0	28.5	100.0	214
20-34	59.7	2.6	2.6	7.6	3.8	2.5	0.2	21.0	100.0	1,475
35-49	53.7	2.0	2.5	7.2	5.5	1.8	0.0	27.4	100.0	410
Birth order										
1	67.5	2.5	2.3	5.7	3.0	1.8	0.0	17.2	100.0	467
2-3	61.1	3.1	2.1	6.8	3.8	2.0	0.1	21.1	100.0	786
4-5	55.0	1.8	3.2	8.7	4.1	3.5	0.4	23.4	100.0	498
6+	41.3	1.7	2.7	10.3	6.3	3.2	0.0	34.5	100.0	348
Place of delivery										
Health facility	87.2	3.5	1.9	0.4	0.0	0.3	0.1	6.6	100.0	1,263
Elsewhere	13.5	0.8	3.4	18.4	10.3	5.9	0.2	47.6	100.0	835
Residence										
Urban	77.4	2.8	1.2	4.7	1.4	0.5	0.3	11.8	100.0	844
Rural	44.6	2.2	3.4	9.5	6.0	3.9	0.1	30.5	100.0	1,255
Region										
Western	52.2	3.7	1.4	9.2	0.0	2.8	0.0	30.6	100.0	189
Central	49.2	1.6	0.7	13.4	4.0	4.0	0.8	26.2	100.0	200
Greater Accra	81.8	2.2	0.0	5.7	0.8	0.0	0.0	9.5	100.0	262
Volta	50.6	5.9	3.3	5.4	1.9	0.0	0.0	33.0	100.0	181
Eastern	67.8	0.9	0.8	8.6	3.3	2.1	0.0	16.6	100.0	185
Ashanti	66.6	1.8	1.0	9.4	3.0	3.9	0.0	14.3	100.0	396
Brong Ahafo	64.2	4.1	0.0	3.4	3.1	2.2	0.0	23.0	100.0	218
Northern	32.1	1.1	7.4	4.9	10.4	3.5	0.2	40.4	100.0	291
Upper East	51.0	1.7	10.6	5.9	11.7	1.0	0.0	18.0	100.0	119
Upper West	46.7	1.8	5.4	13.8	6.7	5.9	1.4	18.4	100.0	58
Mother's education										
No education	38.2	1.5	5.4	7.3	7.6	3.4	0.1	36.5	100.0	647
Primary	51.6	2.5	1.6	10.6	4.0	2.4	0.3	26.9	100.0	511
Middle/JSS	71.6	2.5	1.2	6.6	2.1	2.3	0.1	13.7	100.0	738
Secondary+	85.6	4.6	0.5	4.1	0.5	0.9	0.0	3.7	100.0	201
Wealth quintile										
Lowest	27.4	1.6	6.4	8.9	10.2	4.8	0.1	40.7	100.0	480
Second	46.7	3.7	2.2	8.1	4.0	3.4	0.1	31.9	100.0	461
Middle	61.2	2.4	1.7	10.3	3.1	2.8	0.0	18.4	100.0	400
Fourth	76.1	2.5	0.6	7.1	1.1	0.6	0.0	12.0	100.0	436
Highest	90.1	1.7	0.7	2.1	0.5	0.0	0.7	4.3	100.0	322
Total	57.8	2.4	2.5	7.6	4.1	2.5	0.1	23.0	100.0	2,099

Note: Total includes cases with information missing on mother's education and place of delivery
[1] Includes women who received a check-up after 41 days

Differentials in type of postnatal care provider are similar to those for postnatal care coverage in general. The likelihood of women receiving postnatal care from health professionals decreases with increasing parity. Women in the highest wealth quintile are more than twice as likely to receive postnatal care from a health professional as those in the lowest wealth quintile. Similarly, mothers with secondary and higher education are twice as likely to receive postnatal care from a health professional as those with no education. Finally, women in the Northern region (41 percent) have the least access to a postnatal check-up from a health professional because of the low level of facility-based delivery care in the region.

9.4 Problems in Accessing Health Care

Where health services are present, there are many factors—social, cultural, and economic—that cause women not to use the services, particularly when the health concern is related to sexual or reproductive matters. Information on such factors is particularly important in understanding and addressing the barriers women face in seeking care during pregnancy and at the time of delivery. In the 2008 GDHS, women were asked whether each of the following factors would be a big problem or not a big problem in seeking health care for themselves: getting permission to go for treatment, getting money for treatment, distance to a health facility, having to take transportation, not wanting to go alone to the health facility, concern that there may not be a health provider, and concern that there may be no drugs available.

As shown in Table 9.9, more than seven in ten Ghanaian women reported that they have at least one serious problem when they access health care for themselves. The two major concerns were getting money for treatment and availability of drugs (each 45 percent). The next major concern was the availability of a health care provider (44 percent). Women had about equal concern regarding the distance to the health facility and having to take transport (one in four women). Getting permission to go for treatment was the least of women's worries (7 percent). About one in five women considered the lack of a female provider and not wanting to go alone a problem. In general, women with at least a secondary education and women in the highest wealth quintile were least likely to report having a serious problem in accessing health facilities. The greatest disparity was seen regarding the problem of having to take transport to health facilities: 50 percent of women in the lowest wealth quintile regarded this as a serious problem, compared with only 13 percent of women in the highest wealth quintile.

Table 9.9 Problems in accessing health care

Percentage of women age 15-49 who reported having serious problems accessing health care for themselves when they are sick, by type of problem, according to background characteristics, Ghana 2008

Background characteristic	Problems in accessing health care									Number of women
	Getting permission to go for treatment	Getting money for treatment	Distance to health facility	Having to take transport	Not wanting to go alone	Concern no female provider available	Concern no provider available	Concern no drugs available	At least one problem accessing health care	
Age										
15-19	9.5	45.8	25.6	24.2	24.5	26.0	44.3	46.8	77.7	1,025
20-34	7.0	43.1	25.3	23.4	15.7	19.8	42.2	43.1	71.9	2,354
35-49	5.5	47.8	26.9	27.9	18.6	21.1	45.1	46.2	73.3	1,537
Number of living children										
0	7.9	41.2	22.9	20.8	20.8	23.7	43.0	44.0	72.4	1,691
1-2	6.7	44.7	25.3	24.2	15.4	18.6	40.6	42.9	72.7	1,447
3-4	5.9	47.0	26.6	27.0	15.6	21.9	46.0	46.2	72.3	1,050
5+	7.4	52.3	33.0	33.3	22.8	21.5	47.1	48.8	79.5	729
Marital status										
Never married	8.1	44.2	24.0	21.7	21.0	23.1	42.3	43.9	74.3	1,593
Married or living together	6.7	43.8	26.9	26.4	16.9	20.9	43.6	45.0	72.2	2,876
Divorced/separated/ widowed	5.2	57.1	26.1	27.2	19.0	19.4	47.4	47.5	79.7	446
Employed past 12 months										
Not employed	8.9	44.5	25.9	23.4	22.7	26.4	44.9	46.8	76.8	1,094
Employed for cash	5.7	43.4	25.8	25.3	17.0	20.2	43.6	44.7	71.1	3,140
Employed not for cash	10.0	53.8	26.1	25.8	18.2	19.2	40.8	42.6	79.4	677
Residence										
Urban	4.8	40.0	16.4	15.2	14.2	17.9	37.4	38.0	66.6	2,383
Rural	9.2	49.9	34.8	34.2	22.4	24.8	49.3	51.3	80.1	2,533
Region										
Western	8.1	26.6	24.1	22.1	20.4	28.2	79.6	83.0	90.8	447
Central	3.3	40.6	22.2	20.0	19.2	8.8	26.2	28.5	65.6	424
Greater Accra	4.3	41.2	15.7	13.8	12.5	19.3	17.3	18.9	59.0	853
Volta	5.4	64.3	30.6	34.7	28.5	32.4	38.1	35.8	77.8	431
Eastern	3.3	37.7	22.8	26.3	16.9	14.0	44.3	44.0	70.0	483
Ashanti	4.8	45.3	20.3	17.3	16.8	23.5	59.0	59.4	80.4	1,011
Brong Ahafo	3.9	39.5	24.8	28.6	13.7	28.4	51.7	52.7	71.5	425
Northern	12.0	53.8	35.1	28.2	19.4	16.2	22.6	27.5	68.7	467
Upper East	33.9	67.1	69.4	68.7	30.3	23.9	66.5	69.0	84.3	253
Upper West	10.8	56.8	35.5	40.0	21.6	20.5	46.7	47.7	83.9	122
Education										
No education	11.2	56.8	38.1	37.2	21.9	22.9	42.8	44.6	80.0	1,042
Primary	8.2	52.9	28.9	30.4	23.6	24.0	48.7	49.2	78.5	988
Middle/JSS	5.2	41.2	21.2	19.6	15.6	20.4	44.2	45.7	72.3	2,039
Secondary+	5.0	30.9	18.3	16.4	14.9	19.2	36.5	37.8	62.4	844
Wealth quintile										
Lowest	14.6	60.2	50.9	49.7	28.0	28.9	47.1	50.0	82.3	783
Second	8.0	49.8	30.2	32.1	20.2	24.4	51.5	51.8	82.3	900
Middle	5.0	49.1	22.5	21.7	19.5	18.3	45.8	46.8	79.0	979
Fourth	3.8	41.3	18.6	17.3	16.0	18.8	42.1	43.9	69.8	1,119
Highest	6.1	31.3	15.2	12.7	11.9	19.5	34.2	35.0	59.5	1,135
Total	7.0	45.1	25.9	25.0	18.4	21.5	43.5	44.9	73.5	4,916

Note: Total includes cases with information missing on mother's employment in the past 12 months and mother's education

CHILD HEALTH 10

This chapter presents the findings on child health from the 2008 GDHS. It focuses particularly on neonatal conditions (birth weight and size at birth), children's vaccination status, and treatment practices that are commonly used for children experiencing the three major childhood illnesses: acute respiratory infection (ARI), fever, and diarrhoea. The information on children's birth weight and size, treatment practices, and contact with health facilities when children are sick paves the way to strategic planning and implementation of programmes to reduce neonatal and infant mortality. Combined with information on childhood mortality, this information can be used to identify subgroups of women and children who face increased risk because of non-use of maternal and child health (MCH) services, and to assist with planning effective improvements for these services.

Information was obtained for all live births that occurred in the five years preceding the survey. Wherever possible, data from the 2008 GDHS are compared with data from the four earlier DHS surveys in Ghana, conducted in 1988, 1993, 1998 and 2003. However, analysis of trends in maternity care indicators is complicated by differences in the questions asked. The first three GDHS surveys asked questions on antenatal care and tetanus injections for all births, whereas the 2003 and 2008 surveys confined these questions to the most recent birth. In addition, the questions on maternity care and children's health referred to periods of varying lengths (sometimes five years and sometimes three years) preceding the survey. While it is possible to adjust for some of these inconsistencies, it is not possible to correct them all. Therefore, caution should be used in interpreting the trend data.

10.1 CHILD'S SIZE AT BIRTH

A child's birth weight or size at birth is an important indicator of the child's vulnerability to the risk of childhood illnesses and the chances of survival. Children whose birth weight is less than 2.5 kilograms, or children reported to be "very small" or "smaller than average" are considered to have a higher than average risk of early childhood death. For births in the five years preceding the survey, birth weight was recorded in the questionnaire if available from written records or mother's recall. Because birth weight may not be known for many babies, the mother's estimate of the baby's size at birth was also obtained. Even though it is subjective, it can be a useful proxy for the weight of the child. Table 10.1 presents information on child's weight and size at birth according to background characteristics.

Birth weights were reported for only 43 percent of births in the five years preceding the survey. It is unlikely that these births are representative of all births because births in urban areas and births to mothers in higher wealth quintiles are over-represented, and the pattern of birth weights by background characteristics is likely to be biased.

The results on size of the baby at birth show only small differences by background characteristics. The proportion of babies reported to be of 'average or larger' size at birth increases with mother's age at birth and with level of education and wealth quintile, although the differences are not large. The Upper East region has the smallest proportion of babies reported as average or larger in size at birth, and the Western region has the largest proportion.

Table 10.1 Child's weight and size at birth

Percent distribution of live births in the five years preceding the survey with a reported birth weight by birth weight; percentage of all births with a reported birth weight; and percent distribution of all live births in the five years preceding the survey by mother's estimate of baby's size at birth, according to background characteristics, Ghana 2008

Background characteristic	Percent distribution of births with a reported birth weight[1]				Percentage of all births with a reported birth weight	Percent distribution of all live births by size of child at birth					
	Less than 2.5 kg	2.5 kg or more	Total	Number of births		Very small	Smaller than average	Average or larger	Don't know/ missing	Total	Number of births
Mother's age at birth											
<20	8.1	91.9	100.0	115	34.5	5.3	13.0	80.3	1.4	100.0	333
20-34	9.8	90.2	100.0	947	45.6	3.8	9.3	85.3	1.6	100.0	2,079
35-49	12.4	87.6	100.0	184	37.0	4.9	7.2	87.0	0.9	100.0	497
Birth order											
1	8.3	91.7	100.0	368	53.4	5.1	10.1	83.5	1.3	100.0	688
2-3	10.2	89.8	100.0	514	46.5	3.6	8.9	86.1	1.4	100.0	1,107
4-5	12.5	87.5	100.0	241	36.6	3.7	8.5	86.1	1.8	100.0	659
6+	9.6	90.4	100.0	123	27.0	4.6	10.6	83.3	1.4	100.0	455
Residence											
Urban	9.3	90.7	100.0	742	67.3	3.4	8.2	86.7	1.7	100.0	1,104
Rural	11.2	88.8	100.0	503	27.9	4.6	10.1	84.1	1.3	100.0	1,806
Region											
Western	16.8	83.2	100.0	113	41.9	2.4	3.7	91.8	2.0	100.0	271
Central	8.3	91.7	100.0	70	24.1	0.3	6.9	90.8	1.9	100.0	292
Greater Accra	5.3	94.7	100.0	268	77.6	2.7	9.1	87.2	1.0	100.0	346
Volta	11.1	88.9	100.0	68	28.0	1.1	15.2	83.7	0.0	100.0	244
Eastern	11.4	88.6	100.0	131	51.3	5.8	6.4	87.8	0.0	100.0	254
Ashanti	11.6	88.4	100.0	343	63.0	7.3	7.1	85.2	0.4	100.0	545
Brong Ahafo	9.1	90.9	100.0	97	35.6	3.4	12.5	83.6	0.5	100.0	272
Northern	10.5	89.5	100.0	100	22.0	5.9	10.9	79.3	3.9	100.0	456
Upper East	5.5	94.5	100.0	39	26.2	6.0	14.4	75.6	3.9	100.0	148
Upper West	14.1	85.9	100.0	16	19.4	1.4	16.4	81.4	0.7	100.0	82
Mother's education											
No education	11.4	88.6	100.0	219	23.0	4.4	10.7	82.0	2.8	100.0	952
Primary	12.9	87.1	100.0	255	35.3	4.8	9.4	85.1	0.8	100.0	722
Middle/JSS	9.0	91.0	100.0	557	57.4	2.9	8.7	87.7	0.7	100.0	970
Secondary+	7.8	92.2	100.0	212	80.7	5.6	7.0	86.4	1.1	100.0	263
Wealth quintile											
Lowest	4.3	95.7	100.0	115	15.5	4.9	13.2	79.5	2.3	100.0	744
Second	11.9	88.1	100.0	204	31.9	4.4	7.8	87.1	0.6	100.0	641
Middle	13.7	86.3	100.0	233	42.4	3.6	7.6	86.7	2.1	100.0	549
Fourth	9.2	90.8	100.0	349	62.4	3.3	8.0	87.7	0.9	100.0	560
Highest	9.3	90.7	100.0	344	82.9	3.9	9.1	85.8	1.2	100.0	415
Total	10.0	90.0	100.0	1,246	42.8	4.1	9.4	85.0	1.5	100.0	2,909

Note: Total includes cases with information missing on education that are not shown separately.
[1] Based on either a written record or the mother's recall

10.2 VACCINATION COVERAGE

The 2008 GDHS collected information on immunisation coverage for all children born in the five years before the survey. The Government of Ghana has adopted the World Health Organisation (WHO) and UNICEF guidelines for vaccinating children. According to these guidelines, to be considered fully vaccinated, a child should receive the following vaccinations: one dose each of BCG and measles, three doses of polio vaccine, and three doses of DPT. In addition, in Ghana a vaccine against yellow fever is also recommended for children. BCG, which protects against tuberculosis, should be given at birth or at first clinical contact. DPT protects against diphtheria, pertussis (whooping cough), and tetanus. A dose of polio vaccine is given at birth (Polio 0) or within 13 days of birth. DPT and polio vaccine guidelines require three vaccinations at approximately 6, 10, and 14 weeks of age. The measles and yellow fever vaccines should be given at nine months of age. Currently, the pentavalent vaccine "DPT/HepB/HiB," introduced in 2002, has replaced the DPT vaccine. This vaccine contains in addition to DPT, the hepatitis B vaccine and a vaccine against *Haemophilus* influenza type B. It is recommended that children receive the complete schedule of vaccinations before 12 months of age.

In the GDHS, information on vaccination coverage was obtained in two ways—from health cards and from mother's verbal reports. All mothers were asked to show the interviewer the health cards on which the child's immunisations are recorded. If the card was available, the interviewer copied the dates of each vaccination received. If a vaccination was not recorded on the card, the mother was asked to recall whether that particular vaccination had been given. If the mother was not able to present a card for a child, she was asked to recall whether the child had received BCG, polio, DPT, measles, and yellow fever vaccinations. If she recalled that the child had received the polio or DPT vaccines, she was asked about the number of doses that the child received.

The data presented here are for children age 12-23 months, the youngest cohort of children who have reached the age by which they should be fully vaccinated, and are restricted to children who were alive at the time of the survey. Table 10.2 shows the percentage of children age 12-23 months who received specific vaccines at any time before the survey by source of information. Seventy-nine percent of Ghanaian children age 12-23 months are fully immunised; only 1 percent of children received no vaccinations (Figure 10.1). Seventy percent of children age 12-23 months were fully vaccinated by 12 months of age.

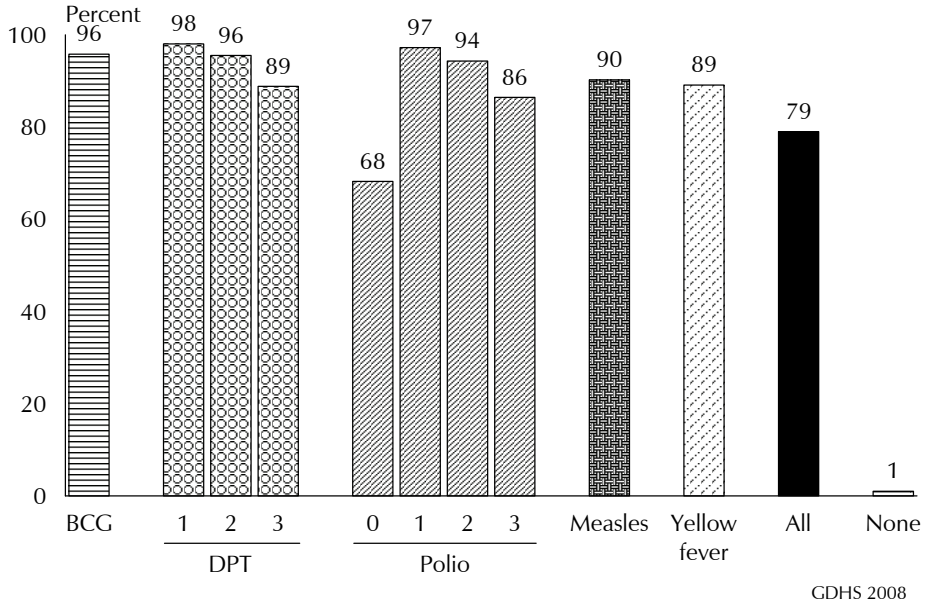
Table 10.2 Vaccinations by source of information

Percentage of children age 12-23 months who received specific vaccines at any time before the survey, by source of information (vaccination card or mother's report), and percentage vaccinated by 12 months of age, Ghana 2008

Source of information	BCG	DPT			Polio[1]				Measles	Yellow fever	All basic vaccinations[2]	No vaccinations	Number of children
		1	2	3	0	1	2	3					
Vaccinated at any time before survey													
Vaccination card	83.0	85.1	84.5	82.0	60.0	85.1	84.5	81.4	79.3	78.9	75.9	0.2	474
Mother's report	12.8	13.0	11.1	6.8	8.3	12.2	9.8	5.1	10.9	10.2	3.1	0.8	78
Either source	95.8	98.0	95.5	88.8	68.2	97.2	94.3	86.4	90.2	89.1	79.0	1.0	552
Vaccinated by 12 months of age[3]	95.6	97.6	95.2	87.7	68.2	96.8	93.7	84.7	79.9	77.8	69.8	1.6	552

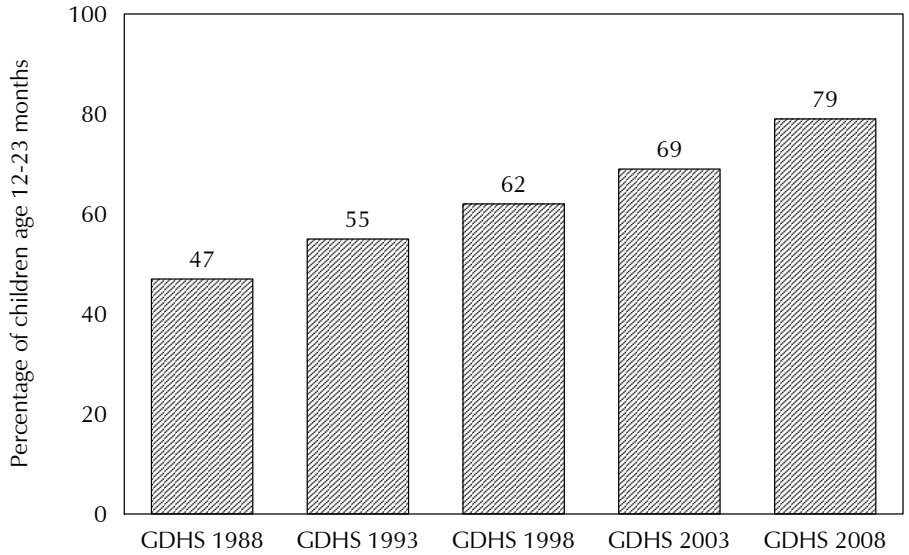
[1] Polio 0 is the polio vaccination given at birth.
[2] BCG, measles, and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)
[3] For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccination.

Figure 10.1 **Vaccination Coverage at Any Time Before the Survey among Children 12-23 Months**



Looking at coverage for specific vaccines, 96 percent of children have received the BCG vaccination, 98 percent received the first DPT dose, and 97 percent received the first polio dose (Polio 1). Coverage for all three vaccinations declines with subsequent doses; only 89 percent of children received the recommended three doses of DPT and 86 percent received three doses of polio. These figures reflect dropout rates of 9 percent for DPT and 11 percent for polio; the dropout rate represents the proportion of children who received the first dose of a vaccine, but did not get the third dose. This is an improvement from 2003 when drop-out rates for DPT and polio were 12 and 15 percent, respectively, and especially from 1998 when drop-out rates for DPT and polio were 19 and 22 percent, respectively (GSS, NMIMR, and ORC Macro, 2004, GSS and MI, 1999). Ninety percent of children received the measles vaccine and 89 percent have been vaccinated against yellow fever. Ideally, measles and yellow fever should be given on the same day and the difference in vaccination coverage is minimal. The percentage of children age 12-23 months who have been fully vaccinated has increased over the past twenty years, from 47 percent in 1988 (GSS and IRD, 1989) to 79 percent in 2008 (Figure 10.2).

Figure 10.2 **Trends in Vaccination Coverage, Ghana 1988-2008**



Note: Children age 12-23 months fully vaccinated, i.e., have received BCG, measles, and three doses of DPT and polio (excluding polio 0).

Table 10.3 shows the percentage of children age 12-23 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), and the percentage with a vaccination card by background characteristics.

There is little difference in the proportion of children fully vaccinated by sex of the child or by urban-rural residence. Boys (80 percent) and children in rural areas (79 percent) are slightly more likely to be fully vaccinated than girls and children in urban areas (78 percent each). The proportion of children fully immunised increases somewhat as birth order increases, from 73 percent among first births to 82 percent among births of order four or five. Coverage falls to below 60 percent for children in the Northern region. Vaccination coverage varies in other regions, from 73 percent of children in the Central region fully immunised to 94 percent in the Brong Ahafo region. Children whose mothers attended only primary or middle/JSS school are more likely to be fully vaccinated than children whose mothers have no education. Surprisingly, children of mothers who attended secondary school or higher are among the least likely to be fully vaccinated, along with children of mothers with no education (74 and 73 percent, respectively). The proportion of children fully immunised increases with wealth quintile, from 75 percent in the lowest wealth quintile to 86 percent in the fourth quintile and 84 percent in the highest quintile.

Table 10.3 Vaccinations by background characteristics

Percentage of children age 12-23 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), and percentage with a vaccination card seen by interviewer, by background characteristics, Ghana 2008

		DPT			Polio[1]								Percentage with a vacci- nation card seen	Number of children
	BCG	1	2	3	0	1	2	3	Measles	Yellow fever	All basic vacci- nations[2]	No vacci- nations		
Sex														
Male	96.7	97.9	95.9	88.8	65.3	95.9	94.1	86.1	88.5	87.3	79.7	0.9	85.8	264
Female	95.0	98.2	95.2	88.8	71.0	98.4	94.5	86.7	91.7	90.7	78.4	1.0	85.9	287
Birth order														
1	93.1	97.6	94.1	85.1	72.2	94.0	90.7	81.1	86.7	86.5	73.2	2.0	81.0	129
2-3	96.8	97.8	95.7	90.5	73.6	97.4	95.3	86.9	91.6	90.4	80.4	0.9	85.9	222
4-5	96.5	99.5	96.4	88.9	67.6	100.0	95.0	88.1	92.6	91.0	81.9	0.0	91.0	123
6+	96.1	96.9	96.1	90.0	47.5	97.7	96.1	91.2	88.1	86.4	80.1	1.2	86.1	78
Residence														
Urban	97.3	97.5	93.8	87.2	82.2	95.5	91.0	83.9	93.4	92.6	78.3	0.7	81.0	214
Rural	94.8	98.3	96.6	89.8	59.4	98.3	96.4	88.0	88.1	86.8	79.4	1.1	89.0	338
Region														
Western	98.9	97.1	97.1	96.0	65.0	99.2	99.2	89.9	89.7	87.2	82.1	0.0	88.0	50
Central	(100.0)	(100.0)	(96.4)	(81.0)	(50.6)	(95.6)	(90.8)	(84.5)	(87.3)	(84.3)	(73.2)	(0.0)	(83.5)	56
Greater Accra	(100.0)	(98.3)	(98.3)	(88.6)	(87.7)	(97.5)	(97.5)	(83.1)	(92.4)	(92.4)	(79.9)	(0.0)	(77.7)	61
Volta	(96.5)	(100.0)	(95.0)	(89.5)	(61.8)	(100.0)	(95.0)	(81.4)	(92.0)	(92.0)	(79.3)	(0.0)	(81.7)	44
Eastern	98.5	97.7	96.3	91.5	68.9	95.8	95.8	87.4	86.8	88.7	76.3	0.0	85.2	55
Ashanti	95.4	97.2	95.7	91.4	77.8	97.2	92.9	90.9	93.0	90.7	84.6	2.8	86.3	114
Brong Ahafo	(98.2)	(98.3)	(97.0)	(95.7)	(79.7)	(98.3)	(98.3)	(95.7)	(95.7)	(95.7)	(93.9)	(0.0)	(96.3)	49
Northern	84.3	96.7	88.3	75.1	48.1	94.4	86.8	73.4	80.5	78.2	58.5	2.5	82.1	76
Upper East	(97.0)	(100.0)	(100.0)	(95.8)	(72.2)	(100.0)	(100.0)	(92.6)	(96.5)	(96.6)	(87.8)	(0.0)	(98.6)	28
Upper West	92.1	96.7	96.7	94.8	66.0	98.1	94.8	94.8	96.7	96.7	88.8	1.9	93.1	18
Mother's education														
No education	91.0	97.2	93.8	84.5	51.9	97.0	92.3	83.3	86.2	84.4	73.0	2.3	86.7	170
Primary	98.2	97.3	95.8	90.1	72.5	96.7	94.2	88.0	89.5	88.7	82.0	0.0	90.9	140
Middle/JSS	98.3	98.7	97.1	91.8	74.1	99.0	97.2	89.0	93.2	92.3	83.5	0.8	84.6	194
Secondary+	95.7	100.0	94.6	88.1	89.9	92.3	90.2	82.0	93.9	93.6	73.5	0.0	73.5	48
Wealth quintile														
Lowest	89.4	98.4	95.1	88.0	48.6	99.1	95.1	86.3	87.5	85.1	74.5	0.9	90.5	129
Second	95.6	95.1	92.2	86.5	55.5	94.9	93.7	84.9	86.0	84.9	77.4	2.1	86.0	124
Middle	97.3	98.5	96.6	82.1	72.6	95.7	89.5	82.1	89.6	89.0	75.0	1.5	81.7	110
Fourth	100.0	100.0	97.5	95.8	86.5	99.5	97.0	90.2	95.5	95.5	86.2	0.0	86.1	110
Highest	98.7	98.7	97.3	93.3	88.9	96.7	96.7	89.8	94.7	93.2	84.3	0.0	83.7	78
Total	95.8	98.0	95.5	88.8	68.2	97.2	94.3	86.4	90.2	89.1	79.0	1.0	85.9	552

Note: Figures in parentheses are based on 25-49 unweighted cases.
[1] Polio 0 is the polio vaccination given at birth.
[2] BCG, measles, and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)

10.3 TRENDS IN VACCINATION COVERAGE

Table 10.4 shows the percentage of children age 12-59 months (at the time of the survey) who received specific vaccines by 12 months of age, and the percentage with a vaccination card. Sixty percent of children received all their vaccinations by 12 months of age. Children in the oldest cohort (48-59 months) were less likely to have received all their vaccinations (53 percent) than children age 12-23 months (70 percent). This pattern is seen with each vaccine but is more marked when all the vaccines are considered together. The findings support a trend towards increased vaccination coverage in 2008, compared with previous surveys. Vaccination cards were shown to interviewers for 86 percent of children age 12-23 months, compared with 60 percent of children age 48-59 months. The difference may be partly a result of the cards for older children having been lost or misplaced over the longer period of time.

The results of the 2008 GDHS indicate that there has been a substantial increase in vaccination coverage over the past five years, from 69 percent fully immunised in 2003 to 79 percent in 2008. The coverage levels for various vaccines have also improved, and the proportion of children who received no vaccinations has declined from 5 to 1 percent. The greatest improvements in vaccination coverage are in the Upper West region (from 60 percent fully immunised in 2003 to 89 percent in 2008), the Western region (from 60 percent in 2003 to 82 percent in 2008), and among children in the poorest households (from 54 percent in 2003 to 75 percent in 2008). Immunisation coverage has also improved among children of mothers with no education (27 percent increase) and children of mothers with primary education (23 percent increase). The regional differences in vaccination coverage should be interpreted with caution because of the small number of cases.

Table 10.4 Vaccinations in first year of life

Percentage of children age 12-59 months at the time of the survey who received specific vaccines by 12 months of age, and percentage with a vaccination card by interviewer, by current age of child, Ghana 2008

Age in months	BCG	DPT			Polio[1]				Measles	Yellow fever	All basic vaccinations[2]	No vaccinations	Percentage with a vaccination card seen	Number of children
		1	2	3	0	1	2	3						
12-23	95.6	97.6	95.2	87.7	68.2	96.8	93.7	84.7	79.9	77.8	69.8	1.6	85.9	552
24-35	94.3	94.7	91.7	84.2	65.3	95.6	91.0	79.3	77.6	74.0	63.2	3.8	79.3	496
36-47	90.2	91.3	85.8	75.0	68.5	91.7	84.0	69.4	73.3	71.0	53.5	5.1	65.5	506
48-59	91.6	90.7	83.7	72.6	64.5	91.4	85.3	68.4	74.1	71.7	52.5	5.1	59.7	559
Total	93.0	93.6	89.2	79.9	66.6	93.9	88.6	75.5	76.5	73.9	59.9	3.9	72.5	2,112

Note: Information was obtained from a vaccination card or the mother's report. For children whose information was based on the mother's report, the proportion of vaccinations given during the first year of life was assumed to be the same as for children with a written record of vaccinations.
[1] Polio 0 is the polio vaccination given at birth.
[2] BCG, measles, and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)

10.4 ACUTE RESPIRATORY INFECTION

Pneumonia and other respiratory tract infections are leading causes of death among young children in Ghana. In the case of pneumonia, early diagnosis and treatment with antibiotics can prevent a large proportion of deaths due to acute respiratory infections (ARI). The prevalence of ARI in the 2008 GDHS was estimated by asking mothers whether their children under age five had been ill with a cough accompanied by short, rapid breathing in the two weeks preceding the survey. These symptoms, though compatible with pneumonia, are subjective (i.e., mother's perception of illness) and not validated by a medical examination. Table 10.5 shows the percentage of children under five years who had a cough accompanied by short rapid breathing (symptoms of ARI).

From mothers' reports, it was estimated that 6 percent of children under five had symptoms of ARI in the two weeks before the survey. Half of these children (51 percent) were taken to a health facility or provider (data not shown separately). Differentials in the prevalence of ARI by background characteristics are minimal; however, it is worth noting that the prevalence of ARI symptoms is slightly higher among children age 12-23 months and among children in the Northern and Upper West regions.

Table 10.5 Prevalence and treatment of symptoms of ARI

Among children under age five, the percentage who had symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey, by background characteristics, Ghana 2008

Background characteristic	Among children under age five: Percentage with symptoms of ARI[1]	Number of children
Age in months		
<6	3.1	317
6-11	5.0	302
12-23	7.4	552
24-35	5.9	496
36-47	6.0	506
48-59	4.4	559
Sex		
Male	5.2	1,412
Female	5.8	1,320
Cooking fuel		
Electricity or gas	3.2	232
Kerosene	*	8
Charcoal	5.3	832
Wood/straw[2]	5.9	1,660
Residence		
Urban	5.1	1,039
Rural	5.7	1,692
Region		
Western	3.8	260
Central	3.5	268
Greater Accra	6.3	329
Volta	3.4	237
Eastern	4.1	240
Ashanti	5.8	510
Brong Ahafo	5.7	260
Northern	9.3	413
Upper East	3.1	142
Upper West	7.7	72
Mother's education		
No education	4.7	888
Primary	6.5	668
Middle/JSS	5.7	920
Secondary+	5.0	252
Wealth quintile		
Lowest	6.2	693
Second	5.5	610
Middle	4.6	507
Fourth	7.4	528
Highest	2.9	393
Total	5.5	2,731

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Total includes cases with information missing on education that are not shown separately.
na = Not applicable
[1] Symptoms of ARI (cough accompanied by short, rapid breathing that is chest-related) are considered a proxy for pneumonia.
[2] Includes grass, shrubs, crop residues

Treatment with antibiotics can often ameliorate the symptoms of ARI, thereby saving lives. In the 2008 GDHS, nearly one-fourth of children (24 percent) under five who had symptoms of ARI in the two weeks before the survey received antibiotics for their illness (data not shown).

10.5 FEVER

Fever is a symptom of malaria and other acute infections in children. Malaria and other illnesses that cause fever contribute to high levels of malnutrition and mortality. While fever can occur year-round, malaria is more prevalent after the end of the rainy season. For this reason, temporal factors must be taken into account when interpreting fever as an indicator of malaria prevalence. Because malaria is a major contributory cause of death in infancy and childhood in many developing countries, the so-called presumptive treatment of fever with anti-malarial medication is advocated in many countries where malaria is endemic. Malaria in Ghana is discussed in greater detail in Chapter 12.

Table 10.6 shows the percentage of children under five with fever during the two weeks preceding the survey and the percentage receiving various treatments, by selected background characteristics. One-fifth (20 percent) of all children under five years of age were reported to have had fever in the past two weeks. Fever is most common among children age 12-47 months (23-26 percent) and then decreases with age. The prevalence of fever is similar for both sexes and for children in both urban and rural areas. Regional differentials show that the proportion of children with fever is highest in the Brong Ahafo region (27 percent) and lowest in the Western region (10 percent). Fever prevalence decreases slightly as wealth quintile increases but shows no clear relationship by education of the mother.

About half of children with a fever (51 percent) were taken to a health facility or provider for treatment. Of these, 43 percent were given anti-malarial drugs and one-fourth (25 percent) received antibiotics. The proportion of children who receive these treatments is higher in urban areas than rural areas, and among children whose mothers are better educated and live in wealthier households.

10.6 DIARRHOEAL DISEASE

Dehydration caused by severe diarrhoea is a major cause of morbidity and mortality among young children in Ghana, although the condition can be easily treated with oral rehydration therapy (ORT). Exposure to diarrhoea-causing agents is frequently related to the use of contaminated water and to unhygienic practices in food preparation and disposal of excreta. In the 2008 GDHS, mothers were asked whether any of their children under five years of age had diarrhoea during the two weeks preceding the survey. If a child had diarrhoea, the mother was asked about feeding practices during the diarrhoeal episode and about what actions were taken to treat the diarrhoea. Because the prevalence of diarrhoea varies seasonally, the results of the 2008 GDHS—which pertain to the fieldwork period from September to late November—should be interpreted with caution.

Table 10.6 Prevalence and treatment of fever

Among children under age five, the percentage who had a fever in the two weeks preceding the survey; and among children with fever, the percentage of children for whom treatment was sought from a health facility or provider, the percentage who took anti-malarial drugs and the percentage who took antibiotic drugs, by background characteristics, Ghana 2008

	Among children under age five:		Among children under age five with fever:			
Background characteristic	Percentage with fever	Number of children	Percentage for whom advice or treatment was sought from a health facility or provider[1]	Percentage who took anti-malarial drugs	Percentage who took antibiotic drugs	Number of children
Age in months						
<6	5.4	317	46.8	*	*	17
6-11	18.7	302	48.2	35.2	32.5	57
12-23	26.1	552	56.2	45.9	28.8	144
24-35	24.3	496	50.7	38.5	18.4	120
36-47	23.3	506	45.3	48.2	27.2	118
48-59	15.7	559	51.3	47.0	22.1	88
Sex						
Male	20.9	1,412	48.8	43.7	23.5	294
Female	18.9	1,320	52.9	42.1	27.2	249
Residence						
Urban	19.0	1,039	59.6	52.6	31.2	197
Rural	20.5	1,692	45.7	37.5	21.8	347
Region						
Western	10.3	260	54.8	(34.7)	(20.1)	27
Central	23.3	268	31.5	35.3	25.2	62
Greater Accra	12.5	329	53.8	(43.6)	(22.3)	41
Volta	18.5	237	34.2	(48.9)	(1.7)	44
Eastern	15.7	240	55.2	(32.0)	(26.5)	38
Ashanti	25.0	510	54.0	46.0	32.7	128
Brong Ahafo	27.2	260	50.3	49.5	38.4	71
Northern	21.3	413	55.7	36.9	23.1	88
Upper East	21.8	142	75.7	(60.4)	(11.5)	31
Upper West	20.3	72	44.3	41.1	22.3	15
Mother's education						
No education	19.4	888	45.8	31.7	21.4	173
Primary	22.8	668	44.9	41.9	18.0	152
Middle/JSS	18.4	920	55.4	49.9	36.5	169
Secondary+	19.9	252	69.6	61.5	22.1	50
Wealth quintile						
Lowest	19.7	693	40.6	27.9	14.8	136
Second	22.3	610	45.2	38.9	20.2	136
Middle	22.0	507	45.7	47.5	31.6	111
Fourth	19.6	528	60.8	63.5	34.6	104
Highest	14.3	393	79.9	42.4	32.6	56
Total	19.9	2,731	50.7	43.0	25.2	544

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases. Total includes cases with information missing on mother's education that are not shown separately.

[1] Excludes pharmacy, shop, and traditional practitioner

10.6.1 Incidence and Treatment of Diarrhoea

Table 10.7 shows the percentage of children under five with diarrhoea in the two weeks preceding the survey by selected background characte ustics. One in five children had diarrhoea during this period; 3 percent had diarrhoea with blood, a symptom of dysentery.

Not surprisingly, very young children are least likely to have had diarrhoea, presumably because most of them are exclusively breastfed and hence less exposed to contaminated food. Diarrhoea prevalence increases with age and peaks at 12-23 months (33 percent), then declines at older ages. Age 12-23 months is when children start to walk and are at increased risk of contamination from the environment. The introduction of other liquids and foods at the time of weaning can also facilitate the spread of disease-causing microbes. Differences in diarrhoea prevalence by gender and by urban-rural residence are small. Children in the Northern and Brong Ahafo regions have a higher prevalence of diarrhoea than children in the other regions. Prevalence of diarrhoea is lowest among children in the Volta region (5 percent) and among children of mothers with secondary or higher education (9 percent). Not surprisingly, diarrhoea prevalence is lowest among children who live in households with improved, not shared toilet facilities, and households that are in the highest wealth quintile. Not surprisingly, diarrhoea prevalence is highest among children residing in households without improved source of drinking water.

Mothers of children with diarrhoea in the two weeks preceding the survey were asked what was done to manage or treat the illness. Table 10.8 shows the percentage of children with diarrhoea who were taken to a health provider for treatment, the percentage who received ORT, and the percentage given other treatments, by background characteristics.

Table 10.7 Prevalence of diarrhoea

Percentage of children under age five who had diarrhoea in the two weeks preceding the survey, by background characteristics, Ghana 2008

Background characteristic	Diarrhoea in the two weeks preceding the survey: All diarrhoea	Diarrhoea with blood	Number of children
Age in months			
<6	9.9	0.1	317
6-11	27.2	4.1	302
12-23	32.6	3.8	552
24-35	22.1	5.0	496
36-47	14.6	3.5	506
48-59	11.6	1.6	559
Sex			
Male	19.4	3.7	1,412
Female	20.3	2.5	1,320
Source of drinking water[1]			
Improved	19.8	2.8	2,102
Not improved	23.8	5.5	455
Other/missing	10.2	0.0	174
Toilet facility[2]			
Improved, not shared	12.8	2.3	205
Non-improved or shared	20.5	3.2	2,516
Residence			
Urban	17.4	1.6	1,039
Rural	21.3	4.0	1,692
Region			
Western	15.3	1.7	260
Central	19.3	1.2	268
Greater Accra	12.4	0.0	329
Volta	5.1	2.5	237
Eastern	17.3	2.5	240
Ashanti	20.2	3.8	510
Brong Ahafo	28.4	1.1	260
Northern	32.5	8.0	413
Upper East	19.5	4.9	142
Upper West	23.6	4.0	72
Mother's education			
No education	23.8	4.4	888
Primary	19.8	3.5	668
Middle/JSS	19.0	2.3	920
Secondary +	9.1	0.5	252
Wealth quintile			
Lowest	25.3	5.1	693
Second	21.4	4.0	610
Middle	21.5	3.2	507
Fourth	16.4	1.7	528
Highest	10.2	0.1	393
Total	19.8	3.1	2,731

Note: Total includes cases with information missing on type of toilet facility and mother's education that are not shown separately.
[1] See Table 2.7 for definition of categories.
[2] See Table 2.8 for definition of categories.

Table 10.8 Diarrhoea treatment

Among children under age five who had diarrhoea in the two weeks preceding the survey, the percentage for whom advice or treatment was sought from a health facility or provider, the percentage given oral rehydration therapy (ORT), the percentage given increased fluids, the percentage given ORT or increased fluids, and the percentage who were given other treatments, by background characteristics, Ghana 2008

Background characteristic	Percentage of children with diarrhoea for whom advice or treatment was sought from a health facility or provider[1]	Oral rehydration therapy (ORT)					Other treatments						Number of children with diarrhoea
		ORS packets	Recommended home fluids (RHF)	Either ORS or RHF	Increased fluids	ORT or increased fluids	Antibiotic drugs	Anti-motility drugs	Zinc supplements	Home remedy/ other	Missing	No treatment	
Age in months													
<6	(35.2)	(33.4)	(1.9)	(35.2)	(26.3)	(50.7)	(11.4)	(2.3)	(2.1)	(22.9)	(0.0)	(32.1)	31
6-11	44.3	34.6	13.2	41.1	22.0	53.7	27.7	1.7	2.0	27.6	0.5	21.3	82
12-23	48.6	53.8	15.4	62.6	42.2	76.9	41.5	0.5	1.8	29.3	0.6	9.0	180
24-35	37.5	45.4	10.2	51.2	46.4	68.6	39.3	0.9	0.9	31.2	1.6	7.4	110
36-47	34.5	45.3	14.6	55.7	38.9	69.4	30.4	6.9	2.7	18.7	0.0	13.4	74
48-59	31.9	34.2	15.6	40.8	33.7	57.1	36.9	1.6	1.7	29.3	4.6	4.8	65
Sex													
Male	40.1	44.5	12.9	50.8	38.1	66.5	35.6	1.9	2.2	29.3	0.4	11.0	274
Female	41.9	44.5	13.4	53.0	37.0	67.0	34.7	1.9	1.3	25.9	1.9	13.0	268
Type of diarrhoea													
Non bloody	37.8	42.1	13.9	50.0	36.6	65.0	33.1	1.1	2.1	27.6	1.3	12.4	457
Bloody	58.0	57.7	8.9	62.3	42.6	76.4	46.4	6.2	0.0	27.5	0.0	9.7	85
Residence													
Urban	37.5	49.2	12.8	55.5	35.9	70.5	38.4	1.7	2.2	23.3	0.5	8.8	181
Rural	42.8	42.2	13.3	50.1	38.4	64.9	33.5	2.0	1.6	29.8	1.5	13.6	361
Mother's education													
No education	41.3	42.7	8.0	47.3	36.4	64.2	29.4	2.7	1.9	27.4	2.3	13.9	212
Primary	36.8	44.2	15.1	52.5	31.0	67.2	31.5	1.7	0.5	25.5	0.9	12.4	132
Middle/JSS	42.2	45.5	17.4	55.6	43.3	69.9	43.5	1.2	2.9	29.9	0.0	9.2	175
Secondary+	*	*	*	*	*	*	*	*	*	*	*	*	23
Wealth quintile													
Lowest	41.2	40.8	8.7	43.6	34.1	58.3	27.3	3.4	2.2	27.8	3.0	15.5	176
Second	39.0	42.6	20.2	57.4	39.0	73.0	37.8	1.1	0.7	30.0	0.0	8.5	131
Middle	39.0	47.5	12.7	54.7	40.6	70.8	40.9	2.0	0.7	26.4	0.0	9.3	109
Fourth	42.9	51.1	9.1	55.5	35.4	68.6	40.5	0.7	2.7	26.1	0.0	14.3	86
Highest	(48.0)	(45.1)	(19.3)	(54.9)	(44.7)	(69.0)	(34.1)	(0.0)	(4.1)	(25.6)	(2.0)	(10.4)	40
Total	41.0	44.5	13.1	51.9	37.6	66.8	35.2	1.9	1.8	27.6	1.1	12.0	542

Note: ORT includes solution prepared from oral rehydration salts (ORS) and recommended home fluids (RHF). An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.
[1] Excludes pharmacy, shop, and traditional practitioner

Overall, 41 percent of children with diarrhoea were taken to a health provider for treatment of diarrhoea. Children age 6-23 months are more likely to be taken to a health facility for treatment (44-49 percent) than children age over two years (32-38 percent). Differences in treatment-seeking behaviour by gender of child, urban-rural residence, and mother's education are small. Children in the highest wealth quintile are more likely than other children to be taken to a health provider for treatment when they have diarrhoea.

Oral rehydration therapy (ORT), which involves giving children with diarrhoea a solution prepared from oral rehydration salts (ORS) or recommended home fluids (RHF)—usually a home-made sugar-salt-water solution—is a simple and effective response to diarrhoeal illness. In the 2008 GDHS, more than half (52 percent) of children with diarrhoea were treated with either ORS (45 percent) or RHF (13 percent). Thirty-eight percent of children were given increased fluids. Overall, 67 percent of children under five with diarrhoea were treated with ORS, RHF, or increased fluids. Children under 12 months of age and children age 48-59 months are less likely to receive ORT than other children. Children in rural areas, children whose mothers have no education, and children in the lowest wealth quintile are also less likely to receive ORT.

Antibiotics are generally not recommended for use in treating non-bloody diarrhoea in young children. In the 2008 GDHS, just over one-third of children with diarrhoea (35 percent) were treated with antibiotics, with a notable difference between bloody and non-bloody diarrhoea (46 percent and 33 percent, respectively). Giving antibiotics to treat diarrhoea is more likely in children age 12-23 months and children in urban areas. There is a steady increase in the use of antibiotics by mother's level of education and household wealth quintile except for the highest wealth quintile. Home remedies were given to 28 percent of children with diarrhoea, and 2 percent each received anti-motility drugs and zinc supplements. One in eight children with diarrhoea was given no treatment at all.

10.6.2 Feeding Practices

Mothers are encouraged to continue normal feeding of children with diarrhoea and to increase the amount of fluids given. These practices help to reduce dehydration and minimise the adverse consequences of diarrhoea on the child's nutritional status. Mothers interviewed in the 2008 GDHS were asked whether they gave the child less, the same amount, or more fluids and food than usual when their child had diarrhoea. Table 10.9 shows the percent distribution of children under five who had diarrhoea in the two weeks preceding the survey by feeding practices, according to background characteristics.

Thirty-eight percent of children with diarrhoea were given more to drink than usual, 35 percent were given the same as usual, and 26 percent were given less to drink than usual or nothing at all. It is particularly unfortunate that 10 percent of children with diarrhoea were given much less or nothing to drink.

Food intake is curtailed even more than fluid intake during episodes of diarrhoea. Only 9 percent of children with diarrhoea were given more to eat than usual, 29 percent were given the same amount of food as usual, and 56 percent were given less food to eat than usual or none at all. These patterns reflect a gap in practical knowledge among some mothers regarding the nutritional requirements of children during diarrheal episodes. The 2008 GDHS findings indicate a need for further health education efforts to reduce the number of children that become dehydrated or malnourished because of improper feeding practices during diarrhoea.

Overall, 24 percent of children with diarrhoea were given increased fluids and continued feeding, and 45 percent were given increased fluids, continued feeding, and ORT. Children age 24-35 months were more likely than other children to be given increased fluids, continued feeding, and ORT during the last episode of diarrhoea. Differentials in these indicators by other background characteristics are not large; however, there was an increase in both indicators (recommended feeding practices during diarrhoea) with increasing wealth quintile.

Table 10.9 Feeding practices during diarrhoea

Percent distribution of children under age five who had diarrhoea in the two weeks preceding the survey by amount of liquids and food offered compared with normal practice, the percentage of children given increased fluids and continued feeding during the diarrhoea episode, and the percentage of children who continued feeding and were given ORT and/or increased fluids during the episode of diarrhoea, by background characteristics, Ghana 2008

Background characteristic	Amount of liquids offered							Amount of food offered								Percentage given increased fluids and continued feeding[1,2]	Percentage who continued feeding and were given ORT and/or increased fluids[3]	Number of children with diarrhoea
	More	Same as usual	Some-what less	Much less	None	Don't know/ missing	Total	More	Same as usual	Some-what less	Much less	None	Never gave food	Don't know/ missing	Total			
Age in months																		
<6	(26.3)	(32.9)	(16.2)	(13.7)	(10.9)	(0.0)	100.0	(11.4)	(25.1)	(17.7)	(6.3)	(0.0)	(34.6)	(4.8)	100.0	(22.3)	(34.6)	31
6-11	22.0	37.4	20.8	18.0	1.8	0.0	100.0	3.6	23.6	31.1	16.3	12.6	12.8	0.0	100.0	11.5	28.7	82
12-23	42.2	35.0	15.7	6.5	0.5	0.1	100.0	8.8	30.8	21.8	24.5	10.0	3.9	0.1	100.0	21.2	45.2	180
24-35	46.4	29.0	16.0	6.1	0.0	2.5	100.0	10.9	28.7	35.3	18.1	5.4	0.0	1.6	100.0	39.0	55.1	110
36-47	38.9	39.2	13.1	8.8	0.0	0.0	100.0	4.4	23.8	38.2	24.7	7.2	0.0	1.9	100.0	25.1	49.0	74
48-59	33.7	40.9	15.2	8.1	0.0	2.1	100.0	18.0	34.8	21.8	17.4	5.9	0.0	2.1	100.0	23.1	44.9	65
Sex																		
Male	38.1	34.8	16.4	9.0	1.2	0.5	100.0	10.3	28.9	24.2	23.2	7.0	5.8	0.6	100.0	23.0	42.9	274
Female	37.0	35.8	15.9	9.2	1.0	1.2	100.0	7.9	28.1	31.8	16.8	9.0	4.7	1.7	100.0	25.4	46.3	268
Type of diarrhoea																		
Non-bloody	36.6	38.0	14.8	8.5	1.3	0.7	100.0	9.2	30.8	25.6	19.9	7.1	6.0	1.4	100.0	24.0	43.3	457
Bloody	42.6	20.9	23.3	12.0	0.0	1.2	100.0	8.3	16.1	40.5	21.0	13.1	1.0	0.0	100.0	24.7	51.1	85
Residence																		
Urban	35.9	43.5	12.1	7.8	0.7	0.0	100.0	7.1	37.8	29.5	15.9	6.8	2.9	0.0	100.0	25.9	53.2	181
Rural	38.4	31.2	18.1	9.8	1.3	1.2	100.0	10.1	23.8	27.2	22.2	8.6	6.4	1.7	100.0	23.3	40.2	361
Mother's education																		
No education	36.4	31.3	18.8	10.6	1.3	1.6	100.0	4.9	21.9	32.1	21.6	8.7	7.9	3.0	100.0	22.2	39.2	212
Primary	31.0	41.4	17.8	8.6	0.6	0.8	100.0	14.6	32.7	25.9	16.5	4.4	5.9	0.0	100.0	21.0	50.4	132
Middle/JSS	43.3	35.5	11.6	8.2	1.4	0.0	100.0	10.0	32.3	23.7	21.9	10.2	1.9	0.0	100.0	27.4	46.2	175
Secondary+	*	*	*	*	*	*	100.0	*	*	*	*	*	*	*	100.0	*	*	23
Wealth quintile																		
Lowest	34.1	29.8	22.6	9.8	1.3	2.5	100.0	7.3	18.3	34.6	20.9	8.6	6.6	3.6	100.0	17.6	33.7	176
Second	39.0	29.9	18.1	12.3	0.7	0.0	100.0	10.0	22.3	27.5	25.0	8.4	6.8	0.0	100.0	22.6	43.7	131
Middle	40.6	42.6	9.7	6.0	1.2	0.0	100.0	12.3	33.4	22.8	21.9	7.0	2.6	0.0	100.0	30.4	50.2	109
Fourth	35.4	41.1	13.0	8.7	1.7	0.0	100.0	7.4	40.5	26.5	14.2	5.5	5.9	0.0	100.0	27.8	54.8	86
Highest	(44.7)	(44.9)	(5.6)	(4.8)	(0.0)	(0.0)	100.0	(8.8)	(54.0)	(17.6)	(7.6)	(12.0)	(0.0)	(0.0)	100.0	(33.0)	(57.3)	40
Total	37.6	35.3	16.1	9.1	1.1	0.8	100.0	9.1	28.5	28.0	20.1	8.0	5.3	1.2	100.0	24.1	44.6	542

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.
[1] Equivalent to the UNICEF/WHO indicator "Home management of diarrhoea." MICS Indicator 34
[2] "Continued feeding" includes children who were given more, same as usual, or somewhat less food during the diarrhoea episode.
[3] Equivalent to UNICEF MICS Indicator 35.

10.7 KNOWLEDGE OF ORS PACKETS

As mentioned earlier, a simple and effective response to dehydration caused by diarrhoea is a prompt increase in the child's fluid intake through some form of ORT, which may include the use of a solution prepared from packets of oral rehydration salts (ORS). To ascertain how widespread knowledge of ORS is in Ghana, mothers were asked whether they know about ORS packets.

Table 10.10 shows the percentage of mothers with a birth in the five years preceding the survey who know about ORS packets for treatment of diarrhoea, by background characteristics. Knowledge of ORS is widespread in Ghana, with 90 percent of mothers having heard of it. Younger mothers are slightly less likely to know about ORS than older mothers. Knowledge of ORS is higher among urban mothers and it increases with level of education and wealth quintile of mothers. Mothers in the Northern region are less likely than mothers in other regions to have heard of ORS.

Table 10.10 Knowledge of ORS packets or pre-packaged liquids

Percentage of mothers age 15-49 with a birth in the five years preceding the survey who know about ORS packets or ORS pre-packaged liquids for treatment of diarrhoea, by background characteristics, Ghana 2008

Background characteristic	Percentage of women who know about ORS packets or ORS pre-packaged liquids	Number of women
Age		
15-19	82.9	100
20-24	88.8	405
25-34	92.0	982
35-49	89.8	612
Residence		
Urban	96.2	844
Rural	86.3	1,255
Region		
Western	87.2	189
Central	88.9	200
Greater Accra	96.7	262
Volta	96.3	181
Eastern	95.1	185
Ashanti	96.3	396
Brong Ahafo	91.6	218
Northern	72.6	291
Upper East	87.1	119
Upper West	92.3	58
Education		
No education	79.6	647
Primary	92.5	511
Middle/JSS	96.2	738
Secondary+	97.6	201
Wealth quintile		
Lowest	75.2	480
Second	91.6	461
Middle	94.7	400
Fourth	95.9	436
Highest	97.9	322
Total	90.3	2,099

Note: Total includes cases with information missing on mother's education that are not shown separately.
ORS = Oral rehydration salts

10.8 STOOL DISPOSAL

If human faeces are left uncontained, disease can spread by direct contact or by animal contact with the faeces. Hence, the proper disposal of children's stools is important in preventing the spread of disease. Table 10.11 shows the percent distribution of mothers who have their youngest child under age five living with them, by the way in which the child's stools are disposed of, according to background characteristics and type of toilet facilities in the household.

The most common method of disposing of young children's stools is rinsing the stools into a toilet or latrine (37 percent), followed by throwing them into the garbage (36 percent). Other methods of disposal include putting them into a drain or ditch (12 percent), or burying them (5 percent). Six percent of children are using a toilet or latrine, and 3 percent of children have their stools left in the open (not contained). Overall, less than half (48 percent) of children have their stools disposed of safely.

There are marked differences in the way children's stools are disposed of, according to background characteristics. For example, older children are more likely than younger children to have their stools disposed of safely. As expected, children in urban areas and children living in households with an improved toilet facility are more likely to have safe disposal of their stools than children in rural areas and those in households without such facilities. By region, the proportion of children whose stools are disposed of safely ranges from 19 percent in the Upper West region to 83 percent in the Eastern region. Safe disposal of children's stools increases with mother's level of education and household wealth quintile.

Table 10.11 Disposal of children's stools

Percent distribution of youngest children under age five living with the mother by the manner of disposal of the child's last faecal matter (stools), and percentage of children whose stools are disposed of safely, according to background characteristics, Ghana 2008

Background characteristic	Manner of disposal of children's stools								Total	Percentage of children whose stools are disposed of safely	Number of mothers
	Child used toilet or latrine	Put/ rinsed into toilet or latrine	Buried	Put/ rinsed into drain or ditch	Thrown into garbage	Left in the open	Other	Missing			
Age in months											
<6	1.0	27.3	3.3	35.5	27.7	3.2	1.9	0.2	100.0	31.6	308
6-11	0.0	35.4	4.6	17.1	38.4	3.8	0.4	0.5	100.0	39.9	297
12-23	2.6	39.9	5.2	7.6	41.4	2.5	0.0	0.8	100.0	47.7	530
24-35	3.6	41.7	6.6	5.3	39.2	3.0	0.0	0.8	100.0	51.8	358
36-47	13.2	35.9	7.0	1.7	37.1	3.8	0.0	1.3	100.0	56.1	275
48-59	23.9	34.6	4.1	4.0	26.3	5.1	0.7	1.2	100.0	62.6	222
Toilet facility											
Improved, not shared[1]	15.1	49.3	2.6	11.9	20.0	1.1	0.0	0.0	100.0	67.0	154
Non-improved or shared	5.1	35.5	5.4	11.6	37.5	3.5	0.5	0.8	100.0	46.1	1,828
Residence											
Urban	6.1	46.6	4.2	12.9	28.2	1.2	0.4	0.5	100.0	56.8	802
Rural	5.9	29.6	5.9	10.9	41.5	4.8	0.5	0.9	100.0	41.4	1,187
Region											
Western	2.1	55.2	0.9	15.9	25.0	0.0	0.0	0.9	100.0	58.2	181
Central	3.2	30.7	0.0	17.6	41.8	2.8	2.0	2.0	100.0	33.9	187
Greater Accra	9.2	42.9	2.5	12.2	30.5	2.7	0.0	0.0	100.0	54.6	251
Volta	6.8	37.6	12.8	5.3	31.3	6.1	0.0	0.0	100.0	57.2	173
Eastern	8.7	71.4	2.9	7.4	7.5	0.6	0.0	1.4	100.0	83.0	174
Ashanti	6.6	36.1	0.0	13.6	41.5	0.2	1.3	0.7	100.0	42.7	373
Brong Ahafo	4.5	40.1	1.2	6.9	46.6	0.8	0.0	0.0	100.0	45.8	206
Northern	2.3	10.6	11.8	11.6	51.2	11.4	0.0	1.1	100.0	24.6	276
Upper East	16.0	17.6	24.7	12.9	25.6	1.4	0.0	1.7	100.0	58.4	114
Upper West	1.4	8.5	8.8	11.7	55.6	14.0	0.0	0.0	100.0	18.7	54
Education											
No education	5.0	20.4	8.8	11.4	47.3	6.0	0.0	1.1	100.0	34.2	619
Primary	4.8	34.4	5.5	12.7	37.9	2.7	1.3	0.8	100.0	44.7	477
Middle/JSS	6.8	47.5	2.2	11.5	29.2	2.1	0.4	0.3	100.0	56.5	699
Secondary+	8.6	52.9	3.5	11.1	21.6	1.1	0.0	1.2	100.0	65.0	193
Wealth quintile											
Lowest	5.8	16.0	12.6	9.4	46.8	7.9	0.0	1.4	100.0	34.4	460
Second	5.7	29.4	4.2	13.8	41.5	4.1	0.6	0.7	100.0	39.3	438
Middle	5.6	41.5	3.2	12.5	34.8	1.1	0.7	0.7	100.0	50.2	373
Fourth	3.7	50.8	2.7	10.7	30.1	1.7	0.0	0.4	100.0	57.2	411
Highest	10.2	52.0	1.2	12.6	22.1	0.4	1.0	0.4	100.0	63.5	306
Total	6.0	36.5	5.2	11.7	36.1	3.3	0.4	0.8	100.0	47.6	1,989

Note: Total includes cases with information missing on type of toilet facility and mother's education that are not shown separately.
[1] Non-shared facilities that are of the following types: flush or pour flush into a piped sewer system/septic tank/pit latrine; ventilated, improved pit (VIP) latrine; pit latrine with a slab; and a composting toilet.

NUTRITION OF CHILDREN AND ADULTS 11

This chapter covers nutritional concerns for children and women. The 2008 GDHS collected information from respondents to evaluate the nutritional status of women and young children. For infants and young children, this included information on breastfeeding and complementary feeding. For micronutrients like iron, vitamin A, and iodine, information was collected on intake levels from supplementation and food. Anthropometric measurements (height and weight) were taken for women 15-49 years and children under age five to determine their nutritional status.

Adequate nutrition is critical to child development. The period from birth to two years of age is important for optimal growth, health, and development. Unfortunately, this period is often marked by growth faltering, micronutrient deficiencies, and common childhood illnesses such as diarrhoea and acute respiratory infections (ARI). Optimal feeding practices reported in this chapter include early initiation of breastfeeding, exclusive breastfeeding during the first 6 months of life, continued breastfeeding for up to two years of age and beyond, timely introduction of complementary feeding at 6 months of age, frequency of feeding solid/semisolid foods, and the diversity of food groups fed to children between 6 and 23 months of age. A summary indicator that describes the quality of infant and young child (age 6-23 months) feeding practices (IYCF) is included.

A woman's nutritional status has important implications for her health as well as the health of her children. Malnutrition in women results in reduced productivity, an increased susceptibility to infections, slow recovery from illness, and heightened risks of adverse pregnancy outcomes. For example, a woman who has poor nutritional status—as indicated by a low body mass index (BMI), short stature, or other micronutrient deficiencies—has a greater risk of obstructed labour, of having a baby with low birth weight, of producing lower quality breast milk, of dying from post-partum haemorrhage, and of contracting diseases along with her baby.

11.1 NUTRITIONAL STATUS OF CHILDREN

Anthropometric data on height and weight collected in the 2008 GDHS permit the measurement and evaluation of the nutritional status of young children in Ghana. This evaluation allows identification of subgroups of the child population that are at increased risk of faltered growth, disease, impaired mental development, and death.

11.1.1 Measurement of Nutritional Status among Young Children

The 2008 GDHS collected information on the nutritional status of children by measuring the height and weight of all children under six years of age. The measurements were collected with the aim of calculating three indices—weight-for-age, height-for-age, and weight-for-height—all of which take age and sex into consideration. Weight measurements were obtained using lightweight, electronic Seca scales with a digital screen, designed and manufactured under the guidance of the United Nations Children's Fund (UNICEF). Height measurements were carried out using a measuring board produced by Shorr Productions. Children younger than 24 months were measured lying down (recumbent length) on the board while standing height was measured for older children.

For the 2008 GDHS, the nutritional status of children is calculated using new growth standards published by the World Health Organisation (WHO) in 2006. These new growth standards were generated using data collected in the WHO Multicentre Growth Reference Study (WHO, 2006). Each of the three nutritional status indicators described below is expressed in standard deviation units from the median of the WHO Child Growth Standards. The indices are not comparable with those based on the previously used NCHS/CDC/WHO Reference.

For the purposes of comparison with previous surveys, Appendix Table C.7 includes indices expressed in standard deviation units (SD) from the median of the NCHS/CDC/WHO international reference population, which was in use prior to the new WHO Child Growth Standards.

Each of these indices—height-for-age, weight-for-height, and weight-for-age—provides different information about growth and body composition that is used to assess nutritional status. The height-for-age index is an indicator of linear growth retardation and cumulative growth deficits. Children whose height-for-age Z-score is below minus two standard deviations (-2 SD) are considered short for their age (stunted) and are chronically malnourished. Children who are below minus three standard deviations (-3 SD) are considered severely stunted. Stunting reflects failure to receive adequate nutrition over a long period of time and is also affected by recurrent and chronic illness. Height-for-age, therefore, represents the long-term effects of malnutrition in a population and is not sensitive to recent, short-term changes in dietary intake.

The weight-for-height index measures body mass in relation to body height or length and describes current nutritional status. Children with Z-scores below -2 SD are considered thin (wasted) and are acutely malnourished. Wasting represents the failure to receive adequate nutrition in the period immediately preceding the survey and may be the result of inadequate food intake or a recent episode of illness causing loss of weight and the onset of malnutrition. Children whose weight-for-height is below -3 SD are considered severely wasted.

Weight-for-age is a composite index of height-for-age and weight-for-height. It takes into account both acute and chronic malnutrition. Children whose weight-for-age is below -2 SD are classified as underweight. Children whose weight-for-age is below -3 SD are considered severely underweight.

11.1.2 Results of Data Collection

Height and weight measurements were obtained for all children under age six living in half of the households selected for the GDHS sample. The results include children who were not biological offspring of the women interviewed in the survey.

Although data were collected for all children under age six, for purposes of comparability, the analysis is limited to children under age five. Valid height and weight measurements were obtained for 87 percent of the 2,912 children under age five in the GDHS households. Measurements were missing for 7 percent of the children, presumably because the child was not present, the parents refused, or the child was ill. Another 6 percent of children were considered to have implausibly high or low values for the height or weight measures, and less than 1 percent lacked data on age in months. The following analysis focuses on the children for whom complete and plausible anthropometric and age data were collected. Table 11.1 and Figure 11.1 show the percentage of children under age five classified as malnourished according to height-for-age, weight-for-height, and weight-for age indices, by the child's age and other selected demographic characteristics.

Figure 11.1 shows that the level of stunting increases drastically in the second year of life when children are weaned, indicating chronic malnutrition over a long period of time. The level of wasting peaks at about 7 months of age at the time when complementary food in addition to breast milk is introduced. The level of undernutrition increases steadily and peaks at about 11 months of age and then levels off to the second year of life until the age of about 27 months before it starts to decline.

Table 11.1 Nutritional status of children

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Ghana 2008

Background characteristic	Height-for-age			Weight-for-height				Weight-for-age				Number of children
	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	
Age in months												
<6	2.2	4.3	0.3	6.0	16.1	5.8	-0.5	3.7	7.8	4.0	-0.2	200
6-8	5.1	10.3	0.1	5.8	28.9	5.6	-1.0	4.8	16.0	0.3	-0.8	123
9-11	6.3	16.7	-0.3	5.5	20.8	7.2	-0.7	7.7	17.8	3.9	-0.8	146
12-17	6.4	22.5	-0.8	4.2	12.8	6.2	-0.5	3.4	14.9	3.5	-0.7	282
18-23	12.8	39.9	-1.4	2.5	9.6	3.5	-0.4	6.7	19.0	2.0	-1.0	223
24-35	12.6	32.6	-1.5	0.7	3.8	5.4	0.0	2.3	13.6	2.1	-0.8	487
36-47	13.8	33.4	-1.5	0.6	4.1	6.2	-0.0	2.2	15.1	1.8	-0.9	511
48-59	8.9	32.3	-1.4	0.7	3.4	3.8	-0.1	1.4	11.2	0.3	-0.9	553
Sex												
Male	11.0	29.6	-1.2	2.2	9.2	5.0	-0.3	3.7	15.4	1.5	-0.8	1,282
Female	8.6	26.2	-1.0	2.2	7.7	5.5	-0.2	2.6	12.4	2.4	-0.7	1,243
Birth interval in months[2]												
First birth[3]	8.7	29.7	-1.2	2.1	9.5	5.0	-0.2	3.4	14.3	2.3	-0.8	513
<24	15.0	33.9	-1.3	2.1	8.4	8.2	-0.1	3.6	16.8	1.4	-0.8	237
24-47	9.9	28.3	-1.1	2.1	9.1	5.0	-0.3	3.1	13.9	1.3	-0.8	907
48+	6.9	21.8	-0.9	2.9	8.2	4.8	-0.3	2.5	11.7	2.9	-0.7	608
Size at birth[2]												
Very small	10.1	38.2	-1.5	7.6	12.7	1.9	-0.8	6.3	32.9	0.6	-1.4	91
Small	10.6	34.1	-1.3	2.4	11.7	6.7	-0.5	4.4	21.6	1.1	-1.0	214
Average or larger	9.2	26.2	-1.0	2.1	8.3	5.3	-0.2	2.8	11.8	2.1	-0.7	1,938
Mother's interview status												
Interviewed	9.3	27.5	-1.1	2.3	8.9	5.3	-0.3	3.1	13.7	1.9	-0.8	2,265
Not interviewed but in household	14.8	30.3	-1.1	3.8	8.9	4.0	-0.1	3.5	15.6	4.0	-0.7	42
Not interviewed, and not in the household[4]	13.7	32.7	-1.2	0.5	4.4	5.2	-0.1	4.0	15.5	1.4	-0.8	218
Mother's nutritional status[5]												
Thin (BMI <8.5)	9.1	32.3	-1.2	3.4	16.9	6.1	-0.6	3.8	21.6	1.3	-1.1	158
Normal (BMI 18.5-24.9)	10.8	30.6	-1.2	2.3	9.2	4.3	-0.3	3.5	15.3	1.3	-0.9	1,470
Overweight/obese (BMI ≥25)	5.9	19.2	-0.7	1.9	6.2	7.2	-0.1	1.8	8.0	3.6	-0.4	645
Residence												
Urban	6.8	21.1	-0.9	1.5	7.6	6.7	-0.2	1.6	10.6	2.6	-0.6	975
Rural	11.7	32.3	-1.2	2.6	9.1	4.3	-0.3	4.1	16.0	1.5	-0.9	1,550
Region												
Western	10.8	27.0	-1.2	2.2	5.6	5.9	-0.0	2.5	10.3	1.0	-0.7	236
Central	14.1	33.7	-1.3	1.7	12.0	9.7	-0.2	5.4	17.2	2.8	-0.9	246
Greater Accra	2.5	14.2	-0.6	0.5	5.9	4.9	-0.1	0.5	6.5	2.4	-0.4	277
Volta	8.1	26.8	-1.1	2.2	5.2	7.9	-0.2	3.6	13.6	4.1	-0.8	228
Eastern	12.3	37.9	-1.4	3.7	6.4	12.0	0.3	2.0	8.7	3.5	-0.6	216
Ashanti	7.4	26.5	-0.9	2.6	9.2	3.7	-0.3	4.2	12.1	2.1	-0.7	507
Brong Ahafo	8.0	25.2	-1.1	0.0	5.4	2.8	-0.3	1.4	13.5	0.3	-0.8	274
Northern	15.4	32.4	-1.2	3.4	12.9	2.0	-0.6	3.4	21.8	0.8	-1.1	360
Upper East	13.8	36.0	-1.4	2.9	10.8	1.3	-0.5	5.5	27.0	1.5	-1.2	116
Upper West	7.9	24.6	-1.0	3.9	13.9	3.0	-0.6	3.3	13.1	0.0	-1.0	66
Mother's education[6]												
No education	11.8	29.6	-1.2	3.5	11.4	4.6	-0.4	3.7	17.2	1.5	-1.0	738
Primary	10.4	31.6	-1.2	2.1	7.7	4.8	-0.2	3.4	13.5	2.0	-0.8	545
Middle/JSS	7.4	25.1	-1.0	1.7	8.3	5.5	-0.2	2.8	12.4	2.2	-0.7	783
Secondary+	5.3	17.5	-0.6	1.1	5.4	7.9	0.1	0.6	6.8	3.3	-0.3	218
Wealth quintile												
Lowest	13.9	35.1	-1.4	2.8	9.4	3.2	-0.4	4.1	19.2	0.7	-1.0	623
Second	12.4	34.1	-1.3	2.3	10.1	3.9	-0.3	4.2	17.4	1.4	-0.9	573
Middle	8.8	28.3	-1.1	2.7	9.4	6.0	-0.2	3.6	12.5	1.9	-0.8	468
Fourth	6.0	21.4	-0.9	1.6	6.1	7.9	-0.1	2.0	8.4	3.3	-0.6	504
Highest	5.3	14.4	-0.5	1.0	6.6	6.3	-0.1	0.8	8.6	3.3	-0.3	356
Total	9.8	28.0	-1.1	2.2	8.5	5.3	-0.2	3.1	13.9	1.9	-0.8	2,525

Note: Table is based on children who slept in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the WHO Child Growth Standards adopted in 2006. The indices in this table are NOT comparable to those based on the previously used NCHS/CDC/WHO Reference. Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight. Total includes cases with information missing on size at birth, mother's nutritional status, and mother's education and are not shown separately.

[1] Includes children who are below –3 standard deviations (SD) from the WHO Child Growth Standards population median

[2] Excludes children whose mothers were not interviewed

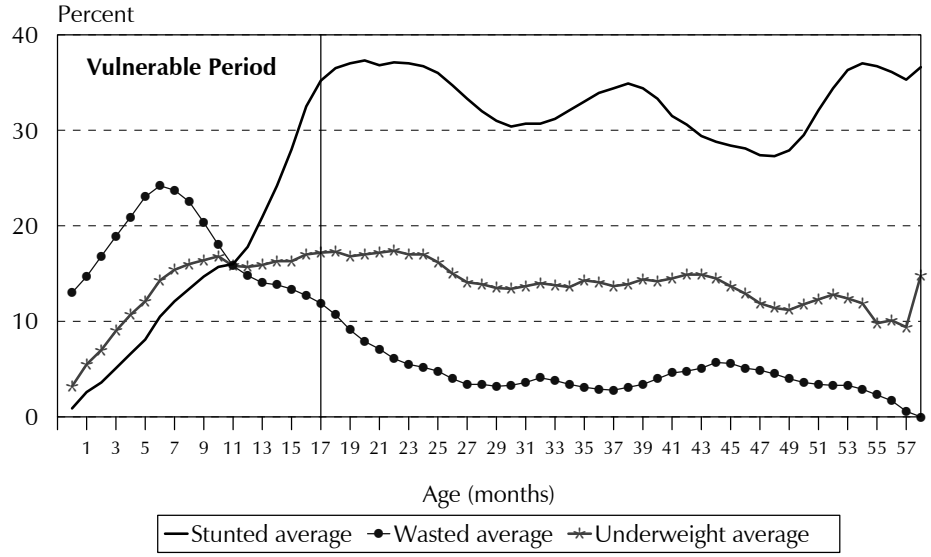
[3] First-born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval

[4] Includes children whose mothers are deceased

[5] Excludes children whose mothers were not weighed and measured. Mother's nutritional status in terms of BMI (Body Mass Index) is presented in Table 11.9.

[6] For women who were not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers were not listed in the Household Questionnaire

Figure 11.1 Nutritional Status of Children by Age



Note: *Stunting* reflects malnutrition; *wasting* reflects acute malnutrition; *underweight* reflects chronic or acute malnutrition or a combination of both. Plotted values are smoothed by a five-month moving average.

GDHS 2008

11.1.3 Levels of Malnutrition

The results show that 28 percent of children under five are stunted (below -2 SD), with 10 percent being severely stunted (-3 SD). Children 18-23 months (40 percent) are most likely to be stunted and those less than 6 months are the least likely to be stunted (4 percent). Male children are slightly more likely to be stunted than female children (30 percent, compared with 26 percent). The extent of stunting decreases as the birth interval and size at birth increase, and as the mother's Body Mass Index (BMI) increases. The level of stunting is higher in the rural areas (32 percent) than in the urban areas (21 percent). Stunting varies by region; it is highest in the Eastern and Upper East regions (38 and 36 percent, respectively) and lowest in the Greater Accra region (14 percent). Stunting decreases as mother's level of education and wealth quintile increase.

The weight-for-height index gives information about children's recent experience with food intake. Wasting represents failure to receive adequate nutrition in the period immediately preceding the survey and may be the result of recent illness or of seasonal variations of food. Overall, 9 percent of children under five are wasted, with 2 percent severely wasted. Wasting is highest among children age 6-8 months (29 percent) and is lowest among children age 48-59 months (3 percent). The level of wasting does not vary much with sex, birth interval, or urban-rural residence. The extent of wasting decreases as the size at birth increases and mother's nutritional status improves. Wasting is more common in the Upper West (14 percent), Northern (13 percent) and Central (12 percent) regions than elsewhere. Wasting generally decreases as mother's level of education and wealth quintile increase.

Table 11.1 highlights another problem among young children in Ghana: 5 percent are overweight [Z-scores are above two standard deviations (+2 SD)]. The highest proportion of overweight children is in age group 9-11 months, with 7 percent of children in that age group being overweight. A higher proportion of children in urban areas are overweight than children in rural areas (7 and 4 percent, respectively). Looking at regional patterns, the prevalence of overweight children ranges from 1 percent in the Upper East region to 12 percent in the Eastern region. Although variations by mother's level of education and wealth quintile are not large, the highest proportions of overweight children are seen among the most educated mothers and mothers who live in wealthier households.

Children whose weight-for-age is below minus two standard deviations (-2 SD) from the median of the reference population are considered underweight. The measure reflects the effects of both acute and chronic malnutrition. Overall, 14 percent of Ghanaian children are underweight, with 3 percent classified as severely underweight. Peak levels of low weight-for-age are found among children age 18-23 months (19 percent), followed by those age 9-11 months (18 percent). Male children are slightly more likely to be underweight than female children (15 and 12 percent, respectively). The percentage of children who are underweight decreases as birth interval, size at birth and mother's nutritional status increase. Children living in rural areas are more likely to be underweight than urban children (16 and 11 percent, respectively). The proportion of underweight children ranges from 7 percent in the Greater Accra region to 27 percent in the Upper East region. Children born to mothers with little or no education are substantially more likely to be underweight than children of more educated women. For example, the proportion of underweight children born to women with no education is 17 percent, compared with 7 percent among children born to women with secondary education or higher. Similarly, children from households in the two wealthiest quintiles are the least likely to be underweight (8-9 percent).

11.1.4 Trends in Children's Nutritional Status

The results of the 2008 GDHS on children's nutritional status can be compared with the results from four earlier surveys conducted in Ghana. However, several factors make this comparison difficult. In the 1988, 1993, and 1998 GDHS surveys, anthropometric measurements were restricted to children born to women interviewed with the Woman's Questionnaire. However, these data are not representative of all children, because they exclude children whose mothers were not in the household (either because they did not live there, or because they had died), children whose mothers were not eligible for the individual interview (i.e., under age 15 or age 50 and over), and children whose mothers did not complete an individual interview. To overcome these biases, the 2003 and 2008 GDHS surveys included height and weight measurements of all children born in the five years preceding the survey and listed in the Household Questionnaire, irrespective of the interview status of their mother.

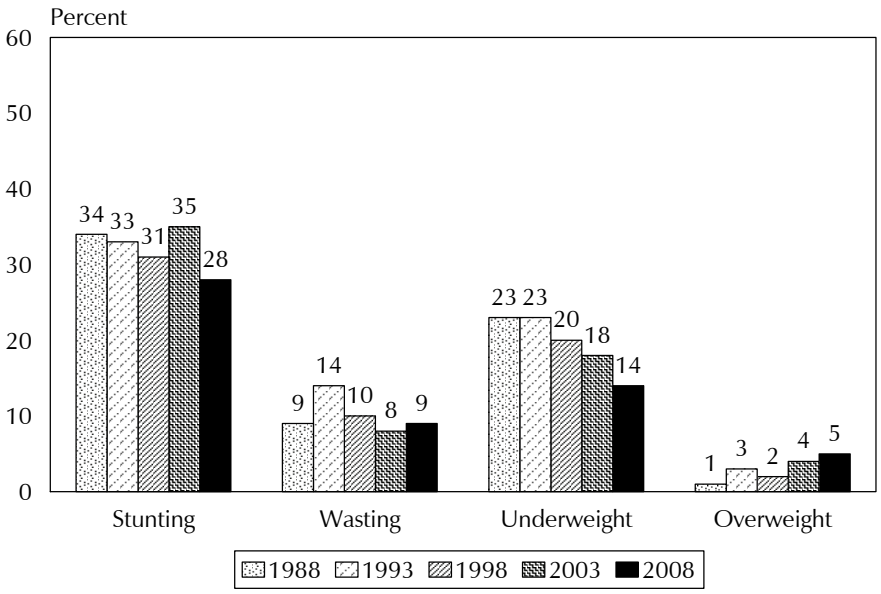
Second, the 2008 GDHS analysis is based on the new WHO child growth reference standards, while all the earlier surveys used the older National Centre for Health Statistics (NCHS) reference standard. As mentioned above, for comparison purposes, data from the 2008 GDHS were also tabulated according to the older reference population (Appendix Table C.7).

Finally, for comparison purposes in this section, data from the 1988, 1993, 1998, 2003, and 2008 GDHS surveys were all re-calculated according to the new reference population, but restricted to children born to women interviewed with the Women's Questionnaire and living with an interviewed mother.

Figure 11.2 shows that the proportion of children under five who are stunted decreased from 34 percent in 1988 to 31 percent in 1998, and then peaked at 35 percent in 2003 before decreasing to 28 percent in 2008. The proportion of children who are wasted has also decreased over the past 15 years from 14 percent in 1993 to 9 percent in 2008, with no marked change over the past five years. The proportion of underweight children decreased from 23 percent in 1988 and 1993 to 14 percent in 2008.

Regarding overweight, the proportion of children whose weight-for-height is above plus two standard deviations (+2 SD) has not changed in the past five years. However, the percentage of children who are overweight has increased steadily over the past 20 years from less than 1 percent in 1988 to 5 percent in 2008.

Figure 11.2 **Trends in Nutritional Status of Children under Five Years**



Note: Based only on children whose mothers were interviewed

11.2 INITIATION OF BREASTFEEDING

Early initiation of breastfeeding is encouraged for a number of reasons. Mothers benefit from early suckling because it stimulates breast milk production and facilitates the release of oxytocin, which helps the contraction of the uterus and reduces post-partum blood loss. The first breast milk contains colostrum, which is highly nutritious and has antibodies that protect the newborn from diseases. Early initiation of breastfeeding also fosters bonding between mother and child.

Table 11.2 shows the percentage of all children born in the five years preceding the survey ever breastfed and for last-born children ever breastfed, the timing of initial breastfeeding, by background characteristics. Overall, 98 percent of children born in the past five years have been breastfed at some time. For last-born children ever breastfed, 52 percent started breastfeeding within one hour of birth and 82 percent started breastfeeding within the first 24 hours after delivery. There are no major differentials in the percentage of children ever breastfed by background characteristics.

The results from the 2008 GDHS show that there is no difference in early initiation of breastfeeding by sex of child. Children in urban areas (55 percent) are slightly more likely to receive breast milk during the first hour after birth than children in rural areas (50 percent). The proportion of children who receive early breastfeeding varies by type of assistance at delivery and place of delivery.

Whereas 56 percent of newborns of mothers who received assistance at delivery from a health professional were breastfed within an hour of birth, only 33 percent of newborns whose mothers receive no assistance at delivery received the same attention. Similarly, children of women who gave birth in a health facility (56 percent) are more likely to initiate breastfeeding early than women who deliver at home (47 percent). The proportion of women initiating breastfeeding within an hour of birth is highest in the Upper East region (68 percent). Early initiation of breastfeeding is below 50 percent for children residing in the Brong Ahafo, Eastern, and Northern regions.

Table 11.2 Initial breastfeeding

Percentage of children born in the five years preceding the survey who were ever breastfed, and for last-born children in the past five years who were ever breastfed, the percentage who started breastfeeding within one hour and within one day of birth, and the percentage who received a prelacteal feed, by background characteristics, Ghana 2008

Background characteristic	Breastfeeding among children born in past five years		Among last-born children ever breastfed:			
	Percentage of children ever breastfed	Number of children born in past five years	Percentage who started breastfeeding within 1 hour of birth	Percentage who started breastfeeding within 1 day of birth[1]	Percentage who received a prelacteal feed[2]	Number of last-born children ever breastfed
Sex						
Male	97.6	1,510	52.2	81.1	18.2	1,067
Female	97.5	1,399	52.5	83.7	17.9	993
Residence						
Urban	97.2	1,104	55.4	85.5	17.5	827
Rural	97.7	1,806	50.2	80.3	18.4	1,234
Assistance at delivery						
Health professional[3]	97.1	1,706	56.0	85.6	15.7	1,264
Traditional birth attendant (trained)	97.1	470	49.8	80.0	19.2	308
Traditional birth attendant (untrained)	98.8	409	43.9	77.4	21.2	261
Other	98.6	236	48.9	74.7	29.7	168
No one	99.2	74	33.0	69.3	16.7	58
Place of delivery						
Health facility	97.2	1,662	56.0	85.6	15.5	1,235
At home	97.9	1,223	47.3	77.9	21.8	816
Other	*	13	*	*	*	10
Region						
Western	98.6	271	58.0	79.7	26.4	187
Central	98.3	292	55.5	79.1	24.8	198
Greater Accra	96.0	346	52.8	81.5	17.7	256
Volta	99.1	244	53.4	97.3	6.8	180
Eastern	98.6	254	47.7	82.1	14.5	182
Ashanti	96.0	545	49.6	78.5	26.9	384
Brong Ahafo	98.8	272	46.6	81.2	13.1	215
Northern	97.1	456	48.2	80.4	9.5	286
Upper East	98.5	148	67.8	91.0	25.7	117
Upper West	95.7	82	60.2	83.2	2.3	57
Mother's education						
No education	97.3	952	50.8	80.5	15.7	636
Primary	96.7	722	53.8	82.4	20.2	493
Middle/JSS	97.9	970	53.3	83.1	18.5	728
Secondary+	99.1	263	49.4	85.5	19.2	201
Wealth quintile						
Lowest	97.9	744	51.2	81.9	18.3	475
Second	98.0	641	45.6	75.7	17.7	452
Middle	97.4	549	52.6	83.8	21.9	393
Fourth	97.0	560	57.0	86.4	14.5	426
Highest	96.9	415	57.0	85.3	18.3	315
Total	97.5	2,909	52.3	82.4	18.1	2,061

Note: Table is based on births in the past five years whether the children were living or dead at the time of interview. Total includes cases with information missing on assistance at delivery, place of delivery, and mother's education that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

[1] Includes children who started breastfeeding within one hour of birth

[2] Children given something other than breast milk during the first three days of life

[3] Doctor, nurse/midwife, auxiliary midwife, or community health officer

The survey results indicate that more than one in five (18 percent) last-born babies ever breastfed received a prelacteal feed, i.e., received something other than breast milk during the first three days of life. Children whose births were assisted by someone other than a health professional or a traditional birth attendant, and children born at home, are more likely to receive a prelacteal feed than children whose births were assisted by a health provider, and children born in a health facility. The practice of giving the baby a prelacteal feed is more common in the Ashanti, Western, Upper East, and Central regions, where more than one in four children are given a prelacteal feed. It is also practiced more commonly among children in households in the middle wealth quintile (22 percent).

Recent trends in breastfeeding indicate that the percentage of children ever breastfed has remained stable at 97-98 percent over the past five years. On the other hand, the percentage of children who started breastfeeding within one hour of birth has increased from 46 to 52 percent over the period, and the percentage who started breastfeeding within 1 day of birth increased from 75 to 82 percent. The proportion of children who received prelacteal feeds decreased slightly from 20 percent to 18 percent between 2003 and 2008.

11.3 BREASTFEEDING STATUS BY AGE

UNICEF and WHO recommend that children be exclusively breastfed during the first 6 months of life and that children be given solid or semi-solid complementary foods in addition to continued breastfeeding from 6 months until age 24 months or more when the child is fully weaned. Exclusive breastfeeding is recommended because breast milk is uncontaminated and contains all the nutrients necessary for children in the first few months of life. In addition, the mother's antibodies in breast milk provide immunity to disease. Early supplementation is discouraged for several reasons. First, it exposes infants to pathogens and increases their risk of infection, especially diarrhoeal diseases. Second, it decreases infants' intake of breast milk and therefore suckling, which reduces breast milk production. Third, in low-resource settings, supplementary food is often nutritionally inferior.

Information on complementary feeding was obtained by asking mothers about the current breastfeeding status of all children under five years of age and—for the youngest child born in the three-year period before the survey and living with the mother—foods and liquids given to the child the day and night before the survey.

Table 11.3 shows the percent distribution of youngest children under three years of age living with the mother by breastfeeding status, and the percentage of all children under three years using a bottle with a nipple, according to age in months. The results presented in Table 11.3 and Figure 11.3 show that breastfeeding duration is long in Ghana. All children under six months in Ghana are breastfed and at age 12-15 months, the vast majority of children (95 percent) are still breastfeeding. By age 20-23 months, 56 percent of children have been weaned.

While breastfeeding extends for a long time in Ghana, exclusive breastfeeding has short duration; 84 percent of children under 2 months of age are exclusively breastfed; by age 4-5 months, only 49 percent are still being exclusively breastfed. Overall, 63 percent of children under 6 months are exclusively breastfed, which is far less than the 100 percent recommended. In addition to breast milk, 3 percent of children under 6 months are given other (non-breast) milk, 17 percent are given water, less than 1 percent are given non-milk liquids or juice, and 17 percent are given complementary food in the form of solid or mushy food. At age 6-9 months, nearly all Ghanaian children are still being breastfed but three in four breastfeeding children are receiving complementary foods in addition to breast milk. Similar patterns are observed for older children; 96 percent of children age 9-11 months are still breastfeeding while 86 percent are receiving complementary foods.

Table 11.3 Breastfeeding status by age

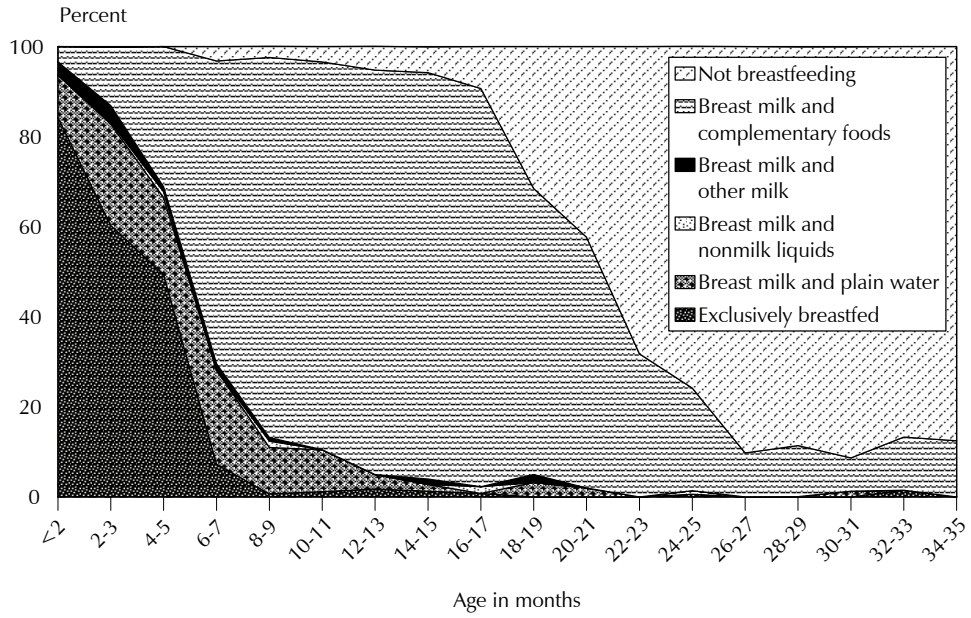
Percent distribution of youngest children under three years who are living with their mother by breastfeeding status and the percentage currently breastfeeding; and the percentage of all children under three years using a bottle with a nipple, according to age in months, Ghana 2008

Age in months	Not breast-feeding	Breastfeeding and consuming: Exclu-sively breast-fed	Plain water only	Non-milk liquids/ juice	Other milk	Comple-mentary foods	Total	Percentage currently breast-feeding	Number of youngest child under three years	Percentage using a bottle with a nipple[1]	Number of all children under three years
<2	0.0	84.3	9.4	0.0	2.9	3.4	100.0	100.0	82	5.4	85
2-3	0.0	60.3	22.5	0.4	3.7	13.0	100.0	100.0	117	13.9	122
4-5	0.0	49.4	17.1	1.3	1.1	31.1	100.0	100.0	109	10.8	111
6-8	2.2	5.3	18.8	0.0	0.9	72.8	100.0	97.8	147	21.1	150
9-11	4.0	0.9	8.3	0.8	0.5	85.6	100.0	96.0	150	12.0	152
12-17	7.0	1.2	1.4	0.6	0.4	89.4	100.0	93.0	305	9.3	312
18-23	46.6	0.0	1.8	0.0	0.7	50.9	100.0	53.4	224	8.7	239
24-35	89.8	0.0	0.0	0.0	0.0	10.2	100.0	10.2	358	3.9	496
0-3	0.0	70.2	17.1	0.2	3.4	9.1	100.0	100.0	198	10.4	206
0-5	0.0	62.8	17.1	0.6	2.6	16.9	100.0	100.0	308	10.5	317
6-9	2.9	4.1	15.9	0.7	1.1	75.3	100.0	97.1	188	20.3	191
12-15	5.5	1.5	2.3	0.0	0.7	90.0	100.0	94.5	191	11.9	194
12-23	23.8	0.7	1.6	0.3	0.5	73.1	100.0	76.2	530	9.1	552
20-23	56.1	0.0	0.9	0.0	0.0	42.9	100.0	43.9	138	11.3	152

Note: Breastfeeding status refers to a 24-hour period (yesterday and the past night). Children who are classified as *breastfeeding and consuming plain water only* consumed no liquid or solid supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, non-milk liquids/juice, other milk, and complementary foods (solids and semi-solids) are hierarchical and mutually exclusive, and their percentages add to 100 percent. Thus, children who receive breast milk and non-milk liquids and who do not receive complementary foods are classified in the non-milk liquid category even though they may also get plain water. Children who receive complementary foods are classified in that category as long as they are breastfeeding as well.

[1] Based on all children under three years

Figure 11.3 Infant Feeding Practices by Age



GDHS 2008

It can be noted that the data reported here on proportion of children less than 6 months who are exclusively breastfed cannot be compared with data from the previous DHS, because the questions on food intake were different in the current survey. The 2008 GDHS asked about more supplementary food items, which could have helped mothers better recall foods given to the infants.

Use of a bottle with a nipple for infant feeding is not widespread in Ghana, which is encouraging because of problems of hygiene that can cause contamination and illness in the child: only 5 percent of the youngest infants (under 2 months) are bottle-fed. This proportion peaks at 21 percent among children age 6-8 months before declining. The percentage of young children bottle-fed has not changed over the past five years. In the 2008 GDHS, 11 percent of children under six months were given a feeding bottle with a nipple, compared with 12 percent of children in the 2003 GDHS.

11.4 Duration and Frequency of Breastfeeding

Table 11.4 shows the median duration of breastfeeding by selected background characteristics. The estimates of median and mean durations of breastfeeding are based on current status data, that is, the proportion of children born in the three years preceding the survey who were being breastfed at the time of the survey.

The median duration of any breastfeeding in Ghana is long—20 months, although the median duration of exclusive breastfeeding is short—only 3 months. Differences in both these durations by background characteristics are small. Children in rural areas are breastfed somewhat longer than children in urban areas (21 months, compared with 19 months). The median duration of any breastfeeding decreases with increasing level of education and increasing wealth quintile.

Almost all children under 6 months of age (96 percent) are breastfed at least six times a day. On average, children are fed more frequently during the day (about 9 times) than during the night (about 6 times). The frequency of breastfeeding varies only slightly by background characteristics.

11.5 Types of Complementary Foods

UNICEF and WHO recommend the introduction of solid foods to infants around the age of 6 months because by that age breast milk alone is no longer sufficient to maintain a child's optimal growth. In the transition to eating the same food as the rest of the family, children from the age of 6 months should be fed small quantities of solid and semi-solid foods throughout the day. During this transition period (age 6-23 months), the prevalence of malnutrition increases substantially in many countries because of increased infections and poor feeding practices.

Table 11.4 Median duration and frequency of breastfeeding

Median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children born in the three years preceding the survey, percentage of breastfeeding children under six months living with the mother who were breastfed six or more times in the 24 hours preceding the survey, and mean number of feeds (day/night), by background characteristics, Ghana 2008

	Median duration (months) of breastfeeding among children born in the past three years[1]			Frequency of breastfeeding among children under six months of age[2]			
Background characteristic	Any breast-feeding	Exclusive breast-feeding	Predominant breast-feeding[3]	Percentage breastfed 6+ times in past 24 hours	Mean number of day feeds	Mean number of night feeds	Number of children
Sex							
Male	20.2	3.6	5.6	97.3	9.1	5.7	163
Female	20.3	3.2	4.8	94.7	8.5	5.4	143
Residence							
Urban	18.9	3.9	5.4	99.5	8.8	5.7	127
Rural	21.3	2.9	5.1	93.6	8.8	5.5	179
Mother's education							
No education	21.8	3.5	5.5	97.7	9.1	6.1	92
Primary	19.9	3.0	4.6	94.3	8.6	5.1	76
Middle/JSS	19.6	2.9	5.0	94.3	8.4	5.4	99
Secondary+	(19.8)	(4.6)	(6.0)	100.0	9.4	5.6	39
Wealth quintile							
Lowest	23.9	3.3	5.5	95.4	8.8	5.8	70
Second	20.8	2.8	4.5	92.0	9.2	5.4	62
Middle	20.1	3.0	5.2	100.0	9.4	6.2	61
Fourth	19.2	3.7	5.6	95.0	7.9	5.1	67
Highest	(17.1)	(3.9)	(5.2)	(98.7)	(8.9)	(5.4)	47
Total	20.2	3.3	5.2	96.1	8.8	5.6	306
Mean for all children	20.4	4.4	6.2	na	na	na	na

Note: Median and mean durations are based on the distribution at the time of the survey of the proportion of births, by months since birth. Includes both living children and children who were dead at the time of the survey. Figures in parentheses are based on 25-49 unweighted cases. The total includes cases with information missing on mother's education that are not shown separately.
na = Not applicable
[1] It is assumed that non-last-born children and last-born children not currently living with the mother are not currently breastfeeding.
[2] Excludes children without a valid answer on the number of times breastfed
[3] Either exclusively breastfed or received breast milk and plain water, and/or non-milk liquids only

Table 11.5 provides information on the types of foods given to the youngest children under three years of age, living with their mother, on the day and night preceding the interview, according to breastfeeding status. Overall, 68 percent of breastfeeding children received solid or semi-solid foods. The most common complementary foods were made from grain (64 percent); meat, fish, poultry, and eggs (47 percent); fruits and vegetables other than those rich in vitamin A (37 percent); fruits and vegetables rich in vitamin A (33 percent); and foods made from roots and tubers (30 percent). Consumption of anything cooked with butter, fat, or oil generally begins at 4-5 months (3 percent), increasing to 55 percent at 24-35 months.

Table 11.5 shows that almost 100 percent of non-breastfeeding children under three years received solid or semi-solid foods in the day and night preceding the interview, indicating that consumption of complementary foods is generally higher among non-breastfeeding children than breastfeeding children. Ninety-six percent of non-breastfeeding children received foods made from grains; almost nine in ten (89 percent) were given meat, fish, poultry, or eggs; 65 percent ate fruits and vegetables other than those rich in vitamin A; 59 percent ate fruits and vegetables rich in vitamin A; and 63 percent consumed food made from roots and tubers. Six in ten non-breastfeeding children under three years consumed food made with oil, fat, or butter, while about half (49 percent) ate sugary foods.

Table 11.5 Foods and liquids consumed by children in the day and night preceding the interview

Percentage of youngest children under three years of age who are living with the mother, by type of foods consumed in the day and night preceding the interview, according to breastfeeding status and age, Ghana 2008

	Liquids			Solid or semi-solid foods											
Age in months	Infant formula	Other milk[1]	Other liquids[2]	Fortified baby foods	Food made from grains[3]	Fruits and vegetables rich in vitamin A[4]	Other fruits and vegetables	Food made from roots and tubers	Food made from legumes and nuts	Meat, fish, poultry, and eggs	Cheese, yogurt, other milk product	Any solid or semi-solid food	Food made with oil, fat, or butter	Sugary foods	Number of children
BREASTFEEDING CHILDREN															
0-1	2.9	1.4	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	1.5	3.4	0.0	0.0	82
2-3	6.8	3.7	1.1	0.5	7.9	0.7	0.0	0.7	1.7	0.5	2.2	12.1	0.0	0.9	117
4-5	6.7	13.5	3.3	5.4	29.1	3.7	1.0	2.9	6.5	4.4	3.6	31.1	2.5	5.7	109
6-8	13.7	17.9	11.2	18.2	71.4	22.6	31.6	16.6	9.7	28.4	2.9	74.4	18.1	19.7	144
9-11	11.9	20.4	18.7	21.9	84.9	41.6	49.5	34.0	12.7	59.4	9.4	89.2	32.7	31.6	144
12-17	7.2	22.4	30.1	10.9	89.3	54.6	63.3	51.4	25.8	78.6	6.7	95.7	47.9	37.0	284
18-23	1.1	14.8	27.2	1.9	91.3	58.8	57.9	52.3	27.9	81.0	5.1	95.3	36.4	29.9	120
24-35	0.0	10.4	29.9	8.4	98.3	56.8	52.0	53.7	19.2	87.0	4.5	100.0	55.3	27.6	37
6-23	8.5	19.7	23.3	13.1	85.0	46.0	52.9	40.7	20.1	64.6	6.2	89.9	36.6	31.1	691
Total	7.4	15.5	17.1	9.7	64.3	33.2	37.3	29.5	15.0	46.7	5.1	68.4	26.6	22.4	1,035
NON-BREASTFEEDING CHILDREN															
6-17	(19.0)	(40.5)	(34.1)	(33.5)	(98.3)	(68.6)	(56.2)	(43.8)	(16.8)	(82.6)	(20.6)	(99.1)	(57.9)	(48.9)	30
18-23	13.0	39.3	43.2	10.6	96.0	56.5	63.6	61.9	30.0	86.2	12.7	99.0	58.1	54.9	105
24-35	3.3	23.7	40.7	7.8	95.2	59.0	66.4	65.4	26.0	89.9	9.9	99.7	60.8	47.1	322
6-23	14.4	39.6	41.1	15.7	96.5	59.2	62.0	57.9	27.0	85.4	14.5	99.1	58.0	53.6	135
Total	6.6	28.4	40.8	10.1	95.6	59.1	65.1	63.2	26.3	88.6	11.2	99.5	60.0	49.0	456

Note: Breastfeeding status and food consumed refer to a 24-hour period (yesterday and the past night). Figures in parentheses are based on 25-49 unweighted cases.

[1] Other milk includes fresh, tinned, and powdered cow or other animal milk

[2] Does not include plain water

[3] Includes fortified baby food

[4] Includes fruits and vegetables such as pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, dark green leafy vegetables, mangoes, papayas, and other locally grown fruits and vegetables that are rich in vitamin A

11.6 INFANT AND YOUNG CHILD FEEDING (IYCF) PRACTICES

Infant and young child feeding (IYCF) practices include timely initiation of feeding solid/semi-solid foods from age 6 months and increasing the amount and variety of foods and frequency of feeding as the child gets older, while maintaining frequent breastfeeding. Guidelines have been established with respect to IYCF practices for children age 6-23 months (PAHO/WHO, 2003; WHO, 2005).

Table 11.6 presents the results of the 2008 GDHS according to IYCF practices for breastfed and non-breastfed children living with their mother. The indicators focus on the percentage of children for whom feeding practices meet minimum standards with respect to—

- Food diversity (i.e., the number of food groups consumed),
- Feeding frequency (i.e., the number of times a child is fed), and
- Consumption of breast milk or other milks or milk products.

Breastfed children are considered fed in accordance with the minimum IYCF standards if they consume at least three food groups[1] and receive foods other than breast milk at least twice per day in the case of children age 6-8 months and at least three times per day in the case of children age 9-23 months. Non-breastfed children are considered to be fed in accordance with the minimum IYCF standards if they consume milk or milk products, are fed four food groups (including milk products), and are fed at least four times per day.

Among breastfed children age 6-23 months, about seven in ten (68 percent) were given foods from three or more food groups in the 24 hours preceding the survey, and half were fed the minimum number of times in the past 24 hours. More than four in ten breastfed children (41 percent) fall into both categories, i.e., their feeding practices meet minimum standards with respect to food diversity and feeding frequency (Figure 11.4). The proportion of breastfed children age 6-23 months who receive the recommended variety of foods the minimum number of times a day increases with children's age from 28 percent among children age 6-8 months to 50 percent among those age 18-23 months. There are slight variations in the proportion of breastfed children who meet both criteria by sex of child and urban-rural residence; however, the differentials by region are larger. The percentage of breastfed children who are fed from three or more food groups the minimum number of times a day ranges from 24 percent in the Northern region to 72 percent in Volta. There is no clear pattern in the proportion of breastfed children who meet the IYCF criteria by mother's level of education and household wealth quintile.

Among non-breastfed children age 6-23 months, 43 percent are given milk or milk products, 74 percent are given food from at least four food groups, and 22 percent are fed four or more times per day. However, only about one-tenth (11 percent) of non-breastfeeding children are fed in accordance with all three IYCF practices (data not shown).

[1] Food groups used in the assessment of minimum standard of feeding practices include: infant formula, milk other than breast milk, cheese or yogurt or other milk products; foods made from grains, roots, and tubers, including porridge and fortified baby food from grains; fruits and vegetables rich in vitamin A; other fruits and vegetables; eggs; meat, poultry, fish, and shellfish (and organ meats); beans, peas, and nuts; and foods made with oil, fat, or butter.

Table 11.6 Infant and young child feeding (IYCF) practices

Percentage of youngest children age 6-23 months living with their mother who are fed according to three IYCF feeding practices, by breastfeeding status, number of food groups consumed and number of times they were fed during the day and night preceding the survey, by background characteristics, Ghana 2008

Background characteristic	Among breastfed children 6-23 months, percentage fed:			Number of breast-fed children 6-23 months	Among all children 6-23 months, percentage fed:				Number of all children 6-23 months
	3+ food groups[1]	Minimum times or more[2]	Both 3+ food groups and minimum times or more		Breast milk or milk products[3]	3+ or 4+ food groups[4]	Minimum times or more[5]	With all 3 IYCF practices	
Age									
6-8	33.0	55.1	28.3	144	97.8	34.5	53.9	27.7	147
9-11	67.7	43.9	37.4	144	99.3	68.2	43.6	36.7	150
12-17	80.0	50.1	45.7	284	96.1	79.2	47.8	43.7	305
18-23	81.0	53.1	50.1	120	73.0	78.0	39.3	31.3	224
Sex									
Male	69.0	48.8	40.2	337	92.2	71.4	46.1	36.5	403
Female	66.8	51.9	42.0	354	89.3	66.6	45.5	35.9	424
Residence									
Urban	71.6	52.3	42.1	235	88.8	73.7	46.6	36.2	311
Rural	65.9	49.3	40.6	456	91.9	66.0	45.3	36.2	516
Region									
Western	74.3	36.3	29.6	60	90.3	72.5	31.7	26.4	75
Central	(67.5)	(47.8)	(39.6)	62	81.4	72.2	36.6	30.6	84
Greater Accra	75.5	66.5	55.1	64	87.4	77.9	57.2	44.5	87
Volta	76.1	82.1	72.4	70	97.4	76.5	81.3	69.6	75
Eastern	68.3	37.8	32.2	60	85.2	66.7	32.2	26.1	79
Ashanti	62.3	55.3	40.4	130	87.6	65.1	50.1	34.2	162
Brong Ahafo	67.6	61.6	49.0	69	98.0	66.7	58.6	46.3	77
Northern	56.6	29.0	23.9	109	94.7	56.9	27.9	22.4	117
Upper East	75.6	34.9	29.0	43	99.1	76.5	33.5	27.9	45
Upper West	75.2	55.0	49.1	24	97.1	74.8	53.4	47.7	25
Mother's education									
No education	64.0	44.0	37.2	235	92.2	63.9	40.0	33.8	259
Primary	66.2	53.0	43.7	155	84.8	68.1	45.5	34.7	199
Middle/JSS	71.7	55.2	44.1	244	92.1	73.0	51.2	39.2	295
Secondary+	71.9	48.6	37.4	57	96.3	72.9	45.4	36.5	72
Wealth quintile									
Lowest	63.2	47.0	38.4	193	97.5	63.2	45.9	37.0	201
Second	67.7	51.1	43.6	163	87.2	66.7	44.6	37.7	189
Middle	69.0	52.2	41.9	131	92.4	69.8	46.8	37.3	153
Fourth	68.7	49.9	42.3	126	85.1	71.4	41.9	33.3	166
Highest	76.2	55.1	39.4	78	90.7	77.9	51.8	35.2	117
Total	67.9	50.4	41.1	691	90.7	68.9	45.8	36.2	826

Note: Figures in parentheses are based on 25-49 unweighted cases.

[1] Food groups: a) infant formula, milk other than breast milk, cheese or yogurt or other milk products; b) foods made from grains, roots, and tubers, including porridge and fortified baby food from grains; c) vitamin A-rich fruits and vegetables (and red palm oil); d) other fruits and vegetables; e) eggs; f) meat, poultry, fish, and shellfish (and organ meats); g) legumes and nuts; h) foods made with oil, fat, or butter.

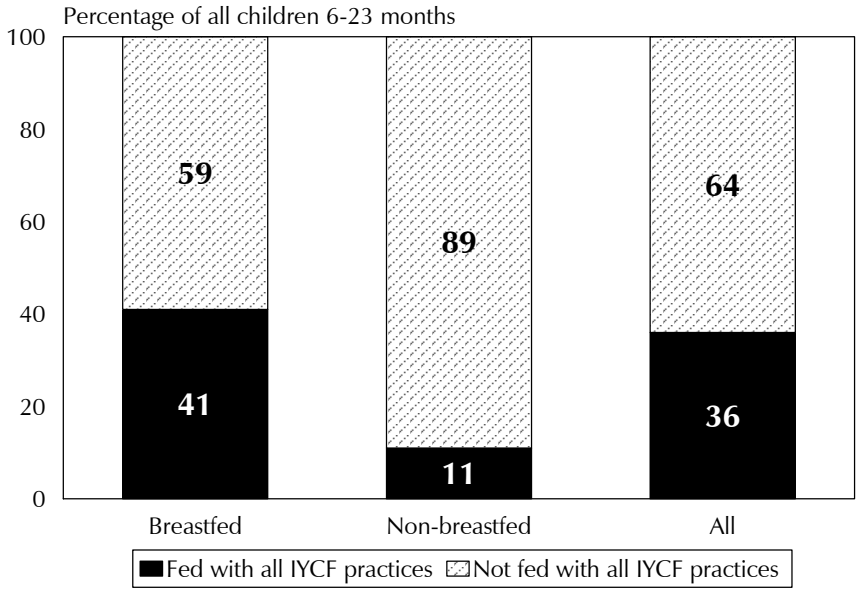
[2] At least twice a day for breastfed infants age 6-8 months and at least three times a day for breastfed children age 9-23 months

[3] Includes commercial infant formula, fresh, tinned, and powdered animal milk, and cheese, yogurt and other milk products

[4] 3+ food groups for breastfed children and 4+ food groups for non-breastfed children

[5] Fed solid or semi-solid food at least twice a day for infants 6-8 months, 3+ times for other breastfed children, and 4+ times for non-breastfed children

Figure 11.4 Infant and Young Child Feeding (IYCF) Practices



GDHS 2008

The results in Table 11.6 indicate that a large majority of young children in Ghana are not being fed appropriately. Overall, feeding practices meet the minimum standards for only 36 percent of children age 6-23 months. The most common problem with feeding practices is inadequate number of feedings. More than nine in ten (91 percent) children age 6-23 months received breast milk or milk products and about seven in ten (69 percent) received foods from the recommended number of food groups for their age. However, only 46 percent were fed the minimum number of times. Appropriate feeding practices are more common for breastfed children than non-breastfed children (41 and 11 percent, respectively). Children age 12-17 months (44 percent) are the most likely to be fed according to all three IYCF practices, while those age 6-8 months (28 percent) are the least likely to be fed according to IYCF practices. There is very little difference in feeding practices between girls and boys or by urban-rural residence. Among regions, the percentage of children who are fed appropriately is highest in Volta region (70 percent) and lowest in Northern region (22 percent). Again, the relationship between the proportion of children who are fed appropriately and mother's level of education and household wealth quintile does not show a clear pattern.

11.7 ANAEMIA IN CHILDREN

Anaemia is a condition characterised by a reduction in the red blood cell volume and a decrease in the concentration of haemoglobin in the blood. Haemoglobin is necessary for transporting oxygen to tissues and organs in the body. About half of the global burden of anaemia is due to iron deficiency. Iron deficiency, in turn, is largely due to an inadequate dietary intake of bioavailable iron, increased iron requirements during rapid growth periods (such as pregnancy and infancy), and increased blood loss due to hookworm or schistosome infestation. Nutritional anaemia includes the anaemia burden due to deficiency in iron plus deficiencies in folate, vitamins B and B_{12}, and certain trace elements involved with red blood cell production. Anaemia in children is associated with impaired mental and physical development and with increased morbidity and mortality. Anaemia can be a particularly serious problem for pregnant women, leading to premature delivery and low birth weight.

The most common causes of anaemia in Ghana are inadequate dietary intake of iron, malaria, and intestinal worm infestation (GHS, 2003). Iron and folic acid supplementation and anti-malarial prophylaxis for pregnant women, promotion of the use of insecticide-treated bed nets by pregnant women and children under five, and six-month de-worming for children age two to five years are some of the important measures to reduce the anaemia burden among vulnerable groups.

The 2008 GDHS included anaemia testing of children age 6-59 months and women age 15-49 in every second household selected for the 2008 GDHS sample. Anaemia levels were determined by measuring the level of haemoglobin in the blood, with a decreased concentration characterising anaemia. For haemoglobin measurements, a drop of capillary blood was taken with a finger prick (using sterile, disposable instruments). Haemoglobin concentration was measured using the HemoCue photometer system. As described in Chapter 1, trained personnel with each 2008 GDHS interviewing team performed the testing procedures on eligible, consenting respondents.

Table 11.7 presents anaemia prevalence for children age 6-59 months. The results are based on tests of 2,313 (de facto) children present at the time of testing, whose parents consented to their being tested, and whose haemoglobin results represented plausible data. Children are classified into three groups according to the level of haemoglobin in their blood:[2]

- Mild: haemoglobin concentration 10.0-10.9 g/dL
- Moderate: haemoglobin concentration 7.0-9.9 g/dL
- Severe: haemoglobin concentration less than 7.0 g/dL

Overall, 78 percent of children age 6-59 months in Ghana have some level of anaemia, including 23 percent of children who are mildly anaemic, 48 percent who are moderately anaemic, and 7 percent of children with severe anaemia. Prevalence of any anaemia increases with age to peak at 88 percent for the age groups 9-11 months and 12-17 months, after which it declines to 70 percent for the age group 48-59 months.

Anaemia is slightly more common in boys (79 percent) than in girls (77 percent). Children in rural areas (84 percent) are more likely than children in urban areas (68 percent) to be anaemic. By region, children in the Upper East and Upper West regions (89 and 88 percent, respectively) are the most likely to be anaemic, while children in the Greater Accra region are the least likely to be anaemic (62 percent). The percentage of children with anaemia decreases as the level of mother's education increases. For example, the prevalence of anaemia is 83 percent among children of uneducated mothers, compared with 58 percent among children of mothers with secondary or higher education. Similarly, the prevalence of anaemia in children decreases with increasing wealth quintile from 87 percent among children in the lowest wealth quintile to 61 percent among children in the highest quintile.

The prevalence of anaemia among children has increased slightly over the past five years, from 76 percent in 2003 to 78 percent in 2008 (Figure 11.5).

[2] The classification is based on criteria developed by WHO (DeMaeyer et al., 1989). Because haemoglobin levels vary by altitude, each child's result should be adjusted based on altitude measurements taken in the sample cluster where they were measured. However, in the GDHS 2008, adjustments for altitude were not made because none of the children were living above 1,000 metres.

Table 11.7 Prevalence of anaemia in children

Percentage of children age 6-59 months classified as having anaemia, by background characteristics, Ghana 2008

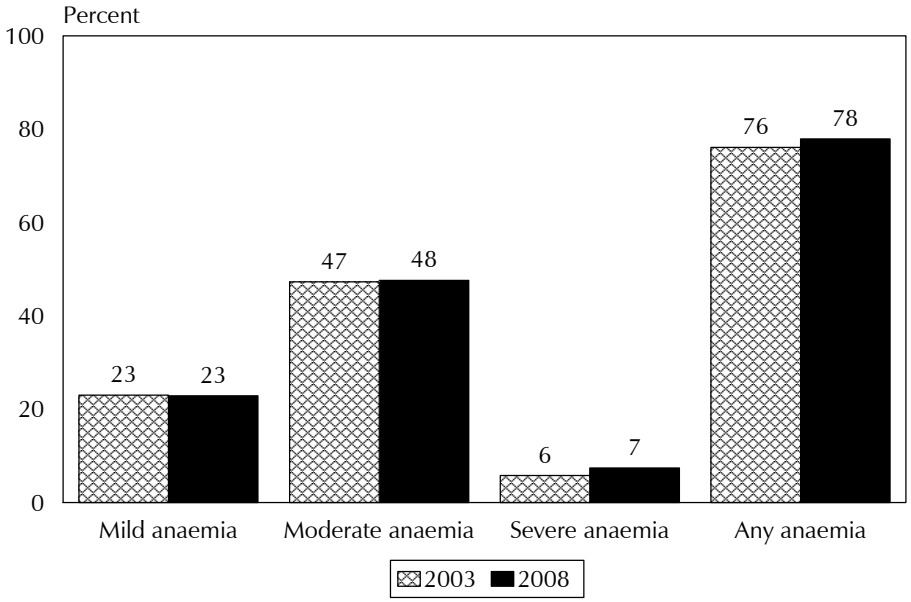
Background characteristic	Anaemia status by haemoglobin level: Mild (10.0-10.9 g/dL)	Moderate (7.0-9.9 g/dL)	Severe (below 7.0 g/dL)	Any anaemia	Number of children
Age in months					
6-8	16.5	53.5	6.0	76.0	103
9-11	18.8	57.1	11.8	87.8	139
12-17	19.1	58.2	10.9	88.3	293
18-23	23.2	48.0	9.4	80.7	222
24-35	21.9	49.1	8.6	79.7	482
36-47	26.5	42.9	6.0	75.4	512
48-59	24.4	41.3	4.3	70.0	562
Sex					
Male	23.1	48.2	7.8	79.1	1,186
Female	22.6	46.9	7.1	76.6	1,126
Mother's interview status					
Interviewed	22.5	47.8	7.7	77.9	2,037
Not interviewed but in household	19.4	57.0	7.2	83.6	45
Not interviewed, and not in the household[1]	27.1	44.0	5.6	76.7	231
Residence					
Urban	24.8	37.7	5.4	67.9	887
Rural	21.7	53.8	8.7	84.1	1,426
Region					
Western	16.7	52.5	11.2	80.4	218
Central	22.8	56.8	4.9	84.5	219
Greater Accra	31.7	26.2	4.2	62.1	267
Volta	20.1	53.3	5.3	78.7	198
Eastern	26.1	45.3	1.8	73.1	211
Ashanti	23.3	44.8	9.8	77.9	453
Brong Ahafo	25.0	47.1	6.2	78.3	249
Northern	16.0	53.5	11.9	81.4	326
Upper East	31.4	51.4	5.7	88.5	109
Upper West	13.7	64.2	10.3	88.2	62
Mother's education[2]					
No education	17.9	54.5	10.2	82.6	668
Primary	23.5	50.1	6.9	80.5	501
Middle/JSS	25.0	44.8	6.8	76.6	699
Secondary+	26.3	28.5	2.9	57.7	189
Wealth quintile					
Lowest	20.9	55.1	11.4	87.4	570
Second	21.8	52.1	9.7	83.6	543
Middle	21.7	54.0	5.8	81.5	418
Fourth	21.4	41.1	5.2	67.8	457
Highest	31.7	27.7	1.8	61.2	325
Total	22.9	47.6	7.4	77.9	2,313

Note: Table is based on children who slept in the household the night before the interview. Haemoglobin in grams per decilitre (g/dL). Total includes cases with information missing on mother's education that are not shown separately.

[1] Includes children whose mothers are dead

[2] For women who were not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers were not listed in the Household Questionnaire.

Figure 11.5 Trends in Anaemia Status among Children under Five Years



The World Health Organisation considers the level of anaemia observed among young children in Ghana to be a major public health concern.[3] Compared with estimates from recent Demographic and Health Surveys conducted in the region, the prevalence of any anaemia among children in Ghana (78 percent) is similar to the prevalence in **Benin**: 78 percent in 2006 (INSAE and Macro International Inc., 2007), **Guinea**: 76 percent in 2005 (DNS and ORC Macro, 2006), and **Sierra Leone**: 76 percent in 2008 (SSL and ICF Macro, 2009), but lower than the prevalence in **Mali**: 81 percent in 2006 (CPS/MS, DNSI/MEIC and Macro International Inc., 2007), **Senegal**: 83 percent in 2005 (Ndiaye and Ayad, 2006), and **Niger**: 84 percent in 2006 (INS and Macro International Inc., 2007).

11.8 MICRONUTRIENT INTAKE AMONG CHILDREN

Micronutrient deficiency is a serious contributor to childhood morbidity and mortality. Children can receive micronutrients from foods, food fortification, and direct supplementation. Table 11.8 shows indicators used to measure children's intake of several key micronutrients.

Vitamin A is an essential micronutrient for the immune system and plays an important role in maintaining the epithelial tissue in the body. Severe vitamin A deficiency can cause eye damage. Vitamin A deficiency can also increase the severity of infections such as measles and diarrhoeal diseases in children and slow recovery from illness. Vitamin A is found in breast milk, other milks, liver, eggs, fish, butter, red palm oil, mangoes, papayas, carrots, pumpkins, yellow-orange sweet potatoes, and dark green leafy vegetables. The liver can store an adequate amount of the vitamin for 4-6 months. Periodic dosing (usually every 6 months) of vitamin A supplements is one method of ensuring that children at risk do not develop vitamin A deficiency.

[3] WHO considers anaemia prevalence of over 40 percent in a population as a major public health problem, from 20-40 percent is considered a medium-level public health problem, and 5-19.9 percent is a mild public health problem (World Health Organisation, 2001).

Table 11.8 Micronutrient intake among children

Among youngest children age 6-35 months living with their mother, the percentage who consumed vitamin A-rich and iron-rich foods in the day and night preceding the survey, and among all children age 6-59 months, the percentages who were given vitamin A supplements in the six months preceding the survey, the percentage who were given iron supplements in the past seven days, and the percentage who were given de-worming medication in the six months preceding the survey, by background characteristics, Ghana 2008

	Among youngest children age 6-35 months living with the mother:			Among all children age 6-59 months:			
Background characteristic	Percentage who consumed foods rich in vitamin A in past 24 hours[1]	Percentage who consumed foods rich in iron in past 24 hours[2]	Number of children	Percentage given vitamin A supplements in past 6 months	Percentage given iron supplements in past 7 days	Percentage given de-worming medication in past 6 months[3]	Number of children
Age in months							
6-8	36.5	30.0	147	67.8	23.3	7.5	150
9-11	70.3	60.3	150	78.4	27.0	20.0	152
12-17	86.0	78.7	305	68.9	30.9	38.6	312
18-23	89.5	83.5	224	64.4	32.7	43.5	239
24-35	93.2	89.6	358	52.8	32.6	48.3	496
36-47	na	na	na	49.3	23.3	47.6	506
48-59	na	na	na	43.9	24.0	47.6	559
Sex							
Male	81.3	76.0	589	57.6	27.4	42.9	1,243
Female	80.2	73.0	596	53.9	27.7	40.9	1,171
Breastfeeding status							
Breastfeeding	72.9	65.7	728	69.5	26.4	26.3	743
Not breastfeeding	93.1	88.5	454	49.8	28.3	49.6	1,637
Mother's age							
15-19	77.1	70.7	61	52.7	30.4	39.9	82
20-29	79.4	73.1	617	56.2	29.1	43.2	1,150
30-39	82.0	76.3	406	58.1	26.5	42.7	908
40-49	85.7	78.2	100	47.3	23.6	34.7	274
Residence							
Urban	82.0	79.0	444	57.8	34.2	52.8	906
Rural	79.9	71.8	740	54.6	23.5	35.4	1,508
Region							
Western	79.5	77.8	112	60.3	34.7	42.0	225
Central	80.9	75.7	121	58.7	29.9	49.8	229
Greater Accra	85.0	83.2	134	53.9	35.8	55.6	289
Volta	82.3	76.8	99	56.6	20.1	29.6	208
Eastern	81.1	73.7	106	50.1	32.7	48.6	216
Ashanti	80.1	72.0	230	65.3	36.5	61.7	468
Brong Ahafo	79.3	74.7	115	49.7	19.3	39.8	234
Northern	76.5	68.7	166	41.2	16.3	13.8	357
Upper East	85.8	74.3	64	67.3	13.9	16.2	125
Upper West	81.6	67.3	36	66.4	17.1	40.2	63
Mother's education							
No education	78.1	69.7	374	51.1	17.3	23.9	791
Primary	81.4	77.4	294	56.0	27.1	41.4	590
Middle/JSS	83.2	76.0	416	59.0	36.4	54.5	819
Secondary+	78.2	78.2	100	60.8	32.4	61.6	213
Wealth quintile							
Lowest	80.2	69.1	291	48.4	16.4	21.2	621
Second	77.7	69.4	270	57.1	23.5	39.8	546
Middle	80.1	75.9	215	54.3	30.3	47.7	441
Fourth	81.9	78.6	237	63.1	37.8	54.3	459
Highest	85.6	84.4	171	59.4	36.7	58.9	347
Total	80.7	74.5	1,184	55.8	27.5	41.9	2,414

Note: Information on vitamin A and iron supplements and de-worming medication is based on the mother's recall. Total includes cases with information missing on breastfeeding status and mother's education that are not shown separately.
na = Not applicable
[1] Includes meat (and organ meat), fish, poultry, eggs, pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, dark green leafy vegetables, mango, papaya, and other locally grown fruits and vegetables that are rich in vitamin A
[2] Includes meat (including organ meat), fish, poultry, and eggs
[3] De-worming for intestinal parasites is commonly done for helminthes and for schistosomiasis.

Iron is essential for cognitive development. Low iron intake can also contribute to anaemia. Iron requirements are greatest between the ages of 6 and 12 months, when growth is extremely rapid. The 2008 GDHS collected information on the consumption of foods rich in vitamin A and foods rich in iron.

Table 11.8 shows that more than eight in ten (81 percent) children age 6-35 months living with the mother consumed foods rich in vitamin A in the 24 hours preceding the survey, and three-fourths consumed foods rich in iron. There is a steady increase with age in the proportion of children who eat foods rich in vitamin A and iron, from 37 percent of children 6-8 months to 93 percent of those age 24-35 months for foods rich in vitamin A and from 30 percent of children 6-8 months to 90 percent of those 24-35 months for foods rich in iron. Male children are slightly more likely to have consumed foods rich in iron than female children. Children who are not breastfeeding are more likely to consume foods rich in vitamin A and iron, compared with their breastfeeding counterparts, presumably because they are older than breastfeeding children. Children born to the youngest mothers (15-19) are somewhat less likely to consume vitamin A-rich foods or iron-rich foods (77 and 71 percent, respectively), compared with those born to older women. Consumption of foods rich in vitamin A or iron is higher among children in urban areas than children in rural areas. Consumption of vitamin A foods is highest among children in the Upper East region (86 percent) and lowest in the Northern region (77 percent). Consumption of iron-rich foods ranges from 67 percent in the Upper West region to 83 percent in the Greater Accra region. Consumption of vitamin A or iron-rich foods among children age 6-35 months generally increases with increasing wealth quintile. Mother's level of education is not clearly related to consumption of these foods by young children.

The 2008 GDHS also collected information on vitamin A supplementation and iron supplementation. As shown in Table 11.8, more than half (56 percent) of all children age 6-59 months received vitamin A supplements in the six months preceding the survey. Supplementation is higher among younger children age 6-23 months than older children age 24-59 months. Male children are more likely to have received a vitamin A supplement in the past 6 months than female children (58 and 54 percent, respectively), and children who are breastfeeding are more likely than non-breastfeeding children to have received a vitamin A supplement (70 and 50 percent, respectively). Children of the oldest mothers age 40-49 are the least likely (47 percent) to have received a vitamin A supplement, compared with children of younger mothers (53-58 percent). Children in urban areas (58 percent) are slightly more likely to receive a vitamin A supplement than children in rural areas (55 percent). The proportion of children receiving vitamin A supplements is highest in the Upper East (67 percent), Upper West (66 percent), and Ashanti (65 percent) regions and lowest in the Northern region (41 percent). The proportion of children receiving a vitamin A supplement is lowest for children of uneducated mothers (51 percent) and children in households in the lowest wealth quintile (48 percent). The proportion of children age 6-59 months who received vitamin A supplementation in the preceding 6 months has declined substantially, from 78 percent in 2003 to 56 percent in 2008. However, in 2008, twice as many children under three who live with their mother consumed fruits and vegetables rich in vitamin A, compared with their counterparts in 2003 (81 and 41 percent, respectively).

Regarding iron supplementation, only 28 percent of children age 6-59 months received an iron supplement in the seven days preceding the survey. Contrary to vitamin A supplementation, iron supplementation is slightly higher among non-breastfeeding children than among children who are breastfeeding. Children in urban areas are more likely than children in rural areas to have received iron supplementation in the past seven days (34 and 24 percent, respectively). Consumption of iron supplements ranges from 14 percent in the Upper East region to 37 percent in the Ashanti region.

Because intestinal worms can contribute to both anaemia and vitamin A deficiency, the 2008 GDHS collected information on whether children age 6-59 months had been given de-worming medication. The results, shown in Table 11.8, indicate that 42 percent of children age 6-59 months received de-worming medication in the six months preceding the survey. Older children age 24-59 months, non-breastfeeding children, children in urban areas and in the Ashanti and Greater Accra regions, and children whose mothers have more education and are in the higher wealth quintiles are more likely to receive de-worming medication than other children.

11.9 NUTRITIONAL STATUS OF WOMEN

Anthropometric data on height and weight were collected for interviewed women age 15-49. Two indicators of nutritional status based on these data are presented in this report: the percentage of women with very short stature (less than 145 cm) and body mass index (BMI).

BMI or the Quetelet index, is used to measure thinness or obesity. BMI is defined as weight in kilograms divided by height squared in metres (kg/m^2). A cut-off point of 18.5 is used to define thinness or acute undernutrition and a BMI of 25.0 or above usually indicates overweight or obesity. The height of a woman is associated with past socio-economic status and nutrition during childhood and adolescence. Low pre-pregnancy BMI and short stature are risk factors for poor birth outcomes and obstetric complications. In developing countries, maternal underweight is a leading risk factor for preventable death and diseases.

Table 11.9 presents the mean values of the two indicators of nutritional status and the proportions of women falling into high-risk categories, according to background characteristics. Respondents for whom there was no information on height and/or weight and for whom a BMI could not be estimated are excluded from this analysis. The analysis of height is based on 4,820 women, and the analysis of BMI is based on 4,381 women age 15-49 years.

The data show that just 1 percent of women age 15-49 in Ghana are less than 145 cm in height. There are no major variations by background characteristics, except for residence. Women in rural areas are somewhat more likely than women in urban areas to be shorter than 145 cm, and women in the Central region are more likely than women in other regions to be very short.

The mean BMI for women 15-49 in Ghana is 23.6. Analysis by background characteristics shows that the mean BMI falls in the normal range (18.5-24.9) for all categories of background characteristics. At the national level, 9 percent of women are considered to be thin (BMI < 18.5); however, only 2 percent of women are considered to be moderately or severely thin (BMI < 17). The highest proportions of women with a BMI less than 18.5 are observed among younger women age 15-19 (16 percent), women living in rural areas (11 percent), and those in the Upper East, Northern, and Volta regions (15, 12 and 11 percent, respectively). The percentage of thin women tends to decrease as woman's level of education increases, and as wealth quintile increases. The proportion of overweight or obese women stands at 30 percent, with 9 percent of women considered to be obese (BMI ≥30.0). The proportion of overweight or obese women is positively correlated with women's age; the proportion increases from 10 percent among women age 15-19 to a high of 44 percent for the age group 40-49. Urban women are twice as likely to be overweight or obese (40 percent) as rural women (20 percent). A regional comparison shows that the Upper West, Northern, and Upper East regions have the lowest proportion of overweight or obese women (13, 14, and 15 percent, respectively), while the Greater Accra region has the highest proportion (45 percent). The proportion of women who are overweight or obese increases with level of education and wealth quintile.

Table 11.9 Nutritional status of women

Among women age 15-49, the percentage with height under 145 centimetres, mean Body Mass Index (BMI), and the percentage with specific BMI levels, by background characteristics, Ghana 2008

Background characteristic	Height		Body Mass Index[1]								
				Normal	Thin			Overweight/obese			
	Percentage below 145 cm	Number of women	Mean Body Mass Index (BMI)	18.5-24.9 (total normal)	<18.5 (total thin)	17.0-18.4 (mildly thin)	<17 (moderately and severely thin)	≥25.0 (total overweight or obese)	25.0-29.9 (overweight)	≥30.0 (obese)	Number of women
Age											
15-19	1.7	990	21.3	73.5	16.2	11.9	4.3	10.3	8.8	1.6	947
20-29	1.4	1,688	23.1	67.3	6.9	5.3	1.6	25.8	20.9	4.9	1,468
30-39	1.2	1,265	24.9	53.0	5.7	4.5	1.2	41.3	26.5	14.8	1,120
40-49	1.4	877	25.2	48.9	7.1	4.6	2.5	44.0	25.8	18.2	845
Residence											
Urban	0.9	2,341	24.7	53.7	6.1	4.8	1.3	40.3	26.2	14.0	2,160
Rural	1.9	2,478	22.5	69.0	11.1	8.0	3.1	19.9	15.3	4.6	2,220
Region											
Western	1.2	444	23.7	57.9	8.6	6.4	2.1	33.5	23.6	9.9	397
Central	2.9	416	23.8	59.3	8.7	6.3	2.4	31.9	24.4	7.5	374
Greater Accra	0.6	836	25.6	51.0	4.5	4.0	0.5	44.5	25.1	19.4	766
Volta	2.3	418	23.3	61.0	11.0	8.4	2.6	28.0	19.1	8.9	381
Eastern	2.1	474	24.0	59.1	7.1	4.7	2.4	33.8	24.0	9.8	448
Ashanti	1.4	999	23.6	59.8	9.5	7.2	2.2	30.7	22.5	8.2	912
Brong Ahafo	1.1	423	22.6	72.2	7.5	3.7	3.8	20.2	15.8	4.4	394
Northern	1.0	455	21.7	74.5	11.7	9.2	2.5	13.8	11.5	2.4	385
Upper East	0.8	236	21.8	69.9	14.8	11.4	3.4	15.3	11.7	3.7	215
Upper West	1.1	119	21.8	77.5	9.8	6.8	3.0	12.7	10.3	2.4	108
Education											
No education	1.4	1,017	22.7	68.9	9.8	7.4	2.4	21.3	16.1	5.2	896
Primary	2.2	971	23.5	59.9	9.9	6.8	3.1	30.1	20.9	9.2	877
Middle/JSS	1.4	2,002	23.7	60.3	8.8	6.4	2.4	30.9	20.7	10.2	1,832
Secondary+	0.7	826	24.4	57.0	5.4	4.8	0.6	37.6	25.8	11.8	772
Wealth quintile											
Lowest	1.5	757	21.6	75.7	12.6	9.5	3.1	11.7	9.7	2.1	668
Second	1.9	877	22.0	69.9	14.3	9.7	4.6	15.8	12.6	3.2	776
Middle	2.2	961	23.0	67.8	9.0	6.6	2.4	23.3	18.5	4.8	875
Fourth	1.1	1,111	24.6	53.6	5.2	4.2	1.0	41.2	29.5	11.7	1,031
Highest	0.7	1,114	25.7	48.3	4.9	3.9	1.0	46.8	27.0	19.8	1,030
Total	1.4	4,820	23.6	61.4	8.6	6.4	2.2	29.9	20.7	9.3	4,381

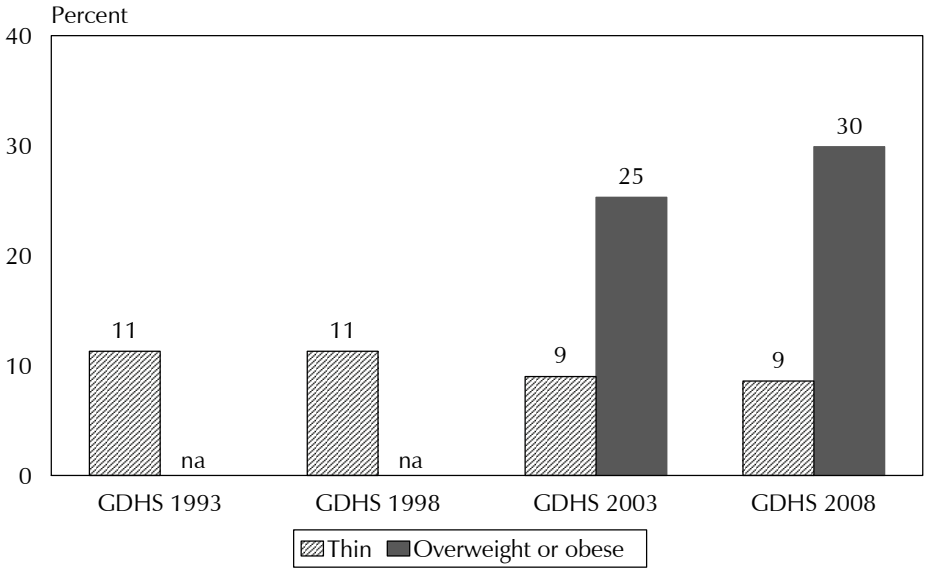
Note: The Body Mass Index (BMI) is expressed as the ratio of weight in kilograms to the square of height in metres (kg/m^2). Total includes cases with information missing on mother's education that are not shown separately.
[1] Excludes pregnant women and women with a birth in the past 2 months

Looking at trends over the past five years, most of the nutritional status indicators for women have remained stable; however, the proportion of women who are overweight or obese has increased, from 25 percent in 2003 to 30 percent in 2008 (Figure 11.6).

11.10 Foods Consumed by Mothers

The quality and quantity of foods consumed by mothers has a direct impact on their health and that of their children, especially the health of breastfeeding children. The 2008 GDHS included questions on the types of foods consumed by mothers of children under age three during the day and night preceding the interview. Table 11.10 shows the foods most commonly consumed by mothers with a child less than three years living with them. These foods include meat, fish, shellfish, poultry, and eggs (88 percent); foods made from grains (86 percent); foods made from roots and tubers and fruits and vegetables that are not rich in vitamin A (65 percent, each); and vitamin A-rich fruits and vegetables (61 percent). Foods cooked with oil, fat, or butter are consumed by about half of these

Figure 11.6 **Trends in Nutritional Status among Women 15-49 Years**



Note: Undernutrition BMI <18.5 and overnutrition BMI ≥25.0
na = Not applicable

women (52 percent), while foods made from legumes (26 percent) and other solid or semi-solid foods (27 percent) are consumed by about one in four women. Differences in consumption of these food groups by background characteristics are not large, although the consumption of grains, proteins, and foods cooked with oil, fat or butter is somewhat higher among women in urban areas than those in rural areas, while the reverse is seen for the consumption of roots or tubers, legumes, and vitamin A-rich foods. With a few exceptions (grains, roots or tubers, and legumes), the consumption of each food type increases with level of education and household wealth quintile. Consumption of meat, fish, shellfish, poultry, and eggs is particularly high among women in the Greater Accra region (96 percent).

The findings indicate that only 17 percent of mothers consumed milk in the 24 hours preceding the interview. Women in urban areas (28 percent) are more likely to drink milk than those in rural areas (11 percent). At the regional level, the percentage of women drinking milk is highest in the Greater Accra region (37 percent) and lowest in the Upper West and Volta regions (8 and 9 percent, respectively). Twenty-one percent of women drank tea or coffee, and 16 percent drank other liquids.

Table 11.10 Foods consumed by mothers in the day and night preceding the interview

Among mothers age 15-49 with a child under age three years living with them, the percentage who consumed specific types of foods in the day and night preceding the interview, by background characteristics, Ghana 2008

	Liquids			Solid or semi-solid foods										
Background characteristic	Milk	Tea/ coffee	Other liquids	Foods made from grains	Foods made from roots/ tubers	Foods made from legumes	Meat/ fish/ shellfish/ poultry/ eggs	Cheese/ yogurt	Vitamin A-rich fruits/ vege-tables[1]	Other fruits/ vege-tables	Other solid or semi-solid food	Foods made with oil/fat/ butter	Sugary foods	Number of mothers
Age														
15-19	11.4	21.5	14.2	86.6	69.9	25.4	89.9	4.6	64.0	68.1	25.5	42.6	23.2	90
20-29	19.0	21.7	15.7	86.2	63.0	23.9	88.0	7.8	59.0	63.4	26.2	52.0	18.0	766
30-39	17.8	21.8	16.3	86.0	67.4	30.7	88.6	8.3	63.5	66.0	27.7	53.4	15.6	518
40-49	7.1	15.8	12.2	84.0	67.0	24.1	85.0	2.7	66.0	66.4	27.6	55.5	7.2	118
Residence														
Urban	27.9	31.7	21.1	88.2	59.0	24.2	93.5	12.4	59.2	68.9	27.5	59.8	22.8	571
Rural	10.5	14.8	12.2	84.7	69.1	27.7	84.8	4.3	62.8	62.3	26.4	47.5	12.8	921
Region														
Western	17.5	21.1	20.5	87.4	67.0	22.9	85.9	6.9	56.2	61.4	19.9	63.2	14.9	147
Central	13.6	18.7	19.7	88.0	77.9	31.2	92.8	6.5	47.8	66.7	11.2	64.4	20.2	159
Greater Accra	37.1	33.6	28.8	90.5	43.5	26.8	96.2	18.4	52.4	68.2	26.6	62.2	31.2	175
Volta	8.9	17.5	9.5	92.4	66.5	28.3	91.8	4.5	62.8	85.0	40.2	48.0	10.4	128
Eastern	18.1	17.9	23.4	90.2	73.9	31.2	86.7	9.0	65.2	65.7	12.7	44.0	22.9	130
Ashanti	15.1	10.1	12.4	79.6	70.2	14.2	90.6	5.4	66.4	57.6	24.0	57.8	15.2	270
Brong Ahafo	10.5	15.8	15.5	73.9	83.4	17.7	84.5	6.6	55.9	66.7	18.3	34.7	11.6	141
Northern	17.4	33.4	5.9	83.7	61.6	35.5	80.8	3.9	60.5	61.5	25.9	33.9	10.4	217
Upper East	15.4	23.1	7.7	96.5	41.9	35.0	82.7	5.4	95.5	57.2	70.6	59.4	14.6	81
Upper West	8.2	26.4	8.1	95.1	43.0	40.4	81.8	7.7	78.5	63.4	78.5	67.2	10.5	44
Education														
No education	12.5	20.9	7.2	87.2	63.1	33.0	82.0	3.9	64.3	60.9	29.0	45.1	11.9	466
Primary	10.2	14.1	15.1	85.3	65.7	21.9	90.4	4.0	58.3	61.4	28.0	53.1	12.0	370
Middle/JSS	18.6	21.7	18.7	85.9	70.0	23.1	89.4	10.5	60.0	68.2	21.8	54.3	20.0	516
Secondary+	45.7	39.5	33.4	83.9	53.4	28.2	97.5	16.6	65.5	74.4	35.1	66.4	32.5	139
Wealth quintile														
Lowest	7.7	15.3	7.9	84.4	61.5	28.5	79.9	2.2	68.6	59.1	31.8	39.9	8.6	362
Second	7.0	14.6	9.8	87.5	71.8	25.5	84.9	4.7	61.9	62.2	23.3	47.8	9.2	333
Middle	15.2	22.4	15.4	86.9	73.5	24.3	90.4	5.3	52.6	63.5	21.1	56.0	21.6	277
Fourth	22.5	24.2	21.1	85.6	66.8	26.4	93.9	9.0	63.3	66.7	26.8	57.3	20.6	303
Highest	43.8	36.1	29.7	85.8	48.7	26.8	95.8	20.7	57.4	77.7	31.3	67.5	29.5	217
Total	17.2	21.3	15.6	86.0	65.2	26.4	88.1	7.4	61.4	64.8	26.8	52.2	16.6	1,492

Note: Foods consumed in the past 24-hour period (yesterday and the past night). Total includes cases with information missing on education that are not shown separately.

[1] Includes fruits and vegetables such as pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, green leafy vegetables, mangoes, papayas, and other locally grown fruits and vegetables that are rich in vitamin A

11.11 ANAEMIA IN WOMEN

The same equipment and procedures used to measure anaemia in children were employed to measure anaemia in women. Three levels of severity of anaemia are distinguished: mild anaemia (10.0-10.9 grams/decilitre for pregnant women and 10.0-11.9 g/dL for non-pregnant women), moderate anaemia (7.0-9.9 g/dL), and severe anaemia (less than 7.0 g/dL). Appropriate adjustments in these cut-off points should be made for respondents living at altitudes above 1,000 metres and respondents who smoke, because both of these groups require more haemoglobin in their blood (Centres for Disease Control and Prevention, 1998). These adjustments were made for respondents who smoke, however adjustments for altitude were not made because none of the respondents was living at altitudes above 1,000 metres.

Table 11.11 shows the prevalence of anaemia in women age 15-49. Anaemia is less prevalent among women than children, 59 percent of women in Ghana have some level of anaemia, compared with 78 percent in children. The great majority of women are mildly anaemic (39 percent), while 18 percent are moderately anaemic, and 2 percent are severely anaemic. The prevalence of anaemia is highest among younger women age 15-19 (63 percent). As expected, the prevalence of anaemia is higher among pregnant (70 percent) and breastfeeding (62 percent) women than among those who are

neither pregnant nor breastfeeding (57 percent). Prevalence of any anaemia is higher among women in rural areas (62 percent) than women in urban areas (55 percent). Regional variation in the prevalence of anaemia among women ranges from 48 percent in the Upper East region to 71 percent in the Western region.

The level of anaemia among women age 15-49 in Ghana has increased over the past five years from 45 percent in 2003 to 59 percent in 2008, with the most noticeable increase occurring in the prevalence of moderate anaemia (9 percent in 2003 and 18 percent in 2008) (Figure 11.7).

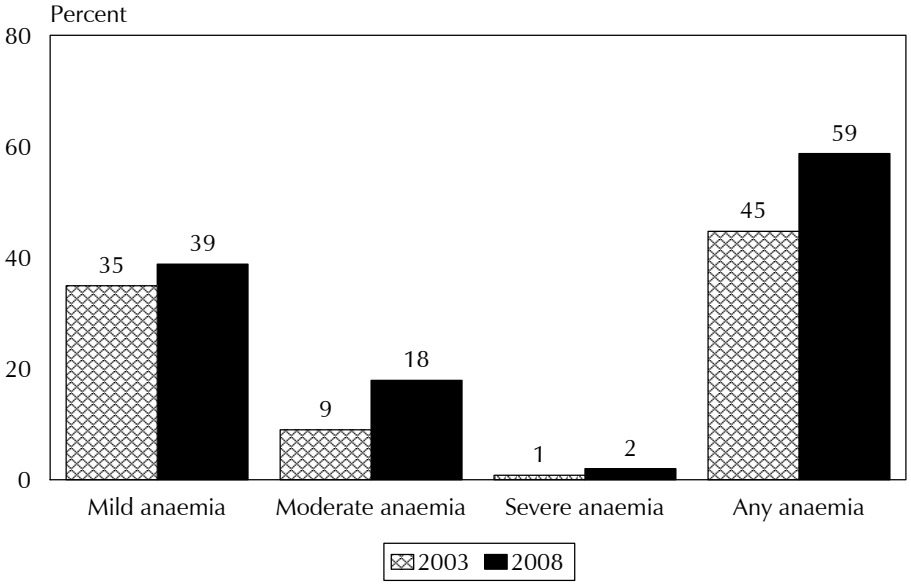
Table 11.11 Prevalence of anaemia in women

Percentage of women age 15-49 with anaemia, by background characteristics, Ghana 2008

		Anaemia status by haemoglobin level				
		Mild	Moderate	Severe	Any	
	Not pregnant:	10.0-11.9 g/dL	7.0-9.9 g/dL	<7.0 g/dL	<12.0 g/dL	
Background characteristic	Pregnant:	10.0-10.9 g/dL	7.0-9.9 g/dL	<7.0 g/dL	<11.0 g/dL	Number of women
Age						
15-19		43.7	17.5	1.8	63.0	993
20-29		37.3	18.7	1.6	57.6	1,649
30-39		38.5	18.3	1.6	58.3	1,242
40-49		36.4	16.3	3.6	56.2	863
Number of children ever born						
0		40.1	17.0	1.6	58.7	1,586
1		36.8	18.0	1.7	56.5	650
2-3		37.7	18.7	2.2	58.6	1,152
4-5		37.7	18.7	2.7	59.1	785
6+		40.8	17.6	2.2	60.6	574
Maternity status						
Pregnant		23.4	40.0	6.6	70.0	351
Breastfeeding		43.9	16.2	1.7	61.8	1,004
Neither		38.8	16.1	1.6	56.6	3,392
Residence						
Urban		36.6	17.1	1.5	55.3	2,290
Rural		40.8	18.6	2.4	61.8	2,458
Region						
Western		42.6	25.2	3.4	71.2	423
Central		47.4	15.1	1.2	63.7	408
Greater Accra		36.4	13.1	1.2	50.7	833
Volta		38.1	17.4	2.5	58.1	418
Eastern		41.6	14.3	2.4	58.3	468
Ashanti		37.6	19.7	2.6	59.9	971
Brong Ahafo		34.8	21.3	1.7	57.8	423
Northern		36.3	21.9	1.1	59.3	450
Upper East		36.8	10.5	1.1	48.4	235
Upper West		40.4	22.7	3.9	66.9	120
Education						
No education		38.0	20.4	1.4	59.9	1,008
Primary		40.3	20.1	3.1	63.5	962
Middle/JSS		39.8	16.8	2.2	58.7	1,979
Secondary+		35.3	14.9	1.0	51.1	795
Wealth quintile						
Lowest		39.5	19.0	2.3	60.7	754
Second		42.5	17.5	3.0	63.0	867
Middle		38.2	18.9	2.3	59.5	959
Fourth		38.2	18.0	1.7	57.9	1,086
Highest		36.3	16.6	1.0	53.9	1,081
Total		38.8	17.9	2.0	58.7	4,747

Note: Prevalence is adjusted for smoking status if known using CDC formulas (CDC, 1998). Total includes cases with information missing on education that are not shown separately.

Figure 11.7 **Trends in Anaemia Status among Women 15-49 Years**



Compared with estimates from recent Demographic and Health Surveys, the prevalence of any anaemia among women age 15-49 in Ghana (59 percent) is higher than the prevalence in **Sierra Leone**: 45 percent in 2008 (SSL and ICF Macro, 2009), **Niger**: 46 percent in 2006 (INS and Macro International Inc., 2007) and **Guinea**: 53 percent in 2005 (DNS and ORC Macro, 2006), similar to that observed in **Senegal**: 59 percent in 2005 (Ndiaye and Ayad, 2006), but lower than the prevalence in **Benin**: 61 percent in 2006 (INSAE and Macro International Inc., 2007), or in **Mali**: 69 percent in 2006 (CPS/MS, DNSI/MEIC and Macro International Inc., 2007).

11.12 MICRONUTRIENT INTAKE AMONG MOTHERS

Adequate micronutrient intake by women has important benefits for them and their children. Breastfeeding children benefit from micronutrient supplementation that mothers receive, especially vitamin A. Iron supplementation of women during pregnancy protects the mother and infant against anaemia. It is estimated that one-fifth of perinatal mortality and one-tenth of maternal mortality are attributable to iron deficiency anaemia. Anaemia also results in an increased risk of premature delivery and low birth weight. Finally, iodine deficiency is related to a number of adverse pregnancy outcomes.

Table 11.12 presents a number of measures that are useful in assessing the extent to which women are receiving adequate intake of vitamin A and iron, and the proportion who take de-worming medication during pregnancy. The first two columns show the percentage of women with children under three years who reported that they consumed foods rich in vitamin A and iron during the 24-hour period before the interview. The results indicate that 94 percent of mothers with young children consumed vitamin A-rich foods during the 24 hours preceding the interview, and 88 percent consumed iron-rich foods.

Table 11.12 Micronutrient intake among mothers

Among women age 15-49 with a child under age three years living with them, the percentages who consumed vitamin A-rich and iron-rich foods in the 24 hours preceding the survey; and among women age 15-49 with a child under five years, the percentage who received a vitamin A dose post-partum (within two months of the last birth), the percentage with night blindness during pregnancy for the last birth, the number of days women took iron tablets or syrup during pregnancy for the last birth, and the percentage who took de-worming medication during pregnancy for the last birth, by background characteristics, Ghana 2008

	Women with a child under three years living with them			Among women whose last birth is a child under five years									
					Percentage with night blindness during pregnancy for last birth		Number of days women took iron tablets or syrup during pregnancy for last birth						
Background characteristic	Percentage consumed vitamin A-rich foods[1]	Percentage consumed iron-rich foods[2]	Number gof women	Percentage who received vitamin A dose post-partum[3]	Reported	Adjusted[4]	None	<60	60-89	90+	Don't know/ missing	Percentage who took de-worming medication during pregnancy for last birth	Number of women
Age													
15-19	94.2	89.9	90	58.7	16.0	1.6	9.6	37.7	9.5	35.4	7.8	34.1	100
20-29	94.0	88.0	766	60.2	13.3	1.9	12.6	29.2	9.8	40.7	7.6	34.6	957
30-39	94.3	88.6	518	60.8	14.7	1.3	11.2	26.6	10.3	44.1	7.9	35.9	791
40-49	93.7	85.0	118	60.3	14.2	2.2	18.1	25.9	10.5	38.4	7.0	33.1	251
Residence													
Urban	96.0	93.5	571	63.8	11.8	1.4	8.7	19.7	9.8	52.6	9.2	34.4	844
Rural	92.9	84.8	921	58.0	15.6	1.9	15.2	34.0	10.3	34.0	6.6	35.2	1,255
Region													
Western	90.7	85.9	147	44.6	12.9	1.7	7.3	39.5	21.1	29.7	2.4	39.1	189
Central	94.7	92.8	159	46.7	22.6	3.3	10.4	34.7	12.2	37.0	5.7	41.4	200
Greater Accra	98.1	96.2	175	65.6	5.9	0.6	4.3	4.6	9.5	68.1	13.5	14.5	262
Volta	96.7	91.8	128	68.2	21.4	1.5	9.6	26.3	10.5	51.9	1.6	33.7	181
Eastern	92.9	86.7	130	49.3	13.3	2.3	10.5	27.2	5.5	46.0	10.8	38.0	185
Ashanti	96.7	90.6	270	56.4	14.5	1.5	7.7	21.4	7.6	60.2	3.1	37.4	396
Brong Ahafo	89.3	84.5	141	68.9	8.1	0.0	14.5	34.6	11.1	31.5	8.2	51.0	218
Northern	89.6	80.8	217	67.8	16.0	2.5	29.7	45.0	6.7	11.7	7.0	25.7	291
Upper East	99.3	82.7	81	80.3	13.3	3.3	13.7	28.5	13.6	19.6	24.6	35.9	119
Upper West	93.9	81.8	44	63.1	16.7	0.8	29.1	23.0	5.1	31.4	11.3	51.5	58
Education													
No education	90.4	82.0	466	59.3	13.8	1.8	19.9	35.1	9.4	26.0	9.6	30.4	647
Primary	96.2	90.4	370	56.4	17.1	1.2	11.6	28.8	12.8	41.0	5.8	35.2	511
Middle/JSS	94.7	89.4	516	62.1	13.7	2.0	7.9	25.4	9.0	51.3	6.5	39.3	738
Secondary+	98.5	97.5	139	67.2	8.8	1.5	9.0	15.5	9.6	55.8	10.2	32.1	201
Wealth quintile													
Lowest	91.3	79.9	362	61.2	17.1	2.0	21.3	38.5	9.6	20.6	10.0	30.9	480
Second	93.0	84.9	333	54.1	13.4	1.8	15.0	34.8	11.4	35.6	3.2	40.9	461
Middle	94.4	90.4	277	57.5	18.9	1.9	11.8	31.6	10.5	41.3	4.8	37.2	400
Fourth	95.5	93.9	303	65.3	11.1	1.1	6.5	19.6	8.3	56.5	9.0	35.4	436
Highest	98.0	95.8	217	65.0	8.7	1.6	5.5	11.0	10.7	60.7	12.2	28.7	322
Total	94.1	88.1	1,492	60.4	14.1	1.7	12.6	28.2	10.1	41.5	7.6	34.9	2,099

[1] Includes meat (and organ meat), fish, poultry, eggs, pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, mango, papaya, and other locally grown fruits and vegetables that are rich in vitamin A
[2] Includes meat (and organ meat), fish, poultry, and eggs
[3] In the first two months after delivery of last birth
[4] Women who reported night blindness but did not report difficulty with vision during the day

The fourth column in Table 11.12 shows the percentage of women with a child under five years who received vitamin A supplements after giving birth to their most recent child. Six in ten mothers with young children reported that they had received a post-partum vitamin A dose within 2 months of delivery, but this varies with residence, region, level of education, and wealth quintile. Women in urban areas (64 percent) are more likely to receive vitamin A supplements than those in rural areas (58 percent). At the regional level, the percentage of women who reported receiving a post-partum vitamin A dose is highest in the Upper East region (80 percent) and lowest in the Western and Central regions (45 and 47 percent, respectively). Women with higher education and those in the two highest wealth quintiles are more likely to receive a vitamin A dose post-partum than other women.

The percentage of women with a child born in the five years preceding the survey who took vitamin A supplements post-partum increased from 43 percent in 2003 to 60 percent in 2008.

Table 11.12 shows that 14 percent of women with a child born in the past five years reported night blindness during pregnancy for the last birth. Night blindness was reported by nearly one in four women in the Central region (23 percent), compared with less than one in ten women in the Greater Accra and Brong Ahafo regions (6 and 8 percent, respectively). Women with the most education and those in the higher wealth quintiles are the least likely to report night blindness. When the results were adjusted for blindness *not attributed to vitamin A deficiency during pregnancy*, only 2 percent of women experienced night blindness during their last pregnancy. There are no major variations in the adjusted percentage of women who reported night blindness by background characteristics.

With regard to iron supplementation during pregnancy, 13 percent of women did not take iron tablets or syrup during pregnancy. Although about eight in ten women said they took iron tablets, 28 percent of women took iron for fewer than 60 days. More than four in ten women (42 percent) took the iron tablets or syrup for the recommended 90 or more days. Iron intake varies by background characteristics. Older women, those living in rural areas, and women in the Northern and Upper West regions are more likely to have not taken iron supplements during pregnancy than other women.

The percentage of women who did not take any iron during pregnancy decreases as level of education and wealth quintile increase. The proportion of women who did not take any iron decreased somewhat over the past five years, from 19 percent in 2003 to 13 percent in 2008.

Thirty-five percent of mothers said they took de-worming medication during their most recent pregnancy. The proportion is highest among women in the Upper West (52 percent) and Brong Ahafo (51 percent) regions.

11.13 Regenerative Health

Ghana, like many African countries, faces a double burden of disease. In addition to the impact of communicable diseases, there is a growing epidemic of non-communicable diseases. Epidemiological data shows a steady increase in prevalence rates since the 1950s (DeGraft Aikins, 2007). As part of efforts to reduce the burden of non-communicable diseases, the Ministry of Health in 2006 initiated the Regenerative Health and Nutrition (RHN) programme. The aim of this programme is to transform the health, lives, and development of Ghanaians. Specifically, it seeks to reduce the risk of the occurrence of diseases and disorders among individuals, households, and communities, to contribute to the development of a healthier, more productive population that can create wealth for itself and the country. The RHN programme focuses on four key interventions: diet, exercise, rest, and hygiene. The interventions proposed are central to current international health perspectives on preventing diseases, especially chronic conditions, through a healthy lifestyle (WHO, 2005).

All respondents interviewed in the GDHS 2008 were asked a series of questions on vigorous physical activity, hours of rest including naps and sleep both during day and night, and average consumption of water, fruits and vegetables. Tables 11.13.1 through Table 11.19 present these results.

11.13.1 Vigorous Physical Activity

The sedentary lifestyle has been associated with chronic disease burden in Ghana, and it is more prevalent in urban than rural settings (Amoah, 2003). The urban lifestyle with its prevalence of office jobs and use of cars is markedly different from the traditional rural life style "in which the daily work of the rural farmer incorporates long-distance walking and the physical exertion of farming" (MOH/PPME, 2008).

In an effort to assess the prevalence of physical activity, women and men in the 2008 GDHS were asked: "*In the past 7 days, on how many days did you do vigorous physical activity that lasted for at least 15 minutes each time?"* In the same question vigorous physical activities were broadly defined to the respondents as the "activities you do at work, as part of your house and yard work, to get from place to place in your spare time, exercise or sport, activities that make you breathe much harder than normal and may include heavy lifting, digging, jogging, or fast bicycling".

Tables 11.13.1 and 11.13.2 show the results for women and men age 15-49, respectively. The Ministry of Health recommends exercising at least 30 minutes three times a week. During the week before the survey, about one in three women (30 percent) and one in two men (50 percent) were engaged three or more days in vigorous physical activity that lasted at least 15 minutes. However, during the same period, one in two women (53 percent) and one in four men (26 percent) were not engaged in any vigorous activity that lasted at least 15 minutes.

There are some differences in frequency of vigorous physical activity by background characteristics. Women age 45-49 and those who are currently employed are generally more likely to be engaged in vigorous physical activity three or more times a week than women of other age groups and unemployed women. Formerly married respondents are more likely to exercise three or more times a week, compared with those of other marital status or women who are not married. As expected, more rural women than urban women reported vigorous physical activity three or more days a week (37 and 24 percent, respectively). In terms of regional variations, women in the Upper East region (61 percent) are the most likely to be engaged in vigorous physical activity three or more days a week, while women in the Greater Accra region are the least likely (22 percent). Level of education and wealth quintile are negatively associated with regular vigorous physical activity. For example, only 25 percent of women with higher education engage in vigorous physical activity three or more days a week, compared with 39 percent of women with no education. Similarly, women in the lowest wealth quintile (44 percent) are twice as likely as women in the highest wealth quintile (22 percent) to engage in vigorous physical activity three or more days a week.

The differentials on vigorous physical activity for men indicate that never-married and currently married men, men age 30-34, and men employed for cash are more likely to report vigorous physical activity three or more days a week than formerly married men, men in other age groups, and men not employed for cash. As with women, rural men, men in the Upper East region, men with no education, and men in the poorest households are more likely to engage in vigorous physical activity three or more days a week than other men.

Women age 20-29 and men age 45-49, urban respondents, those living in the Central and Greater Accra regions, and those in the higher wealth quintiles are most likely to report that they did not engage in any type of vigorous physical activity during the seven days preceding the survey.

Table 11.13.1 Frequency of vigorous physical activity: Women

Percent distribution of women age 15-49 by frequency of vigorous physical activity lasting at least 15 minutes in the seven days preceding the survey, according to background characteristics, Ghana 2008

Background characteristic	Frequency of vigorous physical activity[1] in past 7 days							Number of women
	0 days	1-2 days	3-4 days	5+ days	Don't know	Missing	Total	
Age								
15-19	51.2	20.0	15.5	12.1	1.1	0.1	100.0	1,025
20-24	58.0	16.5	9.5	15.1	0.7	0.2	100.0	878
25-29	57.6	13.0	12.6	15.5	1.4	0.0	100.0	832
30-34	54.1	12.0	13.6	17.9	2.3	0.2	100.0	644
35-39	50.9	15.1	12.2	21.2	0.5	0.1	100.0	638
40-44	49.1	13.9	13.7	22.9	0.4	0.0	100.0	470
45-49	47.7	12.7	13.1	26.2	0.2	0.0	100.0	429
Employment (past 12 months)								
Not employed	59.6	16.5	12.4	9.9	1.4	0.2	100.0	1,094
Employed for cash	52.4	14.3	12.8	19.7	0.6	0.1	100.0	3,140
Employed, not for cash	47.8	17.8	13.6	18.6	2.1	0.0	100.0	677
Marital status								
Never married	52.7	19.5	12.7	14.0	0.9	0.1	100.0	1,593
Married or living together	54.2	13.6	12.6	18.4	1.2	0.1	100.0	2,876
Divorced/separated/widowed	49.9	11.2	15.0	23.2	0.6	0.0	100.0	446
Residence								
Urban	59.6	16.3	9.8	13.8	0.5	0.0	100.0	2,383
Rural	47.4	14.3	15.8	20.8	1.5	0.2	100.0	2,533
Region								
Western	54.2	13.3	10.1	21.6	0.8	0.0	100.0	447
Central	61.0	14.3	11.4	11.6	1.3	0.3	100.0	424
Greater Accra	60.0	17.3	7.6	14.8	0.4	0.0	100.0	853
Volta	58.9	16.9	10.3	13.1	0.2	0.5	100.0	431
Eastern	42.2	13.7	22.1	21.1	0.8	0.0	100.0	483
Ashanti	56.6	14.0	11.1	17.6	0.5	0.1	100.0	1,011
Brong Ahafo	54.9	14.2	16.9	13.3	0.7	0.0	100.0	425
Northern	48.8	17.8	13.6	15.6	4.3	0.0	100.0	467
Upper East	21.2	16.5	23.7	36.8	1.5	0.3	100.0	253
Upper West	51.4	14.6	12.6	21.1	0.3	0.0	100.0	122
Education								
No education	45.5	13.0	14.9	24.3	2.1	0.2	100.0	1,042
Primary	54.9	12.6	13.9	18.3	0.4	0.0	100.0	988
Middle/JSS	57.5	14.7	12.7	14.1	0.8	0.1	100.0	2,039
Secondary+	51.1	22.8	9.4	15.7	0.9	0.1	100.0	844
Wealth quintile								
Lowest	39.9	13.1	18.9	25.4	2.5	0.2	100.0	783
Second	48.0	15.3	16.5	19.1	0.8	0.2	100.0	900
Middle	53.8	15.2	12.8	17.6	0.6	0.0	100.0	979
Fourth	60.0	15.0	9.9	14.2	0.8	0.0	100.0	1,119
Highest	59.8	17.2	8.8	13.5	0.7	0.1	100.0	1,135
Total	53.3	15.3	12.9	17.4	1.0	0.1	100.0	4,916

Note: Total includes cases with information missing on employment and education that are not shown separately.
[1] Physical activity that lasts at least 15 minutes and causes the respondent to breathe harder than normal; may include, among other activities, heavy lifting, digging, jogging, and fast bicycling.

Table 11.13.2 Frequency of vigorous physical activity: Men

Percent distribution of men age 15-49 by frequency of vigorous physical activity lasting at least 15 minutes in the seven days preceding the survey, according to background characteristics, Ghana 2008

Background characteristic	Frequency of vigorous physical activity[1] in past 7 days							Number of men
	0 days	1-2 days	3-4 days	5+ days	Don't know	Missing	Total	
Age								
15-19	21.6	29.2	20.4	28.2	0.6	0.0	100.0	911
20-24	21.5	25.9	21.2	30.5	0.7	0.2	100.0	704
25-29	22.4	25.9	19.3	31.4	1.1	0.0	100.0	624
30-34	30.3	15.2	18.5	35.8	0.3	0.0	100.0	533
35-39	28.8	22.0	14.3	34.0	0.9	0.0	100.0	528
40-44	30.4	19.1	14.9	35.1	0.3	0.1	100.0	394
45-49	34.9	20.7	13.9	29.6	1.0	0.0	100.0	364
Employment (past 12 months)								
Not employed	25.9	29.9	17.2	26.6	0.4	0.1	100.0	781
Employed for cash	27.2	22.7	18.0	31.6	0.5	0.0	100.0	2,655
Employed, not for cash	20.2	19.7	20.1	38.0	2.0	0.0	100.0	619
Marital status								
Never married	21.2	27.4	21.0	29.7	0.6	0.1	100.0	1,936
Married or living together	29.9	19.7	15.4	34.2	0.8	0.0	100.0	1,950
Divorced/separated/widowed	32.2	24.9	18.1	24.0	0.7	0.0	100.0	172
Residence								
Urban	28.5	24.5	16.0	30.4	0.5	0.1	100.0	1,866
Rural	23.5	22.8	20.1	32.7	0.9	0.0	100.0	2,191
Region								
Western	28.0	19.2	21.1	31.3	0.5	0.0	100.0	403
Central	32.8	22.8	17.2	26.4	0.8	0.0	100.0	326
Greater Accra	30.0	28.0	15.2	26.5	0.3	0.0	100.0	649
Volta	27.2	28.0	27.0	17.8	0.0	0.0	100.0	373
Eastern	14.0	38.4	16.2	31.2	0.2	0.0	100.0	411
Ashanti	28.6	24.5	17.5	29.2	0.2	0.0	100.0	785
Brong Ahafo	26.0	14.7	18.6	39.6	1.1	0.0	100.0	347
Northern	26.1	20.4	15.7	33.8	3.5	0.4	100.0	435
Upper East	14.5	7.4	17.0	61.1	0.0	0.0	100.0	219
Upper West	14.1	11.8	21.4	52.5	0.2	0.0	100.0	108
Education								
No education	29.2	12.6	14.1	41.7	2.2	0.1	100.0	540
Primary	24.2	20.9	20.6	33.6	0.7	0.0	100.0	619
Middle/JSS	24.7	26.8	19.8	28.3	0.4	0.0	100.0	1,721
Secondary+	26.9	25.3	16.4	30.9	0.3	0.1	100.0	1,167
Wealth quintile								
Lowest	19.8	17.0	17.9	43.4	1.9	0.1	100.0	708
Second	24.6	20.5	20.9	33.0	1.0	0.0	100.0	738
Middle	26.2	28.8	18.6	26.0	0.4	0.0	100.0	699
Fourth	27.8	25.5	18.0	28.6	0.1	0.1	100.0	974
Highest	29.1	25.2	16.3	29.0	0.4	0.0	100.0	939
Total 15-49	25.8	23.6	18.2	31.6	0.7	0.0	100.0	4,058
50-59	37.6	17.1	11.8	32.3	1.1	0.0	100.0	510
Total men 15-59	27.2	22.9	17.5	31.7	0.7	0.0	100.0	4,568

Note: Total includes cases with information missing on employment and education that are not shown separately.
[1] Physical activity that lasts at least 15 minutes and causes the respondent to breathe much harder than normal; may include, among other activities, heavy lifting, digging, jogging, and fast bicycling.

11.13.2 Duration of Rest

To assess the duration of rest, women and men in the 2008 GDHS were asked: "*How many hours do you rest a day, including naps and sleep both during the day and night?"* Tables 11.14.1 and 11.14.2 show the results for women and men, respectively. The majority of Ghanaian women and men have plenty of rest. Fifty-nine percent of women and 54 percent of men rest at least 7 hours a day, and 27 percent of respondents rest for more than 10 hours. Only one in ten women (13 percent) and one in five men (18 percent) are resting less than 7 hours a day. Women living in the Northern region (20 percent) and men in the Greater Accra and Volta regions are more likely to rest just 4-6 hours a day. Overall, urban respondents, respondents in the older age groups, employed respondents, formerly married respondents, respondents in the highest wealth quintiles, and men with secondary or higher education rest for shorter durations than other respondents.

Table 11.14.1 Daily duration of rest: Women

Percent distribution of women age 15-49 by duration of rest (in hours) in a typical day including naps and all sleep during the day and night, according to background characteristics, Ghana 2008

Background characteristic	Duration of rest in a typical day							Number of women
	1-3 hours	4-6 hours	7-9 hours	10+ hours	Don't know	Missing	Total	
Age								
15-19	1.8	6.9	57.7	32.6	0.9	0.1	100.0	1,025
20-24	0.5	8.7	57.5	32.7	0.6	0.0	100.0	878
25-29	2.1	10.0	57.0	28.4	2.5	0.1	100.0	832
30-34	1.6	15.2	57.2	24.7	0.9	0.4	100.0	644
35-39	2.1	14.3	61.9	20.9	0.8	0.0	100.0	638
40-44	0.9	14.7	64.9	18.1	0.7	0.7	100.0	470
45-49	2.2	17.0	60.5	18.8	1.4	0.0	100.0	429
Employment (past 12 months)								
Not employed	1.9	6.1	54.3	36.2	1.5	0.1	100.0	1,094
Employed	1.5	13.0	60.3	24.0	1.0	0.2	100.0	3,822
Marital status								
Never married	1.0	7.7	60.8	29.9	0.5	0.1	100.0	1,593
Married or living together	2.1	12.8	58.2	25.2	1.6	0.2	100.0	2,876
Divorced/separated/widowed	0.3	16.1	57.5	25.5	0.5	0.1	100.0	446
Residence								
Urban	1.4	13.6	60.5	23.8	0.6	0.1	100.0	2,383
Rural	1.8	9.4	57.5	29.5	1.6	0.2	100.0	2,533
Region								
Western	0.2	7.1	62.8	29.9	0.0	0.0	100.0	447
Central	1.1	8.9	51.7	38.1	0.2	0.0	100.0	424
Greater Accra	0.6	13.9	62.7	22.4	0.4	0.0	100.0	853
Volta	0.0	15.3	54.3	29.2	0.4	0.8	100.0	431
Eastern	0.4	9.8	64.8	24.9	0.0	0.0	100.0	483
Ashanti	0.9	10.4	54.0	34.2	0.4	0.1	100.0	1,011
Brong Ahafo	4.0	10.6	62.7	22.2	0.5	0.0	100.0	425
Northern	8.4	19.6	49.3	15.0	7.8	0.0	100.0	467
Upper East	0.0	3.6	75.4	18.2	1.8	0.9	100.0	253
Upper West	0.2	8.1	67.4	22.0	2.2	0.2	100.0	122
Education								
No education	3.2	14.2	59.5	18.9	3.8	0.5	100.0	1,042
Primary	1.6	11.0	56.8	30.0	0.5	0.0	100.0	988
Middle/JSS	0.9	9.7	58.6	30.2	0.4	0.1	100.0	2,039
Secondary+	1.3	12.6	61.8	24.1	0.2	0.0	100.0	844
Wealth quintile								
Lowest	3.8	10.2	59.3	22.6	3.7	0.3	100.0	783
Second	2.0	7.8	53.2	35.3	1.5	0.2	100.0	900
Middle	1.2	11.2	56.5	30.5	0.3	0.3	100.0	979
Fourth	0.9	12.3	60.8	25.2	0.7	0.0	100.0	1,119
Highest	0.7	14.4	63.6	21.1	0.2	0.0	100.0	1,135
Total	1.6	11.4	59.0	26.8	1.1	0.1	100.0	4,916

Note: Total includes cases with information missing on employment and education that are not shown separately.

Table 11.14.2 Daily duration of rest: Men

Percent distribution of men age 15-49 by duration of rest (in hours) in a typical day including naps and sleep during the day and night, according to background characteristics, Ghana 2008

Background characteristic	Duration of rest in a typical day							Number of men
	1-3 hours	4-6 hours	7-9 hours	10+ hours	Don't know	Missing	Total	
Age								
15-19	1.0	10.8	55.6	31.4	0.8	0.3	100.0	911
20-24	1.7	15.8	54.9	26.4	0.6	0.6	100.0	704
25-29	1.4	17.0	51.3	29.8	0.3	0.2	100.0	624
30-34	1.3	21.2	51.9	24.4	0.5	0.7	100.0	533
35-39	0.8	21.1	52.7	24.1	0.6	0.6	100.0	528
40-44	1.7	18.4	57.6	21.5	0.4	0.3	100.0	394
45-49	1.9	17.8	55.8	23.7	0.4	0.4	100.0	364
Employment (past 12 months)								
Not employed	0.8	9.5	56.5	32.1	0.5	0.6	100.0	781
Employed	1.5	18.4	53.6	25.5	0.6	0.4	100.0	3,276
Marital status								
Never married	1.1	13.2	55.3	29.5	0.6	0.3	100.0	1,936
Married or living together	1.6	19.6	53.0	24.8	0.6	0.5	100.0	1,950
Divorced/separated/widowed	0.9	23.1	55.6	19.1	0.0	1.3	100.0	172
Residence								
Urban	1.2	18.3	56.6	23.2	0.2	0.5	100.0	1,866
Rural	1.5	15.3	52.1	29.8	0.9	0.5	100.0	2,191
Region								
Western	0.8	15.1	62.5	21.1	0.5	0.0	100.0	403
Central	0.8	15.2	39.1	44.7	0.0	0.3	100.0	326
Greater Accra	0.4	24.6	55.8	18.1	0.3	0.7	100.0	649
Volta	0.6	27.3	67.9	4.2	0.0	0.0	100.0	373
Eastern	3.8	19.9	63.7	12.3	0.0	0.3	100.0	411
Ashanti	0.6	16.8	63.6	19.0	0.0	0.0	100.0	785
Brong Ahafo	2.7	13.4	53.3	30.5	0.0	0.0	100.0	347
Northern	2.2	5.1	34.2	53.9	2.0	2.6	100.0	435
Upper East	1.9	8.4	34.1	51.3	4.1	0.2	100.0	219
Upper West	0.2	4.0	30.9	64.0	0.8	0.0	100.0	108
Education								
No education	1.4	13.3	41.9	40.3	2.1	1.0	100.0	540
Primary	1.6	13.0	52.8	30.9	1.0	0.7	100.0	619
Middle/JSS	1.2	16.2	59.2	22.8	0.2	0.3	100.0	1,721
Secondary+	1.4	21.1	53.5	23.6	0.1	0.3	100.0	1,167
Wealth quintile								
Lowest	1.8	11.2	46.1	37.8	1.9	1.1	100.0	708
Second	1.6	15.9	51.6	29.9	0.8	0.1	100.0	738
Middle	1.0	16.2	54.4	27.9	0.0	0.4	100.0	699
Fourth	1.3	17.1	57.6	23.5	0.1	0.5	100.0	974
Highest	1.1	21.4	58.5	18.5	0.2	0.2	100.0	939
Total 15-49	1.4	16.7	54.2	26.8	0.5	0.5	100.0	4,058
50-59	2.1	18.4	52.0	26.6	0.7	0.2	100.0	510
Total 15-59	1.4	16.9	53.9	26.7	0.6	0.4	100.0	4,568

Note: Total includes cases with information missing on education that are not shown separately.

11.13.3 Consumption of Water

The Ministry of Health recommends drinking at least 8 glasses of water a day. All women and men in the 2008 GDHS were asked: *How many glasses of water do you drink in one day on average?* Only one in six women (17 percent) and about one in three men (30 percent) reported drinking 8 or more glasses of water a day, 19 percent of women and 23 percent of men drink 6 or 7 glasses of water a day. Nearly two-thirds of women (64 percent) and almost half of men (47 percent) drink less than 6 glasses of water a day (data not shown).

11.13.4 Consumption of Fruits

The Ministry of Health recommends eating fruits on a daily basis. All women and men in the 2008 GDHS were asked: *In a typical week, on how many days do you eat fruits, for example mangoes, paw paw, banana, orange, avocados, tomatoes, passion fruit, etc?* Those who provided an affirmative response were further asked: *On a day when you eat fruits, how many servings do you eat on average?*

Tables 11.15.1 and 11.15.2 show the results for women and men, respectively. Consumption of fruits on a daily basis (7 days) is reported by 28 percent of women and 21 percent of men; most women and men eat fruits 3-6 days a week (35 and 40 percent, respectively). About one-third of respondents consume fruits 0-2 days a week. Urban respondents, those in the highest wealth quintiles, and those with secondary and higher education are more likely to eat fruits on a daily basis. Consumption of fruits on a daily basis is substantially lower among women in the Upper West and Eastern regions (15 and 16 percent, respectively) and among men in the Upper East and Volta regions (7 and 14 percent, respectively).

Table 11.15.1 Weekly consumption of fruits: Women

Percent distribution of women age 15-49 by number of days fruits are consumed in a typical week, according to background characteristics, Ghana 2008

Background characteristic	Number of days fruits consumed in a typical week						Number of women
	0-2 days	3-6 days	7 days	Don't know	Missing	Total	
Age							
15-19	31.4	40.3	25.9	2.3	0.1	100.0	1,025
20-24	30.5	39.1	28.1	2.2	0.2	100.0	878
25-29	32.8	35.0	29.4	2.8	0.1	100.0	832
30-34	34.1	31.1	32.0	2.5	0.2	100.0	644
35-39	37.3	32.3	28.8	1.6	0.0	100.0	638
40-44	35.2	33.5	29.4	1.8	0.1	100.0	470
45-49	41.5	30.5	25.4	2.6	0.0	100.0	429
Employment (past 12 months)							
Not employed	31.9	36.6	28.1	3.4	0.1	100.0	1,094
Employed	34.4	35.1	28.4	2.0	0.1	100.0	3,822
Marital status							
Never married	28.6	39.6	29.4	2.2	0.1	100.0	1,593
Married or living together	35.9	34.1	27.5	2.4	0.1	100.0	2,876
Divorced/separated/widowed	39.4	28.9	30.1	1.6	0.0	100.0	446
Residence							
Urban	34.8	32.1	30.7	2.2	0.1	100.0	2,383
Rural	32.9	38.6	26.1	2.3	0.1	100.0	2,533
Region							
Western	33.0	40.6	25.2	1.2	0.0	100.0	447
Central	33.8	37.4	27.8	0.9	0.0	100.0	424
Greater Accra	34.1	31.9	30.5	3.3	0.2	100.0	853
Volta	25.1	29.8	40.0	5.1	0.0	100.0	431
Eastern	24.0	58.9	16.3	0.7	0.0	100.0	483
Ashanti	31.9	37.6	30.0	0.2	0.2	100.0	1,011
Brong Ahafo	31.2	26.6	41.1	1.2	0.0	100.0	425
Northern	50.5	22.2	18.7	8.5	0.0	100.0	467
Upper East	34.6	37.6	27.2	0.5	0.1	100.0	253
Upper West	64.0	20.8	14.5	0.7	0.0	100.0	122
Education							
No education	45.2	27.6	23.2	4.0	0.0	100.0	1,042
Primary	33.9	37.7	26.4	1.9	0.0	100.0	988
Middle/JSS	30.3	39.9	28.1	1.5	0.2	100.0	2,039
Secondary+	28.1	31.9	37.6	2.4	0.0	100.0	844
Wealth quintile							
Lowest	43.6	32.2	20.3	3.8	0.0	100.0	783
Second	33.1	39.6	25.8	1.4	0.2	100.0	900
Middle	31.0	38.6	28.4	2.0	0.0	100.0	979
Fourth	33.1	35.2	30.0	1.5	0.2	100.0	1,119
Highest	30.9	31.9	34.3	2.9	0.0	100.0	1,135
Total	33.8	35.4	28.4	2.3	0.1	100.0	4,916

Note: Total includes cases with information missing on employment and education that are not shown separately.

Table 11.15.2 Weekly consumption of fruits: Men

Percent distribution of men age 15-49 by number of days fruits are consumed in a typical week, according to background characteristics, Ghana 2008

Background characteristic	Number of days fruits are consumed in a typical week						Number of men
	0-2 days	3-6 days	7 days	Don't know	Missing	Total	
Age							
15-19	35.7	43.2	18.8	2.4	0.0	100.0	911
20-24	37.7	38.7	20.9	2.5	0.2	100.0	704
25-29	36.0	40.2	20.7	3.1	0.0	100.0	624
30-34	35.7	37.6	21.6	5.2	0.0	100.0	533
35-39	32.7	39.9	23.8	3.5	0.0	100.0	528
40-44	36.5	41.9	19.4	2.3	0.0	100.0	394
45-49	34.7	38.8	21.4	5.1	0.0	100.0	364
Employment (past 12 months)							
Not employed	36.7	42.8	18.0	2.3	0.1	100.0	781
Employed	35.5	39.7	21.4	3.5	0.0	100.0	3,276
Marital status							
Never married	36.1	41.6	19.7	2.5	0.1	100.0	1,936
Married or living together	35.5	38.6	21.8	4.1	0.0	100.0	1,950
Divorced/separated/widowed	33.4	44.3	20.5	1.8	0.0	100.0	172
Residence							
Urban	36.2	38.4	22.5	2.9	0.1	100.0	1,866
Rural	35.3	41.8	19.3	3.6	0.0	100.0	2,191
Region							
Western	34.5	41.2	22.9	1.4	0.0	100.0	403
Central	29.3	49.2	21.0	0.5	0.0	100.0	326
Greater Accra	33.9	41.1	21.8	3.3	0.0	100.0	649
Volta	43.5	42.5	13.8	0.3	0.0	100.0	373
Eastern	14.7	64.1	18.0	3.2	0.0	100.0	411
Ashanti	31.9	35.7	31.9	0.6	0.0	100.0	785
Brong Ahafo	35.2	39.6	19.8	5.4	0.0	100.0	347
Northern	48.8	24.4	13.6	12.9	0.3	100.0	435
Upper East	65.5	23.5	7.2	3.8	0.0	100.0	219
Upper West	39.5	40.1	18.9	1.4	0.0	100.0	108
Education							
No education	47.5	31.2	13.0	8.3	0.0	100.0	540
Primary	36.3	40.4	19.9	3.4	0.0	100.0	619
Middle/JSS	33.0	43.8	21.0	2.2	0.0	100.0	1,721
Secondary+	33.9	39.0	24.5	2.5	0.1	100.0	1,167
Wealth quintile							
Lowest	47.2	32.1	13.7	7.0	0.0	100.0	708
Second	32.9	44.5	20.1	2.6	0.0	100.0	738
Middle	29.6	46.7	21.5	2.3	0.0	100.0	699
Fourth	36.1	40.0	20.8	2.9	0.1	100.0	974
Highest	33.4	38.6	26.0	2.0	0.0	100.0	939
Total 15-49	35.7	40.3	20.8	3.3	0.0	100.0	4,058
50-59	36.2	38.9	21.8	3.2	0.0	100.0	510
Total men 15-59	35.7	40.1	20.9	3.2	0.0	100.0	4,568

Note: Total includes cases with information missing on education that are not shown separately.

Tables 11.16.1 and 11.16.2 show that majority of women and men report a low consumption of fruits; 78 percent of women and 87 percent of men typically have 0-2 servings of fruits on a day when fruits are consumed. Only 3 percent of women and less than 1 percent of men reported having the recommended 5 or more servings of fruit a day. Eighteen percent of women and 11 percent of men have 3-4 servings of fruits a day when fruits are consumed. Respondents in the Brong Ahafo region are more likely to consume 3-4 servings of fruits a day (29 percent of women and 19 percent of men), compared with respondents in the Greater Accra and Upper West regions. Consumption of 3-4 servings of fruits a day is substantially lower among men in the Greater Accra and Northern regions (3 and 6 percent, respectively), compared with men in the Eastern region (24 percent) and women in the Western and Ashanti regions (at least 25 percent).

Table 11.16.1 Number of servings of fruits consumed: Women

Percent distribution of women age 15-49 who consume fruits by number of servings of fruits eaten on a typical day when fruits are consumed, according to background characteristics, Ghana 2008

Background characteristic	Number of servings of fruits consumed						Number of women
	0-2	3-4	5+	Don't know	Missing	Total	
Age							
15-19	79.2	17.0	2.6	1.0	0.1	100.0	1,001
20-24	73.5	21.2	4.4	0.8	0.1	100.0	858
25-29	75.1	19.4	4.1	0.9	0.5	100.0	809
30-34	77.2	18.3	2.5	1.1	0.9	100.0	628
35-39	78.6	17.7	2.6	0.4	0.7	100.0	628
40-44	82.3	13.2	3.5	0.3	0.7	100.0	462
45-49	80.6	16.1	2.5	0.4	0.4	100.0	417
Employment (past 12 months)							
Not employed	80.1	16.4	2.2	0.9	0.4	100.0	1,057
Employed	76.9	18.4	3.5	0.7	0.5	100.0	3,747
Marital status							
Never married	77.2	18.5	3.3	0.8	0.1	100.0	1,558
Married or living together	77.8	17.7	3.1	0.8	0.6	100.0	2,807
Divorced/separated/widowed	77.4	18.2	3.5	0.4	0.5	100.0	439
Residence							
Urban	80.9	15.2	2.9	0.6	0.4	100.0	2,330
Rural	74.4	20.6	3.5	0.9	0.5	100.0	2,474
Region							
Western	66.5	25.0	7.1	1.2	0.2	100.0	442
Central	85.8	12.5	0.7	0.6	0.4	100.0	420
Greater Accra	89.9	9.0	0.4	0.7	0.0	100.0	825
Volta	83.3	15.2	0.6	0.9	0.0	100.0	409
Eastern	83.9	13.6	2.1	0.0	0.3	100.0	479
Ashanti	66.0	26.5	6.0	0.4	1.2	100.0	1,008
Brong Ahafo	59.4	29.2	9.4	0.7	1.3	100.0	420
Northern	83.9	13.2	1.0	2.0	0.0	100.0	427
Upper East	82.3	17.5	0.2	0.0	0.0	100.0	252
Upper West	88.8	7.3	0.3	3.3	0.3	100.0	122
Education							
No education	81.2	14.8	2.6	1.0	0.4	100.0	1,000
Primary	78.3	17.2	3.5	0.3	0.7	100.0	969
Middle/JSS	75.3	20.5	3.1	0.5	0.5	100.0	2,008
Secondary+	78.0	16.5	4.0	1.5	0.0	100.0	823
Wealth quintile							
Lowest	78.3	17.3	2.7	1.3	0.4	100.0	753
Second	70.1	23.3	5.6	0.4	0.6	100.0	888
Middle	76.4	18.6	3.7	0.8	0.5	100.0	960
Fourth	80.2	15.9	2.6	0.7	0.6	100.0	1,101
Highest	81.5	15.7	1.9	0.8	0.2	100.0	1,102
Total	77.6	18.0	3.2	0.8	0.5	100.0	4,804

Note: Total includes cases with information missing on employment and education that are not shown separately.

Table 11.16.2 Number of servings of fruits consumed: Men

Percent distribution of men age 15-49 who consume fruits by number of servings of fruits consumed on a typical day when fruits are consumed, according to background characteristics, Ghana 2008

Background characteristic	Number of servings of fruits consumed						Number of men
	0-2	3-4	5+	Don't know	Missing	Total	
Age							
15-19	86.6	11.4	0.8	1.2	0.0	100.0	889
20-24	87.0	10.2	0.9	1.6	0.3	100.0	687
25-29	86.8	9.8	1.4	2.0	0.0	100.0	604
30-34	88.5	10.4	0.0	1.1	0.1	100.0	505
35-39	86.5	9.6	1.5	2.3	0.0	100.0	510
40-44	88.4	9.6	1.1	0.9	0.0	100.0	385
45-49	83.8	13.2	0.9	2.1	0.0	100.0	345
Employment (past 12 months)							
Not employed	86.8	10.6	1.0	1.5	0.1	100.0	763
Employed	86.9	10.6	0.9	1.6	0.0	100.0	3,162
Marital status							
Never married	87.3	10.4	0.8	1.5	0.1	100.0	1,888
Married or living together	86.1	10.9	1.2	1.8	0.0	100.0	1,869
Divorced/separated/widowed	90.9	8.5	0.6	0.0	0.0	100.0	169
Residence							
Urban	90.2	7.8	0.8	1.1	0.1	100.0	1,813
Rural	84.0	12.9	1.0	2.0	0.0	100.0	2,113
Region							
Western	83.8	12.9	2.4	0.7	0.2	100.0	398
Central	84.7	13.8	1.1	0.4	0.0	100.0	325
Greater Accra	96.3	3.2	0.1	0.4	0.0	100.0	628
Volta	92.4	7.0	0.3	0.3	0.0	100.0	372
Eastern	74.6	24.1	1.3	0.0	0.0	100.0	398
Ashanti	90.3	8.4	0.9	0.4	0.0	100.0	781
Brong Ahafo	79.4	19.0	1.5	0.0	0.0	100.0	328
Northern	79.3	6.4	1.2	12.8	0.3	100.0	379
Upper East	91.8	7.5	0.0	0.7	0.0	100.0	211
Upper West	90.7	8.3	0.0	0.7	0.3	100.0	107
Education							
No education	87.2	6.9	1.1	4.8	0.1	100.0	496
Primary	87.1	10.1	0.9	2.0	0.0	100.0	598
Middle/JSS	85.8	12.6	0.9	0.7	0.0	100.0	1,683
Secondary+	88.2	9.4	0.9	1.3	0.2	100.0	1,138
Wealth quintile							
Lowest	85.8	9.6	0.7	3.9	0.0	100.0	659
Second	80.1	16.3	1.3	2.3	0.0	100.0	719
Middle	84.1	13.5	1.4	1.0	0.0	100.0	683
Fourth	89.6	9.3	0.7	0.3	0.1	100.0	945
Highest	92.1	6.0	0.8	1.0	0.1	100.0	920
Total 15-49	86.9	10.6	0.9	1.6	0.1	100.0	3,925
50-59	85.5	11.5	1.6	1.1	0.3	100.0	494
Total men 15-59	86.7	10.7	1.0	1.5	0.1	100.0	4,420

Note: Total includes cases with information missing on education that are not shown separately.

11.13.5 Consumption of Vegetables

All women and men in GDHS were also asked about consumption of vegetables: *In a typical week, on how many days do you eat vegetables, for example carrots, cabbage, dark green leafy vegetables (e.g. kontomire), pumpkin, squash, etc?* Those who responded in the affirmative were further asked: *On a day when you eat vegetables, how many servings do you eat on average?*

Tables 11.17.1 and 11.17.2 show the results for women and men, respectively. A substantial proportion of respondents reported low consumption of vegetables during a typical week; 34 percent of women and 25 percent of men eat vegetables 0-2 days a week. Consumption of vegetables on a daily basis (7 days) is reported by only 24 percent of women and 30 percent of men; most women and men eat vegetables 3-6 days a week (41 and 44 percent, respectively). Older respondents, those living in urban areas, respondents who are currently married, those in the highest wealth quintiles, and respondents with secondary and higher education are more likely to eat vegetables on a daily basis than other respondents, and the differences are more pronounced for men than women. Consumption of vegetables on a daily basis is very low among women in the Volta region (7 percent) and among men in the Eastern region (10 percent).

Table 11.17.1 Weekly consumption of vegetables: Women

Percent distribution of women age 15-49 by number of days vegetables are consumed in a typical week, according to background characteristics, Ghana 2008

Background characteristic	Number of days vegetables are consumed in a typical week						Number of women
	0-2 days	3-6 days	7 days	Don't know	Missing	Total	
Age							
15-19	36.9	40.8	21.4	0.9	0.1	100.0	1,025
20-24	37.3	39.1	22.7	0.9	0.0	100.0	878
25-29	32.7	42.2	24.5	0.4	0.1	100.0	832
30-34	31.1	41.5	26.0	1.2	0.2	100.0	644
35-39	36.1	41.4	22.0	0.5	0.0	100.0	638
40-44	34.8	39.5	25.1	0.6	0.0	100.0	470
45-49	25.1	46.3	27.2	1.4	0.0	100.0	429
Employment (past 12 months)							
Not employed	34.1	39.9	24.4	1.4	0.2	100.0	1,094
Employed	34.2	41.7	23.5	0.6	0.0	100.0	3,822
Marital status							
Never married	37.1	39.4	22.6	0.8	0.1	100.0	1,593
Married or living together	32.1	42.5	24.5	0.9	0.1	100.0	2,876
Divorced/separated/widowed	37.0	40.4	22.2	0.4	0.0	100.0	446
Residence							
Urban	39.1	35.4	24.6	0.8	0.1	100.0	2,383
Rural	29.5	46.8	22.8	0.8	0.1	100.0	2,533
Region							
Western	38.2	40.7	20.3	0.8	0.0	100.0	447
Central	48.3	37.2	14.2	0.3	0.0	100.0	424
Greater Accra	33.8	26.4	38.6	1.0	0.1	100.0	853
Volta	44.4	47.8	6.8	0.8	0.3	100.0	431
Eastern	26.5	57.9	15.6	0.0	0.0	100.0	483
Ashanti	32.9	43.3	23.7	0.0	0.1	100.0	1,011
Brong Ahafo	30.9	29.3	38.8	1.0	0.0	100.0	425
Northern	37.0	42.7	16.4	3.8	0.0	100.0	467
Upper East	9.3	59.5	31.1	0.2	0.0	100.0	253
Upper West	29.3	53.7	16.8	0.3	0.0	100.0	122
Education							
No education	31.4	47.5	19.2	1.7	0.1	100.0	1,042
Primary	36.0	39.2	24.2	0.6	0.0	100.0	988
Middle/JSS	36.0	40.7	22.6	0.6	0.0	100.0	2,039
Secondary+	30.8	37.2	31.2	0.6	0.1	100.0	844
Wealth quintile							
Lowest	26.5	47.9	23.5	1.9	0.2	100.0	783
Second	30.3	45.1	24.2	0.3	0.1	100.0	900
Middle	35.8	43.3	20.4	0.4	0.0	100.0	979
Fourth	39.7	39.2	20.4	0.8	0.0	100.0	1,119
Highest	35.6	33.9	29.5	0.8	0.1	100.0	1,135
Total	34.2	41.3	23.7	0.8	0.1	100.0	4,916

Note: Total includes cases with information missing on employment and education that are not shown separately.

Table 11.17.2 Weekly consumption of vegetables: Men

Percent distribution of men age 15-49 by number of days vegetables are consumed in a typical week, according to background characteristics, Ghana 2008

Background characteristic	Number of days vegetables consumed in a typical week						Number of men
	0-2 days	3-6 days	7 days	Don't know	Missing	Total	
Age							
15-19	29.5	46.6	22.9	0.9	0.1	100.0	911
20-24	25.0	42.6	29.3	3.0	0.2	100.0	704
25-29	28.1	40.0	30.2	1.7	0.0	100.0	624
30-34	22.5	40.0	35.0	2.5	0.0	100.0	533
35-39	21.2	45.7	30.8	2.4	0.0	100.0	528
40-44	19.6	44.6	34.4	1.5	0.0	100.0	394
45-49	18.8	46.0	32.4	2.8	0.0	100.0	364
Employment (past 12 months)							
Not employed	29.3	42.9	26.2	1.5	0.1	100.0	781
Employed	23.5	43.8	30.5	2.2	0.0	100.0	3,276
Marital status							
Never married	27.9	43.1	27.2	1.7	0.1	100.0	1,936
Married or living together	21.3	43.8	32.5	2.4	0.0	100.0	1,950
Divorced/separated/widowed	25.3	48.1	26.1	0.5	0.0	100.0	172
Residence							
Urban	25.4	38.3	33.5	2.8	0.1	100.0	1,866
Rural	23.9	48.2	26.5	1.4	0.0	100.0	2,191
Region							
Western	22.7	38.7	38.3	0.2	0.0	100.0	403
Central	28.5	36.8	34.3	0.4	0.0	100.0	326
Greater Accra	26.6	30.9	36.9	5.6	0.0	100.0	649
Volta	33.6	44.2	21.8	0.3	0.0	100.0	373
Eastern	19.2	66.9	9.7	4.2	0.0	100.0	411
Ashanti	21.8	52.0	26.2	0.0	0.0	100.0	785
Brong Ahafo	11.7	33.8	53.0	1.5	0.0	100.0	347
Northern	42.2	29.8	23.2	4.4	0.5	100.0	435
Upper East	8.5	64.3	26.8	0.3	0.0	100.0	219
Upper West	19.5	54.2	26.3	0.0	0.0	100.0	108
Education							
No education	24.7	42.5	29.7	3.1	0.0	100.0	540
Primary	27.7	47.3	23.8	1.2	0.0	100.0	619
Middle/JSS	23.1	47.1	27.5	2.2	0.1	100.0	1,721
Secondary+	25.0	37.3	35.9	1.8	0.1	100.0	1,167
Wealth quintile							
Lowest	25.1	48.9	24.3	1.5	0.1	100.0	708
Second	19.8	49.2	29.3	1.7	0.0	100.0	738
Middle	26.6	46.9	25.6	0.9	0.0	100.0	699
Fourth	25.7	40.9	31.3	1.9	0.1	100.0	974
Highest	25.2	35.8	35.4	3.6	0.0	100.0	939
Total 15-49	24.6	43.7	29.7	2.0	0.1	100.0	4,058
50-59	23.0	43.0	32.7	1.4	0.0	100.0	510
Total men 15-59	24.4	43.6	30.0	2.0	0.0	100.0	4,568

Note: Total includes cases with information missing on education that are not shown separately.

Tables 11.18.1 and 11.18.2 show that majority of women (82 percent) and men (86 percent) reported consuming 0-2 servings of vegetables on a typical day when vegetables are consumed. Only 2 percent of women and 1 percent of men consumed the recommended 5 or more servings of vegetables a day. Sixteen percent of women and 11 percent of men had 3-4 servings of vegetables a day. The proportion of respondents with average intake of 3-4 servings of vegetables a day is particularly low among women in the Volta region (4 percent) and among men in the Ashanti region (6 percent). Daily consumption of 3-4 servings of vegetables is somewhat lower among the most educated and wealthiest respondents, and the differences are more pronounced among men than women.

Table 11.18.1 Number of servings of vegetables consumed: Women

Percent distribution of women age 15-49 by number of servings of vegetables consumed on a typical day when vegetables are consumed, according to background characteristics, Ghana 2008

Background characteristic	Number of servings of vegetables consumed						Number of women
	0-2	3-4	5+	Don't know	Missing	Total	
Age							
15-19	81.1	16.6	1.6	0.4	0.2	100.0	1,016
20-24	84.0	14.4	1.1	0.4	0.0	100.0	870
25-29	81.7	14.5	1.8	1.5	0.5	100.0	829
30-34	80.9	15.4	2.3	1.2	0.2	100.0	636
35-39	81.1	16.3	2.1	0.5	0.0	100.0	635
40-44	81.2	16.1	1.8	0.5	0.3	100.0	467
45-49	80.4	17.2	1.2	0.9	0.2	100.0	423
Employment (past 12 months)							
Not employed	82.6	15.5	0.8	0.8	0.2	100.0	1,079
Employed	81.4	15.7	2.0	0.7	0.2	100.0	3,798
Marital status							
Never married	84.8	13.5	1.2	0.3	0.2	100.0	1,580
Married or living together	79.8	16.9	2.0	1.0	0.2	100.0	2,851
Divorced/separated/widowed	82.5	15.2	1.2	0.9	0.4	100.0	445
Residence							
Urban	85.6	11.9	1.6	0.7	0.2	100.0	2,365
Rural	78.0	19.1	1.8	0.9	0.2	100.0	2,512
Region							
Western	80.8	18.8	0.0	0.4	0.0	100.0	444
Central	84.9	13.4	0.9	0.8	0.0	100.0	422
Greater Accra	88.6	7.9	2.4	0.5	0.7	100.0	844
Volta	95.7	3.5	0.0	0.5	0.3	100.0	428
Eastern	84.0	15.8	0.2	0.0	0.0	100.0	483
Ashanti	83.6	13.1	2.5	0.4	0.4	100.0	1,011
Brong Ahafo	53.2	39.1	6.2	1.5	0.0	100.0	421
Northern	79.9	16.5	1.2	2.4	0.0	100.0	449
Upper East	66.1	33.9	0.0	0.0	0.0	100.0	253
Upper West	88.5	6.8	0.8	3.8	0.0	100.0	122
Education							
No education	78.2	18.3	1.7	1.5	0.3	100.0	1,025
Primary	81.7	15.6	1.7	0.7	0.2	100.0	982
Middle/JSS	81.8	15.7	1.7	0.5	0.3	100.0	2,027
Secondary+	85.4	12.3	1.6	0.6	0.0	100.0	839
Wealth quintile							
Lowest	73.0	23.9	1.0	1.7	0.4	100.0	768
Second	78.9	17.7	2.9	0.4	0.1	100.0	897
Middle	80.6	16.7	1.9	0.7	0.2	100.0	975
Fourth	85.1	12.6	1.4	0.9	0.1	100.0	1,110
Highest	87.3	10.5	1.4	0.4	0.4	100.0	1,126
Total	81.7	15.6	1.7	0.8	0.2	100.0	4,876

Note: Total includes cases with information missing on employment and education that are not shown separately.

Table 11.18.2 Number of servings of vegetables consumed: Men

Percent distribution of men age 15-49 by number of servings of vegetables consumed on a typical day when vegetables are consumed, according to background characteristics, Ghana 2008

Background characteristic	Number of servings of vegetables consumed						Number of men
	0-2	3-4	5+	Don't know	Missing	Total	
Age							
15-19	89.1	8.0	1.3	1.6	0.0	100.0	902
20-24	84.8	13.2	0.2	1.6	0.2	100.0	683
25-29	84.4	12.1	1.4	2.1	0.0	100.0	613
30-34	84.5	12.8	0.7	1.9	0.0	100.0	520
35-39	83.5	10.9	1.9	3.7	0.0	100.0	516
40-44	83.7	13.6	1.2	1.5	0.0	100.0	388
45-49	85.8	11.6	0.7	1.8	0.0	100.0	354
Employment (past 12 months)							
Not employed	88.3	8.6	1.2	1.8	0.1	100.0	770
Employed	84.8	12.1	1.1	2.0	0.0	100.0	3,206
Marital status							
Never married	86.8	10.6	0.8	1.8	0.1	100.0	1,902
Married or living together	84.0	12.3	1.4	2.3	0.0	100.0	1,902
Divorced/separated/widowed	88.9	10.7	0.0	0.4	0.0	100.0	171
Residence							
Urban	87.5	9.8	1.1	1.5	0.1	100.0	1,815
Rural	83.8	12.7	1.0	2.4	0.0	100.0	2,161
Region							
Western	89.7	10.3	0.0	0.0	0.0	100.0	402
Central	87.5	10.9	1.1	0.5	0.0	100.0	325
Greater Accra	90.5	8.3	0.7	0.5	0.0	100.0	613
Volta	90.9	8.9	0.0	0.3	0.0	100.0	371
Eastern	75.4	24.4	0.2	0.0	0.0	100.0	394
Ashanti	93.6	6.0	0.2	0.2	0.0	100.0	785
Brong Ahafo	77.7	19.3	0.5	2.5	0.0	100.0	342
Northern	69.5	8.3	7.4	14.6	0.3	100.0	416
Upper East	84.9	14.0	0.2	0.8	0.0	100.0	219
Upper West	83.1	16.7	0.0	0.2	0.0	100.0	108
Education							
No education	78.2	12.5	3.4	5.9	0.0	100.0	524
Primary	85.9	11.9	0.7	1.4	0.0	100.0	612
Middle/JSS	87.0	11.5	0.5	1.0	0.0	100.0	1,683
Secondary +	86.3	10.5	1.2	1.9	0.1	100.0	1,146
Wealth quintile							
Lowest	80.0	13.2	2.2	4.7	0.0	100.0	698
Second	81.7	14.7	1.6	1.9	0.0	100.0	725
Middle	84.8	11.7	1.0	2.6	0.0	100.0	692
Fourth	88.0	10.5	0.7	0.6	0.1	100.0	955
Highest	90.7	8.1	0.3	0.9	0.0	100.0	905
Total 15-49	85.5	11.4	1.1	2.0	0.0	100.0	3,976
50-59	85.9	11.8	1.2	1.0	0.0	100.0	503
Total men 15-59	85.6	11.4	1.1	1.9	0.0	100.0	4,479

Note: Total includes cases with information missing on education that are not shown separately.

11.13.6 Types of Cooking Oil Used in Ghana

Solid fats, such as animal fat, butter, and red palm oil, traditionally used for cooking in many parts of the world are high in cholesterol-elevating fatty acids that increase the risk of heart disease. In an effort to assess what type of oil is used in Ghana for cooking, all respondents to the Household Questionnaire in the 2008 GDHS were asked: *What type of oil does your household mainly use for cooking?* As expected, every second household in Ghana is using palm oil (Table 11.19). Frytol, fortified vegetable oil is used by 27 percent of households. Less than 10 percent of the households use

other vegetable oil or shea butter (7 and 9 percent, respectively). Lard, suet, and other oils high in saturated fats are used by less than 1 percent of households combined.

Rural households favour palm oil over other types of oil. For example, six in ten rural households use palm oil, compared with one in five rural households that use either frytol or other vegetable oil. Urban households, however, use frytol and other vegetable oil (48 percent) almost as frequently as they use palm oil (45 percent). Regional variations show that palm oil is used in all regions, except the three northern regions where shea butter is preferred. The Central region has the highest proportion of households using palm oil for cooking (80 percent), while households in the Greater Accra region prefer frytol (48 percent) to palm oil (41 percent), or any other oil. Over 77 percent of households in the Upper East and Upper West regions use shea butter for cooking, compared with 45 percent of households in the Northern region; more than one in four households (27 percent) in the Northern region use other vegetable oil.

Although there is convincing evidence that consumption of palm oil contributes to an increased risk of cardiovascular diseases, caution should be used regarding efforts to reduce the intake of palm oil; this is because palm oil is a better solid fat to use in foods than animal fat, which would likely be chosen to replace palm oil in many households.

Table 11.19 Types of cooking oil used in Ghana

Percent distribution of households by type of oil used for cooking, according to background characteristics, Ghana 2008

Background characteristic	Type of oil used for cooking							Total	Number of households
	Palm oil	Frytol/ fortified vegetable oil	Other vegetable oil	Shea butter	Lard, suet, butter, margarine, or other	Missing	No food cooked in household		
Residence									
Urban	45.1	39.3	9.1	1.9	0.2	0.1	4.3	100.0	5,627
Rural	62.3	14.8	4.2	15.6	0.6	0.2	2.4	100.0	6,150
Region									
Western	71.1	21.5	4.4	0.0	0.1	0.0	2.8	100.0	1,184
Central	80.3	14.6	2.4	0.0	0.3	0.2	2.1	100.0	1,279
Greater Accra	40.8	47.7	7.6	0.0	0.4	0.2	3.3	100.0	1,951
Volta	69.3	24.7	3.9	0.0	0.8	0.0	1.4	100.0	991
Eastern	78.3	18.7	1.0	0.0	0.1	0.4	1.5	100.0	1,260
Ashanti	55.4	31.9	5.8	0.1	0.1	0.1	6.5	100.0	2,263
Brong Ahafo	57.9	26.4	6.1	3.9	0.1	0.2	5.4	100.0	1,154
Northern	10.1	14.9	26.5	45.0	2.0	0.1	1.5	100.0	928
Upper East	0.6	15.3	3.7	78.5	0.3	0.2	1.5	100.0	540
Upper West	5.1	7.9	8.8	76.5	0.3	0.0	1.3	100.0	228
Wealth quintile									
Lowest	36.8	7.4	7.3	46.0	1.3	0.3	0.9	100.0	1,813
Second	74.8	10.7	5.2	6.8	0.5	0.1	2.0	100.0	2,250
Middle	66.9	19.4	6.3	2.1	0.3	0.2	4.8	100.0	2,548
Fourth	51.8	35.8	5.8	0.7	0.1	0.2	5.7	100.0	2,646
Highest	37.3	51.8	8.3	0.1	0.2	0.1	2.3	100.0	2,520
Total	54.0	26.5	6.6	9.0	0.4	0.2	3.3	100.0	11,777

MALARIA 12

Malaria is hyper-endemic in Ghana and constitutes one of the leading causes of morbidity and mortality, especially among pregnant women and children under the age of five. The Ministry of Health (MOH) estimates that 3 to 3.5 million cases of suspected malaria are reported each year in public health facilities, representing 30-40 percent of outpatient attendance. Of this figure, over 900,000 are children under the age of five. Malaria also accounts for about 61 percent of hospital admissions of children under five years and 8 percent of admissions of pregnant women. It is estimated that malaria accounts for 22 percent of under-five mortality and 9 percent of maternal deaths (The President's Malaria Initiative, 2007).

Ghana's efforts to control malaria date back to the pre-independence era, when various strategies were employed at different times. In 1999, the country adopted the Roll Back Malaria initiative and has since been implementing a combination of curative and preventive interventions. Ghana subscribed to the Abuja Accord of the year 2000, by African Heads of States, which sought to achieve 60 percent coverage of malaria interventions by the year 2005, focusing particularly on pregnant women and children under five in need of access to suitable and affordable combinations of personal and community protective and curative measures such as insecticide-treated mosquito nets (ITNs) and prompt, effective treatment for malaria. The Abuja Accord sought to ensure that at least 60 percent of all pregnant women at risk of malaria, especially those in their first pregnancies, have access to appropriate chemoprophylaxis or intermittent preventive treatment (IPT).

In Ghana, children less than five years of age and pregnant women are targeted for the distribution of insecticide-treated bed nets (ITNs). These groups are considered the most vulnerable and hence the focus of this preventive method. Ghana adopted a multiple approach for the distribution of the ITNs. A voucher scheme with Global Fund support within the framework of public-private partnership was implemented initially in four of the ten regions. The Ghana Health Service (GHS) distributes subsidised ITNs through the child welfare and antenatal clinics of the public health facilities. Occasionally, the Ministry of Health distributes free bed nets to pregnant women and children under five as part of immunisation campaigns and other health programmes.

The Ghana Health Service provides sulphadoxine-pyrimethamine to pregnant women as IPT free of charge and as directly observed therapy (DOT) at both public and private antenatal services delivery points across the country.

Because of the emergence of chloroquine-resistant strains of the malaria parasite, Plasmodium falciparum, in Ghana, the country embarked on a process to change the then existing Anti-Malaria Drug Policy. Guided by WHO criteria and recommendations, the process ended with the adoption of Artesunate-Amodiaquine, an Artemisinin-based Combination Therapy (ACT) as the drug of choice for the treatment of uncomplicated malaria across the country. Implementation of the new treatment policy began in the last quarter of 2005 with countrywide training of health care providers in both private and public sectors. Unlike chloroquine, the use of Artesunate-Amodiaquine for the home management of malaria in children less than five years of age was not recommended because of the complexity of the dosage/weight calculations and the limited data available on its safety. The GHS strongly advised caregivers of young children with the signs and symptoms of malaria to access treatment at the nearest health facility. Unfortunately, after introduction of the new drug, adverse reactions of varying degrees of severity were reported across the country, and the situation impaired confidence of the population in the new treatment policy. The MOH and GHS have since addressed the identified lapses and revised the policy to include two alternative ACT drugs, namely Artemether-Lumefantrine and Dihydroartemisinin-Piperaquine for those who remain hypersensitive to

Artesunate-Amodiaquine. Implementation of the revised policy is expected to begin in 2009 with training of health workers on the revised treatment guidelines.

The Ghana Health Service conducts information, education, and communication (IEC) activities on these malaria control interventions, using a variety of communication media and strategies. Findings from the 2008 GDHS can be used to assess the implementation of these malaria control strategies.

12.1 MOSQUITO NETS

12.1.1 Ownership of Mosquito Nets

One of the cardinal principles of controlling vector-borne diseases is to break the host-vector link. The use of bed nets in malaria control does just that by creating a physical barrier between humans and the female Anopheles mosquito, which feeds primarily at night. Treating the bed nets with an insecticide that leaves a residual effect has the added advantage of repelling and/or killing the mosquitoes. This leads to a reduction in the vector population and, eventually, to termination of their ability to transmit malaria. The Ghana Health Service therefore promotes the ownership and use of insecticide-treated mosquito nets, particularly the (factory-treated) long-lasting, insecticide-treated nets (LLIN), as one of the primary interventions for reducing malaria transmission and morbidity in the country. In Ghana, various types of ITNs have been on the market. They include the long-lasting, insecticide-treated nets (LLINs) that require re-treatment only after about four years or twenty washes, and the standard insecticide-treated nets (ITNs) that need to be re-treated every six months or after three washes.

In an effort to make mosquito nets more affordable, the Government of Ghana has since 2002 waived taxes on the importation of nets into the country. Development partners have also contributed by supplying some ITNs for distribution at subsidised costs to pregnant women and children under five in disadvantaged areas of the country. These nets are distributed through routine public health services.

Table 12.1 shows the percentage of households with at least one and with more than one mosquito net (treated or untreated), and the percentage of households that have at least one and more than one ITN, by background characteristics. The data show that 45 percent of households in Ghana own a mosquito net whether treated or untreated, and 19 percent of households own more than one net. Rural households are more likely to own at least one or more than one net than urban households. Mosquito net ownership is highest in the Upper West region (72 percent) and lowest in the Greater Accra (32 percent) region. The percentage of households with at least one net generally decreases with increasing household wealth quintile. The average number of mosquito nets per household is 0.7.

Four in ten households own at least one ever-treated net or an insecticide-treated net (ITN). Households in the Upper West region report the highest level of ownership of ITNs (71 percent); the lowest level of ownership is in households in the Greater Accra (30 percent) region. Households in the lowest and second wealth quintiles are more likely to own at least one mosquito net than households in the other wealth quintiles. The average number of ITNs per household is 0.6.

Table 12.1 Ownership of mosquito nets

Percentage of households with at least one and more than one mosquito net (treated or untreated), ever-treated mosquito net, and insecticide- treated net[1] (ITN), and the average number of nets per household, by background characteristics, Ghana 2008

Background characteristic	Any type of mosquito net			Ever-treated mosquito nets[1]			Insecticide-treated mosquito nets (ITNs)[2]			Number of house-holds
	Percentage with at least one	Percentage with more than one	Average number of nets per household	Percentage with at least one	Percentage with more than one	Average number of ever-treated nets per household	Percentage with at least one	Percentage with more than one	Average number of ITNs per household	
Residence										
Urban	37.2	12.9	0.5	35.5	12.1	0.5	34.7	11.6	0.5	5,627
Rural	53.0	23.7	0.9	49.2	20.7	0.8	48.1	19.9	0.8	6,150
Region										
Western	43.3	17.1	0.6	41.7	16.0	0.6	41.1	15.8	0.6	1,184
Central	43.9	13.2	0.6	42.6	12.8	0.6	41.8	12.5	0.6	1,279
Greater Accra	32.1	11.5	0.5	30.6	10.9	0.4	29.8	10.2	0.4	1,951
Volta	60.8	35.7	1.1	45.3	22.8	0.8	42.8	20.5	0.7	991
Eastern	37.3	11.2	0.5	36.3	10.8	0.5	36.0	10.7	0.5	1,260
Ashanti	41.2	13.4	0.6	40.2	13.1	0.6	39.7	12.5	0.6	2,263
Brong Ahafo	56.9	21.6	0.8	52.6	17.9	0.7	51.3	17.1	0.7	1,154
Northern	57.1	28.6	1.0	54.9	26.9	0.9	53.5	26.2	0.9	928
Upper East	55.0	32.5	1.0	54.6	32.4	1.0	52.9	31.1	1.0	540
Upper West	71.7	45.5	1.5	71.0	44.7	1.5	70.8	44.3	1.4	228
Wealth quintile										
Lowest	56.4	29.2	1.0	51.6	24.6	0.9	50.2	23.6	0.8	1,813
Second	51.5	20.4	0.8	47.1	17.4	0.7	46.0	16.6	0.7	2,250
Middle	43.4	15.4	0.6	40.9	13.8	0.6	40.1	13.4	0.6	2,548
Fourth	38.4	13.5	0.5	36.9	12.6	0.5	36.5	12.2	0.5	2,646
Highest	41.6	17.7	0.7	40.1	17.2	0.6	39.0	16.3	0.6	2,520
Total	45.4	18.6	0.7	42.7	16.6	0.6	41.7	15.9	0.6	11,777

[1] An ever-treated net is 1) a pre-treated net or a non-pre-treated which has subsequently been soaked with insecticide at any time
[2] An insecticide-treated net (ITN) is 1) a factory-treated net that does not require any further treatment, or 2) a pre-treated net obtained within the past 12 months, or 3) a net that has been soaked with insecticide within the past 12 months

12.1.2 Use of Mosquito Nets by Children

Age is an important factor in determining levels of acquired immunity against malaria. For the first six months of life, antibodies acquired from the mother during pregnancy protect children from malaria. This immunity is gradually lost as children start developing their own immunity over a period of time. Unlike some other infectious diseases, immunity against malaria is not permanent and protection from being infected requires the regular use of the protective interventions. The use of ITNs confers some protection if the child uses the net on a regular basis. In determining ITN usage, only children reported to have slept under a net the night before the survey were considered users of ITNs.

In the 2008 GDHS, respondents to the Household Questionnaire were asked about the use of mosquito nets by all members of the household the night before the interview.

Table 12.2 presents information on the use of mosquito nets by children under five years in all households, and in households with an ITN, by background characteristics. The results show that 41 percent of children under five years in all households slept under a mosquito net (treated or untreated) the night before the survey; 40 percent slept under an ever-treated net; and 39 percent slept under an ITN. In households that own at least one ITN, a substantially larger proportion of children under age five slept under an ITN the night before the survey (58 percent).

Table 12.2 Use of mosquito nets by children

Among children under five years in all households, the percentage who, on the night preceding the interview, slept under a mosquito net (treated or untreated), under an ever-treated mosquito net, and under an insecticide-treated net (ITN), and among children under five years in households with at least one ITN, the percentage who slept under an ITN the past night, by background characteristics, Ghana 2008

	Among children under five in all households, percentage who, the past night				Among children under five in households with an ITN[2]	
Background characteristic	Slept under any net	Slept under an ever-treated net[1]	Slept under an ITN[2]	Number of children	Percentage who slept under an ITN the past night[2]	Number of children
Age (in years)						
<1	51.2	49.6	49.0	1,156	68.0	833
1	47.8	45.8	44.6	1,072	61.9	771
2	39.3	37.5	36.4	1,110	55.5	727
3	37.8	36.6	35.8	1,193	55.3	773
4	30.6	29.4	29.2	1,260	47.7	770
Sex						
Male	39.8	38.3	37.5	2,963	56.8	1,958
Female	42.4	40.8	40.0	2,827	59.0	1,916
Residence						
Urban	34.2	33.2	32.6	2,229	53.3	1,362
Rural	45.4	43.4	42.6	3,561	60.4	2,513
Region						
Western	38.0	37.5	37.5	534	54.0	371
Central	30.7	30.3	29.4	569	40.9	409
Greater Accra	31.3	29.8	29.6	679	50.3	399
Volta	55.1	46.3	43.7	474	64.1	323
Eastern	39.7	39.4	39.2	513	60.6	332
Ashanti	39.4	38.8	38.1	1,060	60.6	668
Brong Ahafo	60.5	58.0	56.9	611	74.0	470
Northern	33.5	32.7	31.8	869	49.5	559
Upper East	42.9	42.7	41.7	317	66.2	200
Upper West	65.6	63.9	63.8	165	73.0	144
Wealth quintile						
Lowest	47.0	44.0	42.6	1,427	63.9	952
Second	42.1	40.6	40.1	1,252	58.4	860
Middle	40.0	39.2	38.4	1,128	56.5	767
Fourth	37.6	36.5	36.2	1,110	55.4	725
Highest	35.7	34.8	34.0	874	52.1	570
Total	41.1	39.5	38.7	5,790	57.9	3,875

[1] An ever-treated net is 1) a pre-treated net or a non-pre-treated which has subsequently been soaked with insecticide at any time

[2] An insecticide-treated net (ITN) is (1) a factory-treated net that does not require any further treatment, or (2) a pre-treated net obtained within the past 12 months, or (3) a net that has been soaked with insecticide within the past 12 months

Among children under five, those less than one year of age are most likely to have slept under any net (51 percent), an ever-treated net (50 percent), or an ITN (49 percent) the night before the survey. Children in rural areas are more likely than those in urban areas to have slept under any net, an ever-treated net, or an ITN. The proportion of children who slept under any type of mosquito net is highest in the Upper West region (66 percent) and lowest in the Central and Greater Accra regions (31 percent each). The proportion of children who slept under a mosquito net generally decreases with increasing wealth quintile, thus while 47 percent of children in the lowest wealth quintile slept under a net the night before the survey, only 36 percent of children in the highest wealth quintile slept under a net. The proportion of children who slept under an ITN was highest in the Upper West region (64 percent) and lowest in the Central and Greater Accra regions (30 percent each).

In households that own at least one ITN, there are small differences by background characteristics in the proportion of children under age five who slept under an ITN the night before the survey. Children age four years (48 percent), male children (57 percent), children in urban areas (53 percent), and those in the highest wealth quintile (52 percent) were less likely than other children to sleep under ITNs the night before the interview. The percentage of children in the households with ITNs who slept under an ITN is highest in Brong Ahafo region (74 percent) and lowest in the Central region (41 percent).

12.1.3 Use of Mosquito Nets by Women

Pregnant women are one of the groups most vulnerable to malaria. The disease adversely affects birth outcomes and can lead to a spontaneous abortion, pre-term labour, low birth weight, and stillbirth. Pregnancy on its part affects the prognosis of malaria and enhances progression to the severe form of the disease. This has prompted many advocacy campaigns to educate not only pregnant women, but also the general public on the importance of preventing malaria during pregnancy. In Ghana, two key malaria preventive methods employed during pregnancy are the provision of intermittent preventive treatment (IPT) and the use of ITNs. As with children under age five, pregnant women in Ghana have been targeted for bed net distribution over the past five years, and those who slept under an ITN the night before the survey were considered regular users of an ITN.

Tables 12.3.1 and 12.3.2 show the percentage of all women and pregnant women, respectively, in all households who slept under a mosquito net (treated or untreated) the night before the survey, and in households that own at least one ITN, the proportions of women and pregnant women who slept under an ITN the night before the survey, by background characteristics. The results show some differences between all women and pregnant women in the use of nets. Overall, 26 percent of all women and 32 percent of pregnant women slept under any net the night before the interview; 24 percent and 28 percent, respectively, slept under an ever-treated net, and 24 percent and 27 percent, respectively, slept under an ITN. As with children under five, in households that own at least one ITN, a substantially larger proportion of women slept under an ITN the night before the survey (48 percent of all women and 52 percent of pregnant women).

For all women, those living in rural areas (35 percent) are more likely to have slept under a mosquito net the night before the survey than urban women (17 percent); the same pattern is seen for pregnant women, although the proportions are higher (41 and 18 percent, respectively). As with children, use of any mosquito net by all women is highest in the Upper West region (49 percent) and lowest in the Greater Accra region (13 percent); use of an ITN is highest in Upper West (48 percent) and lowest in the Greater Accra region (12 percent). Education is inversely related to sleeping under a mosquito net. While 33 percent of women with no education slept under a net the night before the survey, only 18 percent of women with secondary or higher education did. Similarly, women in the highest wealth quintile are the least likely to have slept under an ever-treated net, or an ITN. This pattern is probably related to the fact that many women in wealthier households, those who are better educated, and women in urban areas live in houses with mosquito screening on the windows and doors, hence the redundancy of using a mosquito net.

Table 12.3.1 Use of mosquito nets by women

Among all women age 15-49 in all households, the percentage who slept the past night under a mosquito net (treated or untreated), under an ever-treated mosquito net, and under an insecticide-treated net (ITN); and among all women age 15-49 in households with at least one ITN, the percentage who slept the past night under an ITN, by background characteristics, Ghana 2008

	Among women age 15-49 in all households, percentage who, the past night:				Women age 15-49 in households with an ITN[2]	
Background characteristic	Slept under any net	Slept under an ever-treated net[1]	Slept under an ITN[2]	Number of women	Percentage who slept under an ITN[2] the past night	Number of women
Residence						
Urban	16.5	15.7	15.4	5,214	37.4	2,141
Rural	35.2	32.0	31.3	5,475	55.6	3,083
Region						
Western	24.1	23.0	22.8	973	44.7	496
Central	22.2	22.0	21.4	967	43.2	480
Greater Accra	12.8	12.0	11.7	1,804	32.7	647
Volta	38.6	27.8	26.3	945	52.0	478
Eastern	24.0	23.7	23.6	1,037	53.2	459
Ashanti	21.8	21.5	21.2	2,074	47.5	925
Brong Ahafo	40.5	35.2	34.1	993	58.4	580
Northern	30.4	28.9	28.1	1,052	48.4	612
Upper East	32.0	31.8	31.2	576	52.8	340
Upper West	49.0	48.1	47.9	268	62.0	207
Education						
No education	33.0	29.9	29.3	2,515	54.9	1,342
Primary	29.9	27.4	26.5	2,076	52.1	1,055
Middle/JSS	23.3	21.8	21.4	4,252	45.3	2,014
Secondary+	18.3	17.5	17.1	1,838	38.7	810
Wealth quintile						
Lowest	40.0	35.6	34.6	1,794	59.4	1,045
Second	34.3	31.0	30.5	1,912	55.3	1,053
Middle	26.9	25.2	24.7	2,130	51.0	1,034
Fourth	19.8	18.9	18.8	2,322	43.9	993
Highest	14.9	14.4	13.8	2,532	31.8	1,099
Total	26.0	24.1	23.5	10,689	48.2	5,224

Note: Total includes women missing information on education who are not shown separately.
[1] An ever-treated net is 1) a pre-treated net or a non-pre-treated which has subsequently been soaked with insecticide at any time
[2] An insecticide-treated net (ITN) is 1) a factory-treated net that does not require any further treatment, or 2) a pre-treated net obtained within the past 12 months, or 3) a net that has been soaked with insecticide within the past 12 months.

Table 12.3.2 Use of mosquito nets by pregnant women

Among pregnant women age 15-49 in all households, the percentage who slept the past night under a mosquito net (treated or untreated), under an ever-treated mosquito net, and under an insecticide-treated net (ITN); and among pregnant women age 15-49 in households with at least one ITN, the percentage who slept the past night under an ITN, by background characteristics, Ghana 2008

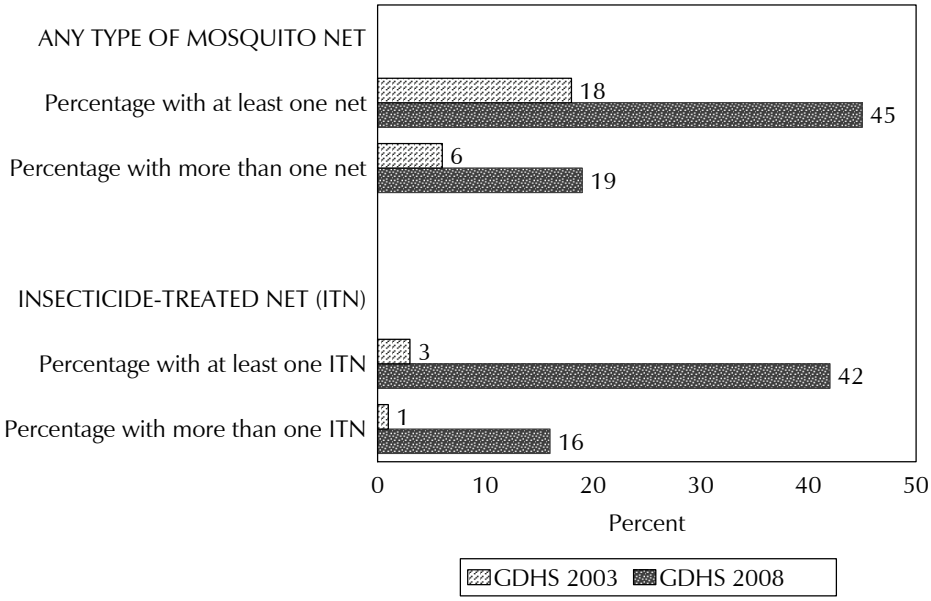
	Among pregnant women age 15-49 in all households, percentage who, the past night:				Pregnant women age 15-49 in households with an ITN[2]	
Background characteristic	Slept under any net	Slept under an ever-treated net[1]	Slept under an ITN[2]	Number of women	Percentage who slept under an ITN[2] the past night	Number of women
Residence						
Urban	18.4	18.0	18.0	145	41.6	63
Rural	40.6	35.5	33.9	208	57.4	123
Education						
No education	36.1	33.0	32.2	90	51.6	56
Primary	38.8	30.6	28.9	72	(50.0)	42
Middle/JSS	25.2	23.6	22.7	150	53.7	63
Secondary+	(31.4)	(31.4)	(31.4)	41	*	24
Wealth quintile						
Lowest	49.8	43.6	40.4	65	62.9	42
Second	34.7	29.5	29.5	82	50.4	48
Middle	29.5	26.1	24.3	68	(54.1)	31
Fourth	25.2	24.4	24.4	64	(50.1)	31
Highest	19.0	19.0	19.0	74	(41.2)	34
Total	31.5	28.3	27.4	353	52.1	186

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.
[1] An ever-treated net is 1) a pre-treated net or a non-pre-treated which has subsequently been soaked with insecticide at any time.
[2] An insecticide-treated net (ITN) is 1) a factory-treated net that does not require any further treatment, or 2) a pre-treated net obtained within the past 12 months, or 3) a net that has been soaked with insecticide within the past 12 months.

12.1.4 Trends in Household Ownership and Use of Mosquito Nets

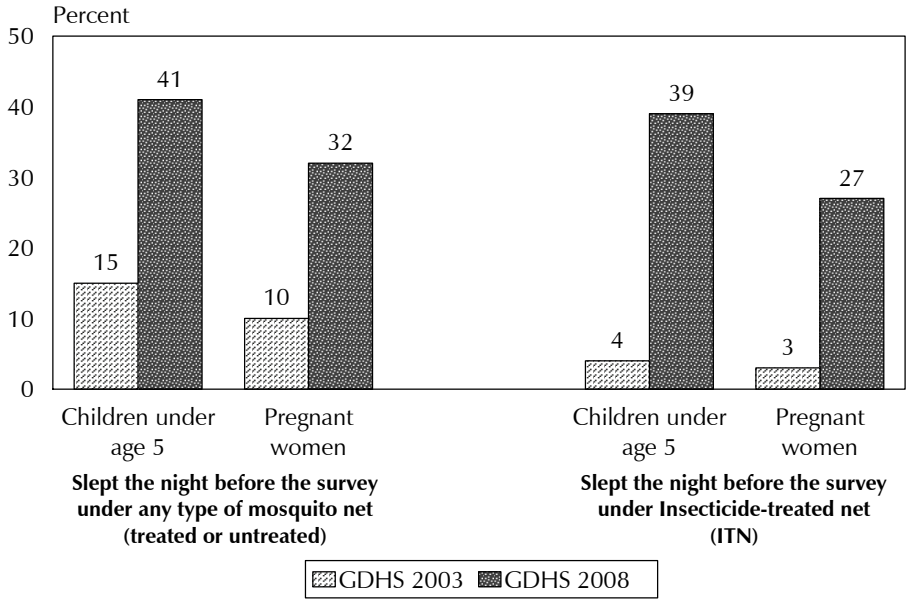
Figure 12.1 shows that household ownership of mosquito nets increased substantially between the 2003 GDHS and the 2008 GDHS. During the five-year period, ownership of a mosquito net (treated or untreated) increased from 18 to 45 percent, and household ownership of more than one net increased from 6 to 19 percent. In 2008, 42 percent of households own at least one ITN, compared with 3 percent of households in 2003. These increases demonstrate remarkable improvements in Ghana's bed-net distribution programmes in just five years.

Figure 12.1 Trends in Household Ownership of Mosquito Nets GDHS 2003 and GDHS 2008



The increase in the use of mosquito nets by women and children is consistent with the overall increase in ownership of ITNs (Figure 12.2). For example, the proportion of children under age five, in all households, who slept under an ITN the night before the survey, has increased 35 percentage points from 4 percent in 2003 to 39 percent in 2008. Similarly, the proportion of pregnant women, in all households, who slept under an ITN the night before the survey, has increased 24 percentage points from 3 percent in 2003 to 27 percent in 2008.

Figure 12.2 Trends in Use of Mosquito Nets by Children under Five and Pregnant Women (Any Net and ITNs) GDHS 2003 and GDHS 2008



12.2 Intermittent Preventive Treatment of Malaria in Pregnancy

12.2.1 Malaria Prophylaxis during Pregnancy

In malaria endemic areas, adults acquire partial immunity that protects them from repeated malaria infection. However, pregnant women—especially those pregnant for the first time—are more susceptible to malaria infection. In some cases, malaria infections remain asymptomatic but may lead to the development of anaemia. Malaria infection during pregnancy can also interfere with the maternal-foetus exchange, which can lead to intra-uterine growth restriction, and ultimately lead to low birth weight or even stillbirth.

One of the interventions the MOH and the Ghana National Malaria Control Programme have adopted to control malaria in pregnancy is Intermittent Preventive Treatment (IPT) with sulphadoxine-pyrimethamine (SP), which has several brand names including Fansidar and Malafan. According to this policy, from the second trimester of pregnancy (after quickening), pregnant women attending antenatal clinics are expected to be given three doses of SP as directly observed therapy (DOT), at monthly intervals (GHS, 2003b) (GSS, NMIMR, and ORC Macro, 2004: 200). This replaces the former policy of giving a full dose of chloroquine for treatment at the first antenatal visit, followed by two tablets weekly until 6 weeks post-partum (GHS, 2003c) (GSS, NMIMR, and ORC Macro, 2004: 200).

In the 2008 GDHS, women who had a live birth in the two years preceding the survey were asked whether they had taken any drugs to prevent them from getting malaria during the pregnancy for their most recent birth and, if yes, which drug. If they had taken SP, they were further asked how many times they took it and whether they had received it during an antenatal care visit.

Table 12.4 shows for women age 15-49 with a live birth in the two years preceding the survey, the percentage who took any anti-malarial drug for prevention during the pregnancy, the percentage who took SP/Fansidar, or any other anti-malaria drugs, and the percentage who received Intermittent Preventive Treatment (IPT).

The survey results show that nearly two-thirds (65 percent) of women 15-49 with a live birth in the two years preceding the survey took some kind of anti-malarial medicine for prevention of malaria during the last pregnancy. Over half (58 percent) of the women said they took SP/Fansidar—the recommended drug for prevention of malaria during pregnancy in Ghana—at least once during the pregnancy. Less than half (46 percent) of pregnant women said they took SP twice during the pregnancy.

Women in urban areas (74 percent) are more likely to take anti-malarial drugs during pregnancy than rural women (60 percent). The Volta and Brong Ahafo regions (79 and 76 percent, respectively) have the highest proportions of women taking any anti-malarial drug, while the Upper East and Northern regions (43 and 45 percent, respectively) have the lowest proportions. The use of anti-malarial drugs during pregnancy increases with increasing levels of education and increasing wealth quintile.

Differences by background characteristics in the proportion of treated women who took any dose of SP and who took 2 or more doses of SP are not large, although the proportions are smaller for women who took 2 or more doses of SP. The patterns are similar for women who took any anti-malarial drugs during pregnancy, although, as expected, those proportions are larger.

Intermittent Preventive Treatment (IPT) using SP/Fansidar was introduced in Ghana in 2003 as a replacement for chloroquine prophylaxis because of the high levels of chloroquine resistance. Some pregnant women may have received chloroquine prophylaxis because the drug was still in stock for some time after the change of anti-malarial drug policy. Over half (56 percent) of women with a birth in the two years preceding the survey who used IPT received SP/Fansidar during an antenatal visit. Most of them were from the Volta and Brong Ahafo regions (73 and 74 percent, respectively).

Table 12.4 Prophylactic use of anti-malarial drugs and use of Intermittent Preventive Treatment (IPT) by women during pregnancy

Among women age 15-49 with a live birth in the two years preceding the survey, percentage who during their pregnancy received any anti-malarial drug for prevention; percentage who received any SP/Fansidar/Malafan and two or more doses of SP/Fansidar/Malafan; and percentage who received Intermittent Preventive Treatment (IPT), by background characteristics, Ghana 2008

Background characteristic	Percentage who took any anti-malarial drug	SP/Fansidar/Malafan		Intermittent Preventive Treatment[1]		Number of women with a live birth in the two years preceding the survey
		Percentage who took any SP/Fansidar/ Malafan	Percentage who took 2+ doses	Percentage who received any SP/Fansidar/ Malafan during an ANC visit	Percentage who received 2+ doses, at least one during an ANC visit	
Residence						
Urban	73.9	64.7	49.6	60.9	46.3	455
Rural	60.1	54.1	42.9	52.9	42.1	723
Region						
Western	62.5	54.2	46.5	53.2	45.5	111
Central	72.3	68.1	46.7	66.1	45.7	123
Greater Accra	64.8	50.3	37.1	40.9	29.4	133
Volta	78.6	73.2	59.8	73.2	59.8	107
Eastern	66.7	60.5	44.6	56.7	40.8	105
Ashanti	72.8	66.6	51.8	65.7	50.8	215
Brong Ahafo	75.8	73.9	63.7	73.9	63.7	107
Northern	45.0	39.8	29.0	38.2	27.9	177
Upper East	42.8	26.0	26.0	26.0	26.0	63
Upper West	75.7	64.5	53.3	63.0	52.5	36
Education						
No education	50.0	45.5	36.0	43.8	34.5	363
Primary	64.2	54.3	42.2	52.4	40.7	288
Middle/JSS	77.3	70.4	55.2	67.5	52.6	412
Secondary+	74.6	64.0	49.3	62.3	48.6	113
Wealth quintile						
Lowest	48.6	42.0	31.9	40.5	31.2	283
Second	62.9	56.6	43.4	55.7	42.6	261
Middle	69.8	64.7	52.0	63.0	50.3	222
Fourth	74.4	67.6	51.6	64.9	49.2	243
Highest	78.8	65.7	54.1	60.6	49.8	169
Total	65.4	58.2	45.5	56.0	43.7	1,178

Note: Total includes women with information missing on education that are not shown separately

[1] Intermittent Preventive Treatment (IPT) during pregnancy is preventive treatment with a dose of sulfadoxine-pyrimethamine (SP/Fansidar/Malafan) at each scheduled antenatal visit after the first trimester, but not more frequently than once a month.

The MOH and the Ghana National Malaria Control Programme recommend that pregnant women receive at least two doses of SP/Fansidar during pregnancy as IPT against malaria. In the 2008 GDHS, only 44 percent of women reported receiving two or more doses, at least one of which was during an ANC visit. By inference, 56 percent of respondents who were eligible did not get the recommended doses of SP. IPT coverage increases with mother's level of education, from 35 percent among those with no education, to 53 percent among those with middle/JSS education, and 49 percent among those with some secondary or higher education. Similarly, IPT coverage increases with wealth quintile, from 31 percent among those in the lowest wealth quintile to 50 percent among those in the highest wealth quintile.

12.2.2 Prevalence and Management of Childhood Malaria

A common manifestation of malaria is fever, and the presence of fever is used as an entry point to assess and classify a sick child's condition under the Home Management of Malaria approach. In the 2008 GDHS, mothers were asked whether their children under age five had a fever in

the two weeks preceding the survey. Although fever can occur year-round, malaria is more prevalent during the rainy season. Such temporal factors should be taken into account when interpreting the occurrence of fever as an indicator of malaria prevalence. If a fever was reported, the mother was asked whether treatment was sought at a health facility and whether the child was given any medication and, if so, how soon the medication was taken after the onset of fever.

Table 12.5 shows the percentage of children under age five with fever in the two weeks preceding the survey, and among children with fever, the percentage who received anti-malarial drugs and the percentage who took anti-malarial drugs the same or next day, by background characteristics. One in five children under five years (20 percent) had a fever in the two weeks preceding the survey. Of these, 43 percent of children received an anti-malarial drug. Only 24 percent of children received the anti-malarial drug on the same or the next day after the onset of the fever.

Table 12.5 Prevalence and prompt treatment of fever

Percentage of children under age five with fever in the two weeks preceding the survey; and among children with fever, the percentage who received anti-malarial drugs and the percentage who received the drugs the same or next day following onset of fever, by background characteristics, Ghana 2008

	Children under five		Children under five with fever		
Background characteristic	Percentage with fever in the two weeks preceding the survey	Number of children	Percentage who received anti-malarial drugs	Percentage who received anti-malarial drugs same or next day	Number of children
Age (in months)					
<12	11.9	619	31.5	19.2	74
12-23	26.1	552	45.9	24.5	144
24-35	24.3	496	38.5	20.9	120
36-47	23.3	506	48.2	24.6	118
48-59	15.7	559	47.0	28.8	88
Sex					
Male	20.9	1,412	43.7	25.9	294
Female	18.9	1,320	42.1	21.1	249
Residence					
Urban	19.0	1,039	52.6	26.8	197
Rural	20.5	1,692	37.5	22.0	347
Region					
Western	10.3	260	(34.7)	(19.8)	27
Central	23.3	268	35.3	25.1	62
Greater Accra	12.5	329	(43.6)	(21.7)	41
Volta	18.5	237	(48.9)	(28.1)	44
Eastern	15.7	240	(32.0)	(17.8)	38
Ashanti	25.0	510	46.0	19.9	128
Brong Ahafo	27.2	260	49.5	35.7	71
Northern	21.3	413	36.9	11.5	88
Upper East	21.8	142	(60.4)	(52.6)	31
Upper West	20.3	72	41.1	20.2	15
Mother's education					
No education	19.4	888	31.7	16.7	173
Primary	22.8	668	41.9	25.0	152
Middle/JSS	18.4	920	49.9	25.1	169
Secondary+	19.9	252	61.5	39.3	50
Wealth quintile					
Lowest	19.7	693	27.9	13.8	136
Second	22.3	610	38.9	22.7	136
Middle	22.0	507	47.5	26.4	111
Fourth	19.6	528	63.5	33.8	104
Highest	14.3	393	42.4	26.3	56
Total	19.9	2,731	43.0	23.7	544

Note: Total includes children with information missing on mother's education that are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.

The highest prevalence of fever is reported among children age 12-23 months (26 percent), followed by those age 24-35 months (24 percent). Fever is less common among children age less than 12 months (12 percent) and those age 48-59 months (16 percent).The proportion of children with fever differs little by urban-rural residence. The Brong Ahafo and Ashanti regions have the highest proportions of children with fever (27 and 25 percent, respectively), while the Western region has the lowest proportion (10 percent). The prevalence of fever is highest among children of mothers with primary level education and children of mothers in the second and middle wealth quintiles.

Older children are slightly more likely to be given anti-malarial drugs for the treatment of fever and to receive the drugs the same or the next day. Children living in urban areas are slightly more likely to be given anti-malarial drugs (and within a day or two) than children in rural areas. Children of more educated mothers and children of mothers in the higher wealth quintiles are more likely than other children to be given anti-malarial drugs and to receive these drugs the same or next day as the onset of the fever.

Table 12.6 presents information on the type and timing of anti-malarial drugs given to children under age five with fever in the two weeks preceding the survey, the percentage who took specific anti-malarial drugs, and the percentage who took the drugs the same or next day after developing fever, by background characteristics.

Artemisinin Combination Therapy (ACT) is by far the most common anti-malarial drug given to children for fever (22 percent), followed by chloroquine (9 percent), Fansidar (4 percent) and Camoquine (2 percent). Quinine, which is reserved for treatment of severe and complicated malaria cases in health facilities, was taken by less than 2 percent of children with fever. Four percent of children were given other anti-malarial drugs.

There are large differences in the anti-malarial drugs used to manage fever in children under five years by background characteristics. Older children (26 percent), those living in urban areas (30 percent), children of mothers with secondary or higher education (47 percent), and children in households in the fourth wealth quintile (34 percent) are more likely than other children to be given ACT to treat fever. In contrast, rural children (10 percent) are more likely than urban children (6 percent) to have received chloroquine to treat fever, and to have received the drug within a day or two following the onset of fever (7 and 4 percent, respectively). It is noteworthy that chloroquine was withdrawn from the Ghana market in 2003 because of the high level of resistance to the drug.

In the majority of cases, the fever was not managed appropriately, with ACT not being given as recommended in the national policy.

Because of the need to treat malaria quickly, it can be useful for parents to have anti-malarial drugs at home. The GDHS findings show that anti-malarial drugs were at home when the child became ill in only 19 percent of cases (data not shown). The proportion with the anti-malarial drugs at home was highest for children treated with chloroquine (25 percent); mothers of 13 percent of the children treated with ACT reported having had the drug at home when the child became ill with fever.

Table 12.6 Type and timing of anti-malarial drugs

Among children under age five with fever in the two weeks preceding the survey, percentage who received specific anti-malarial drugs and the percentage who received the drugs the same or next day after developing fever, by background characteristics, Ghana 2008

Background characteristic	Percentage of children who received specific anti-malarial drugs							Percentage of children who received anti-malarial drugs the same or next day							Number of children with fever
	SP/Fansidar/ Malafan	Chloroquine	Camoquine	Quinine	Artemisinin	ACT[1]	Other antimalarial	SP/Fansidar/ Malafan	Chloroquine	Camoquine	Quinine	Artemisinin	ACT[1]	Other antimalarial	
Age (in months)															
<12	5.8	6.3	4.2	0.0	2.0	11.8	1.4	2.6	5.5	0.0	0.0	0.5	9.1	1.4	74
12-23	5.5	7.7	2.1	1.4	1.8	23.6	3.9	2.2	4.7	0.0	0.8	0.0	13.8	3.2	144
24-35	3.5	10.4	1.3	4.5	0.0	18.1	3.6	2.5	6.2	0.0	2.8	0.0	9.5	1.2	120
36-47	1.2	8.1	3.5	1.3	2.5	25.1	7.5	1.2	6.1	0.6	0.0	1.5	12.2	4.0	118
48-59	7.1	10.6	0.0	0.0	0.0	26.0	4.8	5.4	8.2	0.0	0.0	0.0	15.2	1.5	88
Sex															
Male	4.2	10.0	2.4	1.4	0.7	21.0	4.9	2.3	7.7	0.2	1.0	0.7	12.0	2.8	294
Female	4.7	7.1	1.9	1.9	2.0	22.1	3.8	3.1	4.0	0.0	0.6	0.0	12.2	1.9	249
Residence															
Urban	5.6	6.1	1.8	3.2	1.1	29.9	6.3	2.5	3.9	0.4	1.5	0.0	17.1	2.8	197
Rural	3.8	10.2	2.4	0.8	1.4	16.7	3.4	2.7	7.2	0.0	0.4	0.6	9.3	2.2	347
Mother's education															
No education	3.3	8.1	1.9	1.9	1.9	14.0	2.1	1.3	6.4	0.0	0.2	0.2	8.5	1.4	173
Primary	5.0	12.8	1.5	1.7	0.7	14.9	6.9	4.2	7.5	0.5	0.9	0.0	7.9	4.9	152
Middle/JSS	5.7	7.3	3.7	0.9	1.7	27.7	3.0	3.4	5.1	0.0	0.7	1.0	13.5	1.4	169
Secondary+	2.1	3.0	0.0	3.1	0.0	46.5	9.8	0.0	3.0	0.0	3.1	0.0	32.2	1.7	50
Wealth quintile															
Lowest	4.9	13.4	1.2	0.7	0.0	7.5	1.3	3.1	8.1	0.0	0.0	0.0	2.9	0.0	136
Second	5.2	5.7	1.2	2.0	0.3	20.1	4.5	3.5	2.8	0.0	0.3	0.3	12.2	3.6	136
Middle	2.4	7.8	3.4	1.1	5.1	26.6	2.2	2.4	6.7	0.0	0.0	1.6	15.6	0.0	111
Fourth	6.3	10.4	4.7	2.6	0.0	33.6	8.3	2.5	8.6	0.7	2.6	0.0	16.0	5.7	104
Highest	1.9	2.9	0.0	2.6	1.8	26.6	9.3	0.0	2.3	0.0	2.6	0.0	19.9	4.1	56
Total	4.4	8.7	2.2	1.6	1.3	21.5	4.4	2.6	6.0	0.1	0.8	0.4	12.1	2.4	544

[1] Artemisinin Combination Therapy (ACT) = Artesunate with Amodiaquine combination, or Artemether-Lumefantrine combination

This finding may be a reflection of two factors: the use of Artesunate-Amodiaquine at the household level was not initially encouraged because of the difficulty in calculating doses for infants on the basis of weight; instead, caregivers were advised to seek help at the nearest health facility when their child developed a fever. Second, there was reluctance on the part of many people to use the drug for fear of adverse reactions, which were observed in the initial stages of the drug's introduction.

Overall, the 2008 GDHS results highlight the large gap between the national targets set for 2005 in the Roll Back Malaria (RBM) initiative and the present intervention coverage. Advocacy programmes need to be implemented to increase the use of insecticide-treated mosquito nets, their re-treatment, management of paediatric fevers, and uptake of IPT.

12.3 EXPOSURE TO MESSAGES ON MALARIA

Malaria has been a topical health issue for several decades and it is a common occurrence to hear, read, or watch a message on malaria in any of the mass communication media. The practice was intensified in the early 2000s when the country changed the treatment policy and introduced and scaled up IPT and ITN use.

The 2008 GDHS included a series of questions at the household level on media exposure to information on malaria. The respondents to the Household Questionnaire were asked if they had seen or heard any messages about malaria in various media sources. They were also asked specifically whether they had listened to the radio programme *He Ha Ho*. This information is shown in Table 12.7.

Table 12.7 Sources of messages on malaria

Percentage of household respondents who heard or saw a message about malaria in the media or received a message through a health worker or a community volunteer, and percentage who ever listened to the radio programme *He Ha Ho*, by source of messages and background characteristics, Ghana 2008

Background characteristic	Percentage of household respondents who received malaria message through: TV	Radio	News-paper/ magazine	Poster	Leaflets/ brochures	Health worker	Community volunteer	No media exposure	Percentage who ever listened to *'He Ha Ho'*	Number of household respondents
Residence										
Urban	73.2	83.2	28.0	54.0	16.5	41.5	19.9	6.5	31.6	5,627
Rural	35.7	79.6	10.3	37.1	7.7	42.5	23.6	12.0	40.3	6,150
Region										
Western	58.3	87.7	19.9	51.5	11.1	29.0	15.1	6.5	48.5	1,184
Central	59.2	83.7	17.1	48.9	15.4	41.4	23.0	8.0	27.9	1,279
Greater Accra	79.4	78.8	33.6	54.9	16.8	29.4	11.2	7.7	24.4	1,951
Volta	24.1	82.2	10.5	35.1	7.9	53.1	25.3	10.2	77.1	991
Eastern	50.2	74.6	18.4	36.6	9.4	46.0	24.2	14.1	24.8	1,260
Ashanti	59.2	85.7	18.1	51.4	12.3	43.7	15.5	6.0	15.5	2,263
Brong Ahafo	48.7	86.9	11.9	54.4	10.6	46.2	32.9	6.7	39.8	1,154
Northern	37.2	71.0	13.4	22.6	10.5	55.9	40.8	16.7	56.6	928
Upper East	24.3	72.5	12.8	27.2	6.7	43.9	24.8	21.0	54.6	540
Upper West	30.0	78.6	9.2	25.2	7.3	50.6	37.0	8.3	64.1	228
Wealth quintile										
Lowest	13.3	69.3	3.9	20.7	2.9	40.3	28.4	20.3	44.5	1,813
Second	28.0	80.3	6.5	35.2	5.9	41.0	23.0	11.7	40.0	2,250
Middle	46.4	80.4	10.8	43.2	8.1	43.6	21.4	10.5	34.8	2,548
Fourth	75.9	86.2	23.5	54.8	14.4	42.2	20.5	5.1	32.9	2,646
Highest	89.3	86.5	43.4	63.5	25.0	42.4	17.9	3.0	31.5	2,520
Total	53.6	81.3	18.8	45.2	11.9	42.0	21.9	9.4	36.2	11,777

Not surprisingly, the majority of household respondents said they had heard about malaria on the radio (81 percent), 54 percent had seen a message about malaria on the television, and more than two in five respondents had seen a poster on malaria. One-fifth of respondents had read about malaria in a newspaper or magazine and 12 percent had seen leaflets or brochures on malaria. At the same time, nearly two-thirds (64 percent) of household respondents said they heard about malaria from a health worker or community volunteer. Thirty-six percent of respondents reported having heard the radio programme *He Ha Ho*. This is a decline since 2003 when 42 percent of respondents to household questionnaire had heard about the programme.

Except for radio, which is widely available in most communities, exposure to media messages about malaria from other sources is more common in urban areas than in rural areas. It should be noted that exposure to radio messages shows little difference by residence, but it is considerably lower

among respondents in the lowest wealth quintile. There are also large differences by wealth quintile in the proportion of respondents who received malaria messages through TV, leaflets, posters, and newspapers or magazines. There were no differences by wealth quintile in exposure to messages from health workers; however, there were substantial differences by wealth quintile for no media exposure: 20 percent for the lowest wealth quintile, compared with 3 percent for the highest wealth quintile.

Rural respondents were slightly more likely than those in urban areas to have received a message on malaria from a community volunteer (24 and 20 percent, respectively), and the Northern and Upper West regions were more likely to receive messages on malaria from a community volunteer (41 and 37 percent, respectively) than other regions. Regarding malaria messages received from a health worker, respondents in Volta, Northern, and Upper West regions were the most likely to cite this source (53, 56, and 51 percent, respectively); respondents in the Western and Greater Accra regions were the least likely to receive messages on malaria from a health worker (29 percent each).

12.3.1 Exposure to Specific Messages on Malaria

In Ghana, messages on malaria in the mass media are so varied that they can be misleading or confusing. This is particularly the case regarding FM radio stations because of widespread commercials on local herbal preparations claiming to have a cure for malaria, and a litany of mosquito coils purported to repel or kill mosquitoes and protect against malaria. Household respondents in the 2008 GDHS were asked about exposure to specific messages about malaria that were officially sanctioned for dissemination by the Ministry of Health and the Ghana Health Service. Table 12.8 summarises the results.

Interestingly, and contrary to the low level of ITN usage, 93 percent of household respondents have heard messages that families should sleep under an ITN to protect them from mosquito bites and hence malaria. Seventy-seven percent have heard that pregnant women should attend antenatal clinics and take three doses of SP or Fansidar for IPT.

Seventy-six percent have heard that treatment should be sought from health facilities within 24 hours of the onset of childhood fever; 63 percent have heard that the GHS recommends Artesunate-Amodiaquine for treatment of malaria; and more than half were aware that the full course of Artesunate-Amodiaquine should be completed.

The proportion of respondents who have heard the messages about malaria in Table 12.8 appears to increase with household wealth except for message on IPT but does not appear to be influenced by urban-rural residence, except for ACT (rural is lower). The Upper East, Upper West, and Eastern regions are more likely to have heard messages on the recommended treatment for malaria and the need to seek prompt care. Respondents in the Central region are least likely to have heard messages on the recommended treatment for malaria, and the need to seek prompt care, and to complete the full course of treatment. Less than half of respondents in the Central region (47 percent) know that pregnant women should go to the antenatal clinic for IPT, compared with 94 percent of respondents in the Upper East region.

The 2008 GDHS results on the malaria messages heard or seen by household respondents point to an interesting behavioural pattern if viewed against the results of ITN use, IPT uptake, and the management of fever in children under age five. The findings show a gap between what people in Ghana know about malaria and its treatment, and what they actually do when a young child has a fever and the situation demands action.

Table 12.8 Exposure to specific messages on malaria

Percentage of household respondents who heard or saw a message about malaria, by specific message and background characteristics, Ghana 2008

Background characteristic	Message					Number of household respondents
	The Ghana Health Service recommends Artesunate and Amodiaquine as a drug for malaria	Treatment should be sought from health facility within 24 hours of onset of fever, especially for a child under 5 years	The full course of the malaria drug Artesunate and Amodiaquine should be completed	Pregnant women should attend ANC and take 3 doses of SP/Fansidar during pregnancy to prevent malaria	Families should sleep under an insecticide-treated mosquito net to protect them from mosquito bites that lead to malaria, especially pregnant women and children under 5 years	
Residence						
Urban	67.8	76.5	64.2	76.5	93.6	5,627
Rural	58.9	75.3	53.4	78.2	91.6	6,150
Region						
Western	65.9	82.3	61.1	85.1	91.9	1,184
Central	50.8	69.0	38.2	46.7	94.0	1,279
Greater Accra	65.9	72.4	64.5	68.6	92.4	1,951
Volta	65.3	75.3	57.2	82.2	90.9	991
Eastern	71.4	80.3	62.4	79.3	92.3	1,260
Ashanti	63.6	79.4	61.1	83.2	92.5	2,263
Brong Ahafo	61.5	78.4	61.0	86.9	95.0	1,154
Northern	52.0	61.8	46.5	83.2	88.5	928
Upper East	70.0	82.8	72.4	93.8	95.5	540
Upper West	72.3	79.9	72.3	85.9	94.5	228
Wealth quintile						
Lowest	54.0	69.4	49.7	82.2	89.1	1,813
Second	56.0	74.4	50.5	75.9	91.2	2,250
Middle	57.1	75.2	50.8	74.5	91.8	2,548
Fourth	64.7	77.9	60.3	76.5	94.1	2,646
Highest	80.6	80.3	78.1	79.1	95.2	2,520
Total	63.1	75.8	58.6	77.4	92.5	11,777

HIV/AIDS-RELATED KNOWLEDGE, ATTITUDES, AND BEHAVIOUR

13

Acquired Immune Deficiency Syndrome (AIDS) was first recognised internationally in 1981 and in Ghana in 1986. AIDS is caused by the human immunodeficiency virus (HIV) which compromises the immune system and makes the body prone to opportunistic infections.

In 2000, the Government of Ghana, with the objective of ensuring effective management and a unified response to the HIV and AIDS epidemic, adopted a multi-sectoral approach to address the developmental challenges of the epidemic. The HIV and AIDS response in Ghana is guided by the National Strategic Framework 2006-2010 (GAC, 2006). The National HIV/AIDS and STI policy underpins the National Strategic Framework. Currently, the national response involves the participation of entities at national and decentralised levels such as by ministries, departments and agencies, regional coordinating councils, district assemblies, civil society organisations, the private sector and research and academic institutions.

Ghana is considered a lower prevalence country with the main route of transmission being heterosexual. Results from the 2003 GDHS indicate that 2 percent of Ghanaian adults age 15-49 are HIV positive (2.7 percent women and 1.5 percent men) (GSS and ORC Macro, 2004). The median HIV prevalence from antenatal clinic (ANC) sentinel surveillance has also remained fairly stable at around 3 percent (varying between 2.3-3.6 percent) since 1992, despite an increase in the number of sites from 8-40 and the rural-urban mix. In 2008, the median HIV prevalence from antenatal clinic (ANC) sentinel surveillance was 2.2 percent. The prevalence of HIV among young people age 15-24, which is used as a marker for new cases, has decreased from 3.2 percent in 2002 to 1.9 percent in 2008 (NACP, 2009).

There are various factors that have worked in favour of the stable HIV prevalence in the country. For example, in Ghana it is believed that the high levels of male circumcision are likely to have been a major factor containing the spread of HIV. Furthermore, with the increased accessibility and affordability of anti-retroviral therapy (ART), coupled with the increased uptake of counselling and testing, there is a window of opportunity to ensure a more effective and efficient response to the spread of HIV (GAC, 2009)

Challenges exist nevertheless. Stigma and discrimination against persons living with HIV is quite high, coupled with misconceptions about the disease. High levels of sero-discordance, high levels of consensual unions or marriage, and low levels of knowledge of HIV status among persons living with HIV present an unwanted window for transmission within the general population, in addition to sex with female sex workers, their clients, and non-paying partners (GAC, 2009b).

In Ghana, gender issues are basic to confronting the HIV/AIDS epidemic. Ghanaian women often experience relative powerlessness, compared with men, because of poor economic empowerment and negative social norms. As a result, they are often subject to the will of their partners and husbands. This powerlessness, along with limited life choices, makes it difficult to decline sexual advances without facing coercion or violence, and limits women's ability to negotiate condom use and gain access to health services. Many interventions have been developed and implemented to address gender equity so that men and women have full access to information and services that can help reduce vulnerability to infection and/or mitigate the effects of HIV and AIDS (GAC, 2009b).

The Ghana DHS 2008 collected a variety of information on HIV/AIDS-related knowledge including social stigmatisation, risk behaviour modification, access to high-quality services for sexually transmitted infections (STI), provision and uptake of HIV counselling and testing, and the prevalence of male circumcision. The principal objective of this chapter is to establish the level of relevant knowledge, perceptions, and behaviours at the national level, and within geographic and socio-economic sub-populations. Such information should go a long way toward better targeting of interventions for effective prevention, treatment, care and support for those groups most in need of information and most at risk of HIV.

13.1 KNOWLEDGE OF AIDS

Respondents in the 2008 GDHS were asked whether they had heard of AIDS. Those who reported having heard of AIDS were asked a series of questions about whether AIDS can be avoided and how. Table 13.1 shows the percent distribution of women and men age 15-49 who have heard of AIDS, by background characteristics. As high as 98 percent of women and 99 percent of men have heard about AIDS, indicating that awareness of AIDS in Ghana is nearly universal. Knowledge of HIV/AIDS does not vary much by background characteristics. Nevertheless, there are some differences in the level of knowledge by region, education, and wealth quintile. As can be seen from Table 13.1, awareness of AIDS is lowest among women and men in the Northern region and highest among women in the Eastern region and men in the Central region. Awareness of AIDS increases with level of education. All women and men with at least middle/JSS have heard about AIDS, compared with 94 percent of women and 97 percent of men who have no education. Similarly, women and men in the higher wealth quintiles are more likely to have heard of AIDS than those in the lowest wealth quintile.

Table 13.1 Knowledge of AIDS

Percentage of women and men age 15-49 who have heard of AIDS, by background characteristics, Ghana 2008

Background characteristic	Women		Men	
	Has heard of AIDS	Number of women	Has heard of AIDS	Number of men
Age				
15-24	98.2	1,902	98.8	1,615
15-19	97.6	1,025	98.2	911
20-24	98.9	878	99.5	704
25-29	99.1	832	99.3	624
30-39	97.5	1,283	99.7	1,061
40-49	98.7	899	99.7	758
Marital status				
Never married	98.7	1,593	98.9	1,936
Ever had sex	99.3	819	99.7	984
Never had sex	97.9	774	98.0	952
Married/living together	98.0	2,876	99.6	1,950
Divorced/separated/ widowed	98.5	446	100.0	172
Residence				
Urban	99.5	2,383	99.8	1,866
Rural	97.0	2,533	98.8	2,191
Region				
Western	97.1	447	99.5	403
Central	98.3	424	100.0	326
Greater Accra	99.2	853	99.9	649
Volta	99.4	431	99.5	373
Eastern	100.0	483	99.8	411
Ashanti	99.6	1,011	99.7	785
Brong Ahafo	99.4	425	99.5	347
Northern	91.4	467	95.5	435
Upper East	99.5	253	99.6	219
Upper West	93.1	122	99.2	108
Education				
No education	94.3	1,042	97.0	540
Primary	98.0	988	98.9	619
Middle/JSS	99.6	2,039	99.6	1,721
Secondary+	100.0	844	99.9	1,167
Wealth quintile				
Lowest	93.9	783	97.5	708
Second	97.9	900	99.0	738
Middle	98.7	979	99.5	699
Fourth	99.4	1,119	99.8	974
Highest	99.9	1,135	100.0	939
Total 15-49	98.2	4,916	99.2	4,058
50-59	na	na	99.0	510
Total 15-59	na	na	99.2	4,568

Note: Total includes cases with information missing on education that are not shown separately.
na = Not applicable

13.2 KNOWLEDGE OF HIV PREVENTION METHODS

In Ghana, HIV in adults is mainly transmitted by heterosexual contact between a partner who is HIV positive and a partner who is HIV negative. Consequently, HIV prevention programmes focus their messages and efforts on three important aspects of behaviour: using condoms, limiting the number of sexual partners or staying faithful to one partner, and delaying sexual debut for young persons (abstinence).

To ascertain whether programmes have effectively communicated these messages, the 2008 GDHS respondents were specifically asked if people can reduce their chances of getting the AIDS virus by using a condom every time they have sex, by having just one HIV-negative sexual partner who has no other sexual partners, and by not having sexual intercourse at all. Table 13.2 shows that 76 percent of women and 82 percent of men age 15-49 know that consistent use of condoms is a means of preventing the spread of HIV. About 85 percent of women and 88 percent of men know that limiting sexual intercourse to one HIV-negative and faithful partner can reduce the chances of contracting HIV. The proportion of men who said that people can reduce the chances of getting the AIDS virus by using condoms and limiting sex to one HIV-negative partner is higher (77 percent) than that of women (69 percent). Thus, knowledge is higher among men than women for each of the three specified prevention methods. Almost equal proportions of women (80 percent) and men (81 percent) age 15-49 know that abstinence is a way of reducing the chances of getting HIV.

Table 13.2 Knowledge of HIV prevention methods

Percentage of women and men age 15-49 who, in response to prompted questions, say that people can reduce the risk of getting the AIDS virus by using condoms every time they have sexual intercourse, by having one sex partner who is not HIV positive and has no other partners, and by abstaining from sexual intercourse, by background characteristics, Ghana 2008

Background characteristic	Percentage of women who say HIV can be prevented by:					Percentage of men who say HIV can be prevented by:				
	Using condoms[1]	Limiting sexual intercourse to one HIV-negative partner[2]	Using condoms and limiting sexual intercourse to one HIV-negative partner[1,2]	Abstaining from sexual intercourse	Number of women	Using condoms[1]	Limiting sexual intercourse to one HIV-negative partner[2]	Using condoms and limiting sexual intercourse to one HIV-negative partner[1,2]	Abstaining from sexual intercourse	Number of men
Age										
15-24	74.9	82.3	65.9	79.8	1,902	82.5	87.3	76.1	80.4	1,615
15-19	73.8	80.6	63.9	78.7	1,025	82.4	85.9	75.4	80.5	911
20-24	76.1	84.4	68.3	81.0	878	82.5	89.1	77.1	80.4	704
25-29	80.2	88.4	73.7	80.4	832	82.4	89.3	77.9	82.0	624
30-39	76.0	85.9	69.7	79.3	1,283	83.7	88.9	78.6	81.9	1,061
40-49	73.8	87.1	67.9	81.6	899	80.4	89.3	74.9	81.3	758
Marital status										
Never married	75.3	83.2	66.3	80.0	1,593	83.3	88.0	77.5	81.5	1,936
Ever had sex	78.6	86.8	71.7	80.3	819	85.7	91.1	81.4	83.6	984
Never had sex	71.8	79.4	60.6	79.6	774	80.9	84.9	73.4	79.4	952
Married/living together	75.7	85.9	69.4	79.9	2,876	81.8	89.1	76.7	81.2	1,950
Divorced/separated/ widowed	78.8	87.4	71.6	81.6	446	79.0	84.4	71.6	78.4	172
Residence										
Urban	79.3	88.1	72.8	82.4	2,383	82.8	89.6	77.5	82.2	1,866
Rural	72.6	82.4	64.6	78.0	2,533	82.1	87.4	76.2	80.4	2,191
Region										
Western	84.1	75.0	65.2	82.1	447	80.4	92.1	75.5	71.8	403
Central	84.2	90.7	79.7	86.2	424	92.2	95.3	88.2	92.7	326
Greater Accra	75.8	88.3	71.1	84.3	853	85.0	88.6	79.3	86.9	649
Volta	80.2	92.5	76.4	80.6	431	91.5	95.4	88.3	88.3	373
Eastern	78.5	83.0	69.0	78.8	483	73.9	76.6	61.1	69.0	411
Ashanti	76.6	84.1	67.9	75.2	1,011	84.1	91.4	80.1	83.7	785
Brong Ahafo	78.4	86.4	70.6	84.4	425	86.2	93.6	82.9	84.3	347
Northern	58.2	78.7	54.2	74.7	467	61.6	73.2	53.6	66.6	435
Upper East	68.3	92.6	65.9	83.1	253	90.4	90.5	86.1	90.1	219
Upper West	59.7	76.8	54.6	66.5	122	89.1	91.7	83.5	82.8	108
Education										
No education	64.7	80.1	58.8	74.8	1,042	71.0	81.1	64.8	76.1	540
Primary	77.3	83.9	68.7	78.1	988	84.4	86.3	78.0	84.4	619
Middle/JSS	79.2	86.5	71.5	82.0	2,039	83.1	88.8	76.8	80.0	1,721
Secondary+	79.7	89.5	73.5	84.4	844	85.7	92.2	81.9	83.7	1,167
Wealth quintile										
Lowest	62.8	77.5	55.6	73.2	783	77.1	81.8	70.3	76.7	708
Second	77.3	82.8	67.6	78.2	900	80.5	86.7	72.9	78.7	738
Middle	76.7	85.5	69.4	81.1	979	83.1	90.3	78.7	82.1	699
Fourth	81.3	87.5	74.4	81.7	1,119	84.1	90.4	79.3	82.3	974
Highest	77.6	89.7	71.8	84.0	1,135	85.7	91.3	80.8	84.8	939
Total 15-49	75.9	85.2	68.6	80.1	4,916	82.4	88.4	76.8	81.2	4,058
50-59	na	na	na	na	na	82.0	92.3	79.2	82.3	510
Total 15-59	na	na	na	na	na	82.4	88.8	77.1	81.4	4,568

Note: Total includes cases with information missing on education that are not shown separately.
na = Not applicable
[1] Using condoms every time they have sexual intercourse
[2] Partner who has no other partners

Among men, there is no clear association between age and knowledge of HIV prevention. For women, however, with exception of knowledge of abstinence, women age 25-29 have the highest level of knowledge of HIV prevention. Awareness of HIV prevention methods by marital status shows that women who have never had sex, and divorced/separated/widowed men, are among the least likely to report knowledge of ways to prevent the transmission of HIV. Knowledge of HIV prevention methods is higher among respondents in urban areas, better educated respondents, and those in the higher wealth quintiles. Both women and men in the Northern region are less likely to know that using condoms and limiting sex to one HIV-negative partner can reduce the risk of getting HIV. Among both women and men, knowledge of ways to prevent AIDS is consistently higher in the Central region, compared with other regions.

13.3 BELIEFS ABOUT AIDS

In addition to knowing about effective ways to avoid contracting HIV, it is also useful to be able to identify incorrect beliefs about AIDS to eliminate misconceptions. Misconceptions about AIDS and HIV transmission are among the factors that result in discrimination and stigmatisation. The 2008 GDHS included questions on common misconceptions about HIV/AIDS. Misconceptions about AIDS in Ghana include the idea that HIV-positive people always appear ill, the belief that the virus can be transmitted through mosquito bites, by sharing food with someone who is HIV positive, and by witchcraft and other supernatural means. Respondents were asked about these four misconceptions and the results are presented in Tables 13.3.1 and 13.3.2 for women and men, respectively.

The results in Tables 13.3.1 and 13.3.2 indicate that many Ghanaian adults have accurate knowledge about the ways in which the AIDS virus can and cannot be transmitted. About 82 percent of women and 86 percent of men know that a healthy-looking person can have the AIDS virus. Over two-thirds of respondents are aware that the AIDS virus cannot be transmitted through mosquito bites. Furthermore, 60 percent of men and 48 percent of women correctly believe that the AIDS virus cannot be transmitted by supernatural means, and 78 percent of men and 74 percent of women know that the AIDS virus cannot be contracted by sharing food with a person who has AIDS. Overall, about one-third of women (33 percent) and 41 percent of men reject two of the most common local misconceptions about the transmission of the AIDS virus in Ghana—namely, that the AIDS virus can be transmitted through mosquito bites and by supernatural means—and believe that a healthy-looking person can have the AIDS virus. These proportions are slightly higher than those in the 2003 GDHS (28 percent for women and 39 percent for men).

Tables 13.3.1 and 13.3.2 provide an assessment of the level of comprehensive knowledge of HIV/AIDS prevention and transmission. Comprehensive knowledge is defined as: 1) knowing that both condom use and limiting sexual partners to one HIV-negative person are HIV/AIDS prevention methods, 2) being aware that a healthy-looking person can have HIV, and 3) rejecting the two most common local misconceptions. The 2008 GDHS results indicate that only one in four women (25 percent) and one in three men (33 percent) in Ghana have comprehensive knowledge of HIV/AIDS prevention and transmission.

Tables 13.3.1 and 13.3.2 document substantial variation in knowledge about AIDS by background characteristics. The proportions of women and men who reject the most common misconceptions and know that a healthy-looking person can have the AIDS virus, or who have comprehensive knowledge about AIDS, are highest among younger respondents. For all indicators, the proportions of women and men with correct knowledge about HIV/AIDS prevention and transmission are higher in urban areas than in rural areas. Variations in knowledge of AIDS are also seen by region. Women in the Upper West and Northern regions (17 percent each) have the lowest level of comprehensive knowledge about AIDS, while women in the Greater Accra region (36 percent) have the highest level. Among men, comprehensive knowledge ranges from 21 percent in the Western region to 47 percent in the Greater Accra region.

Table 13.3.1 Comprehensive knowledge about AIDS: Women

Percentage of women age 15-49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about HIV/AIDS transmission or prevention, and the percentage with a comprehensive knowledge about AIDS by background characteristics, Ghana 2008

Background characteristic	Percentage of women who say that: A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites	AIDS cannot be transmitted by super-natural means	A person cannot get the AIDS virus by sharing food with a person who has AIDS	Percentage who say that a healthy-looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with a compre-hensive knowledge about AIDS[2]	Number of women
Age							
15-24	79.1	71.8	55.8	77.4	38.5	28.3	1,902
15-19	75.6	71.3	59.5	75.8	39.1	27.7	1,025
20-24	83.3	72.3	51.5	79.3	37.9	29.0	878
25-29	84.5	68.7	46.4	73.7	33.9	27.5	832
30-39	83.8	57.6	43.5	71.7	29.4	22.9	1,283
40-49	82.4	58.3	40.9	68.3	27.5	20.8	899
Marital status							
Never married	80.4	75.4	59.3	80.0	41.6	30.3	1,593
Ever had sex	84.3	75.1	55.9	82.7	40.7	31.1	819
Never had sex	76.3	75.9	62.9	77.1	42.6	29.4	774
Married/living together	82.6	60.1	43.7	69.9	30.1	23.6	2,876
Divorced/separated/ widowed	81.9	60.5	38.3	74.9	24.6	19.6	446
Residence							
Urban	85.7	76.0	55.6	82.2	42.0	32.2	2,383
Rural	78.2	54.8	41.3	65.5	25.2	19.0	2,533
Region							
Western	69.5	67.8	48.2	74.9	31.0	25.7	447
Central	86.0	56.8	34.1	71.7	25.1	22.1	424
Greater Accra	87.4	80.3	62.3	85.5	49.4	36.1	853
Volta	89.7	56.8	49.9	61.0	37.1	30.5	431
Eastern	87.4	66.9	47.8	79.0	32.3	23.5	483
Ashanti	83.9	72.6	41.0	76.9	27.6	20.2	1,011
Brong Ahafo	84.5	58.2	45.6	78.9	32.0	24.2	425
Northern	63.3	45.0	48.2	52.9	24.5	17.4	467
Upper East	86.1	62.4	54.7	69.7	38.5	31.0	253
Upper West	60.7	43.7	51.9	58.0	24.8	17.1	122
Education							
No education	71.1	41.4	36.1	52.4	19.6	13.6	1,042
Primary	78.2	57.6	41.1	66.9	24.3	18.3	988
Middle/JSS	84.8	71.4	48.2	80.4	33.2	26.1	2,039
Secondary+	92.4	87.9	71.4	91.3	60.9	46.5	844
Wealth quintile							
Lowest	67.0	44.1	40.9	53.8	19.2	13.3	783
Second	80.2	56.9	41.5	65.1	25.7	19.7	900
Middle	81.3	62.8	44.6	73.8	29.6	22.4	979
Fourth	86.0	70.7	48.8	80.1	36.7	29.5	1,119
Highest	89.8	82.5	61.2	87.5	49.0	36.7	1,135
Total	81.9	65.1	48.2	73.6	33.3	25.4	4,916

Note: Total includes cases with information missing on education that are not shown separately

[1] Two most common local misconceptions: 'AIDS can be transmitted by mosquito bites' and 'AIDS can be transmitted by supernatural means'.

[2] Comprehensive knowledge means knowing that consistent use of condoms during sexual intercourse and having just one HIV-negative and faithful partner can reduce the chances of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about HIV/AIDS transmission or prevention.

Table 13.3.2 Comprehensive knowledge about AIDS: Men

Percentage of men age 15-49 who say that a healthy-looking person can have the AIDS virus and who, in response to prompted questions, correctly reject local misconceptions about AIDS transmission or prevention, and the percentage with a comprehensive knowledge about AIDS by background characteristics, Ghana 2008

Background characteristic	Percentage of men who say that: A healthy-looking person can have the AIDS virus	AIDS cannot be transmitted by mosquito bites	AIDS cannot be transmitted by super-natural means	A person cannot get the AIDS virus by sharing food with a person who has AIDS	Percentage who say that a healthy-looking person can have the AIDS virus and who reject the two most common local misconceptions[1]	Percentage with a compre-hensive knowledge about AIDS[2]	Number of men
Age							
15-24	81.8	71.0	62.6	79.0	41.9	34.2	1,615
15-19	77.8	69.0	60.4	77.2	37.6	30.4	911
20-24	87.1	73.5	65.3	81.4	47.5	39.1	704
25-29	89.2	67.7	58.6	78.0	43.3	36.7	624
30-39	89.5	65.5	59.3	78.8	40.8	32.6	1,061
40-49	86.7	60.2	56.2	75.7	36.1	28.9	758
Marital status							
Never married	83.9	71.8	63.0	79.5	43.9	36.4	1,936
Ever had sex	89.1	71.7	63.0	80.7	45.4	39.6	984
Never had sex	78.5	71.9	63.0	78.3	42.3	33.1	952
Married/living together	87.8	62.7	57.8	77.1	38.4	30.8	1,950
Divorced/separated/ widowed	86.3	61.9	49.2	76.3	31.9	24.3	172
Residence							
Urban	90.7	74.9	66.2	84.5	50.8	41.2	1,866
Rural	81.8	60.4	54.6	72.8	32.2	26.4	2,191
Region							
Western	94.0	56.3	42.4	74.9	26.6	20.7	403
Central	93.9	66.6	44.4	87.4	33.5	29.0	326
Greater Accra	94.6	79.8	69.3	88.7	57.7	47.4	649
Volta	90.4	72.1	64.4	67.8	47.8	43.3	373
Eastern	82.1	63.3	58.1	80.2	34.0	26.3	411
Ashanti	83.6	69.0	62.0	79.8	40.3	32.0	785
Brong Ahafo	86.8	68.1	53.8	78.4	40.5	35.2	347
Northern	67.9	59.4	69.9	60.2	36.9	22.8	435
Upper East	76.5	60.7	60.9	84.9	38.3	36.9	219
Upper West	82.7	54.3	69.3	73.9	39.8	34.6	108
Education							
No education	73.9	48.9	51.9	60.3	24.9	19.0	540
Primary	80.2	49.1	47.5	70.0	25.7	21.1	619
Middle/JSS	86.6	66.1	56.9	78.9	35.8	28.5	1,721
Secondary+	93.3	86.4	74.7	89.7	63.4	53.2	1,167
Wealth quintile							
Lowest	71.2	49.3	52.5	64.3	24.4	20.1	708
Second	82.1	58.5	53.4	72.5	30.8	24.7	738
Middle	87.0	66.5	58.2	77.4	38.6	30.1	699
Fourth	90.6	72.8	61.9	81.0	45.5	37.3	974
Highest	94.1	81.5	69.8	90.8	57.5	47.7	939
Total 15-49	85.9	67.0	59.9	78.2	40.7	33.2	4,058
50-59	86.8	62.0	63.9	76.2	41.7	37.0	510
Total 15-59	86.0	66.5	60.4	78.0	40.8	33.6	4,568

Note: Total includes cases with information missing on education that are not shown separately

[1] Two most common local misconceptions: 'AIDS can be transmitted by mosquito bites' and 'AIDS can be transmitted by supernatural means'.

[2] Comprehensive knowledge means knowing that consistent use of condom during sexual intercourse and having just one HIV-negative and faithful partner can reduce the chances of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about HIV/AIDS transmission or prevention.

Education and wealth status are directly related to correct knowledge about common misconceptions about AIDS and comprehensive knowledge of HIV/AIDS prevention and transmission. Among women, for example, 47 percent of women with secondary or higher education have comprehensive knowledge about prevention and transmission of HIV/AIDS, compared with 14 percent of women with no education. Similarly, among men, the level of comprehensive knowledge is 53 percent among men with secondary or higher education, compared with 19 percent among men with no education. Looking at wealth status, 13 percent of women in the lowest quintile have comprehensive knowledge about AIDS, compared with 37 percent of women in the highest wealth quintile. Among men, the level of comprehensive knowledge about AIDS also increases with wealth quintile (20 percent in the lowest quintile, compared with 48 percent in the highest).

13.4 KNOWLEDGE OF PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV

Increasing the level of general knowledge of transmission of HIV from mother to child and reducing the risk of transmission using antiretroviral drugs is critical to the prevention of mother-to-child transmission (MTCT) of HIV. In Ghana, at the end of 2008, there were 117 antiretroviral sites and 524 PMTCT/CT sites established and operational (NACP, 2009).

To assess MTCT knowledge, respondents in the 2008 GDHS were asked if the virus that causes AIDS can be transmitted from a mother to her baby during pregnancy, delivery, or breastfeeding and whether they know of any special drugs a mother with HIV can take to reduce the risk of transmission to the baby.

Table 13.4 shows that women are slightly more likely than men to know of the risk of mother-to-child transmission of HIV through breastfeeding (85 and 78 percent, respectively). About one in two women (50 percent) and two in five men (44 percent) know that the risk of mother-to-child transmission of HIV can be reduced by the mother taking special drugs during pregnancy. Although low, these levels of knowledge about the special drugs that can prevent transmission of HIV to babies are a substantial increase from the 16 percent for both sexes in 2003. Pregnant women are just slightly more likely to know about drugs to reduce the risk of mother-to-child transmission than women who are not pregnant (50 and 47 percent, respectively). Women and men in urban areas, those with higher education, and those from wealthier households are more likely to know about special drugs to prevent mother-to-child transmission than other respondents. Knowledge of drugs to prevent MTCT varies by region. For women, it is lowest in the Northern region (28 percent) and highest in the Brong Ahafo region (63 percent).

Overall, about one in two women (47 percent) and one in three men (38 percent) know that HIV can be transmitted through breastfeeding and that the risk of MTCT can be reduced by the mother taking special drugs during pregnancy. Knowledge is lowest among respondents who are married or living together. A larger proportion of women in urban areas than in rural areas know about MTCT and the use of special drugs to reduce the risk of MTCT (51 and 43 percent, respectively). The same pattern is seen for men: 42 percent of men in urban areas know about MTCT and the use of special drugs to reduce the risk of MTCT, compared with 35 percent of men in rural areas. By region, this knowledge among women ranges from 26 percent in the Northern region to 61 percent in the Brong Ahafo region. Among men, this knowledge ranges from 23 percent in the Volta region to 52 percent in the Central region. As seen earlier, respondents' socio-economic status, as measured by level of education and wealth quintile, has a positive correlation with knowledge of MTCT.

Table 13.4 Knowledge of prevention of mother to child transmission of HIV

Percentage of women and men who know that HIV can be transmitted from mother to child by breastfeeding and that the risk of mother to child transmission (MTCT) of HIV can be reduced by mother taking special drugs during pregnancy, by background characteristics, Ghana 2008

Background characteristic	Percentage of women who know that: HIV can be transmitted by breast-feeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of women	Percentage of men who know that: HIV can be transmitted by breast-feeding	Risk of MTCT can be reduced by mother taking special drugs during pregnancy	HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking special drugs during pregnancy	Number of men
Age								
15-24	82.2	47.8	44.2	1,902	72.8	39.6	33.0	1,615
15-19	78.2	43.0	39.5	1,025	70.6	35.2	29.4	911
20-24	86.9	53.3	49.7	878	75.5	45.4	37.7	704
25-29	87.6	56.6	53.7	832	79.5	45.3	40.9	624
30-39	87.0	51.4	48.7	1,283	81.3	47.6	42.0	1,061
40-49	87.4	46.7	44.0	899	80.9	45.9	40.8	758
Marital status								
Never married	81.2	47.9	43.6	1,593	73.7	41.2	34.7	1,936
Ever had sex	84.1	51.4	46.5	819	75.8	46.2	38.2	984
Never had sex	78.0	44.1	40.5	774	71.5	36.1	31.1	952
Married/living together	87.3	51.4	49.0	2,876	81.3	46.1	40.8	1,950
Divorced/separated/ widowed	87.4	48.6	45.7	446	79.1	45.4	43.7	172
Currently pregnant								
Pregnant	84.1	54.2	49.5	360	na	na	na	na
Not pregnant or not sure	85.4	49.7	46.8	4,556	na	na	na	na
Residence								
Urban	87.5	55.3	51.0	2,383	75.9	49.4	41.5	1,866
Rural	83.2	45.0	43.1	2,533	79.0	38.9	35.1	2,191
Region								
Western	85.8	45.7	43.5	447	70.7	47.9	39.2	403
Central	85.9	47.5	44.9	424	71.6	62.6	51.7	326
Greater Accra	87.5	53.7	49.6	853	77.7	48.7	40.6	649
Volta	92.7	35.4	35.2	431	76.6	23.9	22.6	373
Eastern	87.6	56.9	54.6	483	85.3	41.0	39.6	411
Ashanti	85.5	54.9	49.2	1,011	81.3	45.5	39.5	785
Brong Ahafo	86.3	63.4	61.0	425	77.7	55.8	47.3	347
Northern	70.7	28.0	25.9	467	77.8	29.3	26.6	435
Upper East	90.2	61.0	60.1	253	70.7	39.5	37.3	219
Upper West	72.0	46.8	45.4	122	79.3	36.0	31.7	108
Education								
No education	79.6	37.2	36.6	1,042	75.7	30.2	28.3	540
Primary	85.0	46.5	44.4	988	77.0	35.1	30.8	619
Middle/JSS	87.5	52.9	49.5	2,039	78.7	42.1	37.5	1,721
Secondary+	87.4	62.6	56.3	844	77.3	57.0	47.3	1,167
Wealth quintile								
Lowest	75.9	35.8	34.7	783	76.8	30.3	28.8	708
Second	84.0	46.1	44.1	900	76.7	36.1	31.9	738
Middle	86.5	48.1	45.4	979	80.2	42.7	38.4	699
Fourth	89.9	53.9	51.0	1,119	77.9	49.6	42.1	974
Highest	87.4	60.8	55.0	1,135	76.4	54.6	45.4	939
Total 15-49	85.3	50.0	47.0	4,916	77.6	43.8	38.0	4,058
50-59	na	na	na	na	72.9	47.2	36.8	510
Total 15-59	na	na	na	na	77.0	44.1	37.9	4,568

Note: Total includes cases with information missing on education that are not shown separately.
na = Not applicable

13.5 STIGMA ASSOCIATED WITH AIDS AND ATTITUDES RELATED TO HIV/AIDS

Widespread stigma and discrimination in a population can adversely affect people's willingness to be tested for HIV as well as their adherence to antiretroviral therapy. Reduction of stigma and discrimination in a population is, thus, an important impetus to the success of programmes targeting HIV/AIDS prevention and control.

To assess the level of stigma, GDHS respondents who had heard of AIDS were asked if they would be willing to care for a family member with AIDS virus in their home, if they would buy fresh vegetables from a shopkeeper who has the AIDS virus, if they thought a female teacher who has the AIDS virus but is not sick should be allowed to continue teaching, and if they would not want to keep secret that a family member has the AIDS virus. Tables 13.5.1 and 13.5.2 show the results for women and men, respectively.

Both women and men tended to express more positive attitudes about caring for a family member with the AIDS virus in the respondent's home than buying vegetables from a shopkeeper with AIDS, allowing an HIV-positive teacher to continue teaching, or keeping secret a relative's HIV-positive status. About three-fourths of both women and men (75 and 79 percent, respectively) would be willing to care for a family member sick with AIDS in their home. It is encouraging to see that nearly half (49 percent) of women and 58 percent of men would not want to keep secret that a family member has HIV. These results indicate that individuals are generally supportive in providing a caring environment for their family members if they were to get HIV.

Respondents in their early 20s and women in their 40s, those who are never-married but have ever had sex, urban respondents, those with secondary or higher education, and respondents in the wealthiest households are somewhat more likely to say that they would be willing to care for a family member with AIDS in their home, compared with other respondents. There are marked regional variations, especially among women. Respondents in the Central region are the least likely to say they would take care of a family member with AIDS in their home (60 percent), compared with 93 percent of women in the Upper East region.

Empowering persons living with AIDS is also a critical programme area. Survey data show that only 32 percent of women and 43 percent of men would buy fresh food from a shopkeeper with the AIDS virus, while 62 percent of women and 66 percent of men said that an HIV-positive teacher should be allowed to continue teaching. The percentage expressing accepting attitudes on all four measures is just 11 percent for women and 19 percent for men age 15-49.

Higher education and urban residence are generally associated with more accepting attitudes towards non-relatives who are HIV-positive and to greater willingness to care for family members with AIDS in their own home. For instance, the percentage of women expressing accepting attitudes towards a female teacher who is HIV-positive but not sick is 70 percent among urban women, compared with 54 percent among rural women; it is 52 percent among women with no education, compared with 83 percent among those with secondary or higher education. Likewise, 76 percent of urban men and 84 percent of men with secondary or higher education are likely to express accepting attitudes towards a female teacher who is HIV-positive but not sick. On the other hand, among both women and men, respondents in rural areas, those in households in the lower wealth quintiles, and those with no education are generally more likely to say that they would not want to keep secret that a family member is HIV positive. Household wealth status is correlated with accepting attitudes towards persons who are HIV positive; the higher the wealth status, the more likely it is that the respondent has an accepting attitude for all four indicators of acceptance.

These results indicate that individuals are generally supportive in providing a caring environment for their family members, if they were to get HIV. This support can ensure early diagnosis and treatment, and is actively encouraged by the national programme in Ghana.

Table 13.5.1 Accepting attitudes towards those living with HIV/AIDS: Women

Among women age 15-49 who have heard of AIDS, percentage expressing specific accepting attitudes towards people with AIDS, by background characteristics, Ghana 2008

Background characteristic	Percentage of women who: Are willing to care for a family member with the AIDS virus in the respondent's home	Would buy fresh vegetables from shopkeeper who has the AIDS virus	Say that a female teacher with the AIDS virus who is not sick should be allowed to continue teaching	Would not want to keep secret that a family member has the AIDS virus	Percentage expressing accepting attitudes on all four indicators	Number of women who have heard of AIDS
Age						
15-24	75.1	35.4	64.2	43.5	11.1	1,868
15-19	74.6	34.4	63.8	43.9	11.3	1,000
20-24	75.6	36.6	64.6	43.0	10.8	868
25-29	71.5	32.6	63.0	51.5	11.2	825
30-39	74.7	30.2	59.6	53.4	11.7	1,250
40-49	75.5	28.9	59.5	54.5	11.9	887
Marital status						
Never married	77.7	39.7	68.0	41.7	12.5	1,572
Ever had sex	79.5	42.0	68.0	40.3	12.1	814
Never had sex	75.8	37.3	68.1	43.3	12.8	758
Married/living together	73.1	29.0	59.6	53.7	11.2	2,818
Divorced/separated/ widowed	71.6	28.1	55.4	49.2	8.5	440
Residence						
Urban	78.0	38.9	70.0	44.4	13.2	2,372
Rural	71.0	26.1	54.2	54.3	9.7	2,458
Region						
Western	82.3	33.3	61.5	48.4	12.1	434
Central	59.8	25.1	55.2	40.1	5.7	416
Greater Accra	77.3	40.1	70.3	44.6	14.3	846
Volta	71.7	38.5	65.8	77.1	24.5	428
Eastern	75.3	26.3	53.2	50.1	9.9	483
Ashanti	70.2	35.9	59.5	47.6	9.5	1,006
Brong Ahafo	76.2	26.8	57.8	38.3	5.6	423
Northern	71.5	22.5	55.1	65.8	9.1	427
Upper East	92.9	31.2	79.5	36.0	12.0	252
Upper West	85.7	31.1	73.1	41.5	10.8	114
Education						
No education	69.9	18.2	52.1	57.1	7.2	982
Primary	68.3	25.7	51.8	51.1	8.1	968
Middle/JSS	75.6	33.7	62.7	47.3	10.7	2,032
Secondary+	84.0	53.4	83.1	43.7	21.6	844
Wealth quintile						
Lowest	70.3	18.2	51.6	56.1	7.9	736
Second	67.9	22.0	49.8	53.1	6.5	881
Middle	74.4	31.4	59.7	51.0	11.9	967
Fourth	76.2	40.0	67.5	46.8	14.1	1,112
Highest	80.6	43.2	74.6	43.4	14.5	1,133
Total	74.5	32.4	61.9	49.4	11.4	4,830

Note: Total includes cases with information missing on education that are not shown separately.

Table 13.5.2 Accepting attitudes towards those living with HIV/AIDS: Men

Among men age 15-49 who have heard of HIV/AIDS, percentage expressing specific accepting attitudes towards people with HIV/AIDS, by background characteristics, Ghana 2008

Background characteristic	Percentage of women who: Are willing to care for a family member with the AIDS virus in the respondent's home	Would buy fresh vegetables from shopkeeper who has the AIDS virus	Say that a female teacher with the AIDS virus who is not sick should be allowed to continue teaching	Would not want to keep secret that a family member has the AIDS virus	Percentage expressing acceptance attitudes on all four indicators	Number of men who have heard of AIDS
Age						
15-24	78.5	42.0	66.1	53.7	17.7	1,595
15-19	76.4	38.3	62.2	52.6	15.2	894
20-24	81.1	46.6	71.1	55.1	20.8	700
25-29	79.3	46.8	67.3	56.6	20.1	619
30-39	78.8	42.7	67.5	59.6	19.3	1,058
40-49	77.6	41.8	63.5	63.5	19.5	755
Marital status						
Never married	79.0	44.7	68.2	53.8	18.9	1,914
Ever had sex	80.0	48.3	70.5	53.4	21.0	980
Never had sex	77.9	40.9	65.8	54.2	16.7	933
Married/living together	78.6	41.4	64.6	61.2	18.9	1,941
Divorced/separated/ widowed	72.2	39.9	60.8	58.2	17.3	172
Residence						
Urban	80.2	49.8	75.6	51.7	20.6	1,862
Rural	77.1	36.9	58.1	62.6	17.3	2,165
Region						
Western	74.3	43.1	65.7	54.9	17.4	401
Central	68.8	44.1	69.6	54.1	15.8	326
Greater Accra	76.9	50.5	73.1	51.3	17.6	649
Volta	80.8	56.1	59.6	75.8	34.1	371
Eastern	74.2	39.5	61.8	56.8	15.6	410
Ashanti	80.5	38.4	73.4	46.3	14.6	783
Brong Ahafo	85.0	46.2	56.8	56.7	20.7	345
Northern	75.8	28.1	53.9	70.8	13.9	416
Upper East	90.3	46.9	65.8	77.6	34.5	218
Upper West	93.6	30.7	79.9	47.8	12.7	107
Education						
No education	73.0	21.9	46.5	67.1	11.2	524
Primary	74.5	31.3	52.2	58.0	12.5	612
Middle/JSS	76.1	40.4	64.8	56.4	16.7	1,714
Secondary+	87.0	62.0	84.2	54.6	28.8	1,166
Wealth quintile						
Lowest	74.8	27.0	48.2	68.6	13.3	690
Second	75.7	32.6	54.8	59.4	14.9	730
Middle	79.2	40.6	65.3	59.6	18.4	695
Fourth	79.7	51.2	75.0	54.5	21.9	972
Highest	81.8	55.6	79.6	49.5	23.1	939
Total 15-49	78.5	42.9	66.1	57.5	18.8	4,027
50-59	77.8	44.5	67.6	65.3	22.2	505
Total 15-59	78.5	43.1	66.3	58.4	19.2	4,532

Note: Total includes cases with information missing on education that are not shown separately.

13.6 ATTITUDES TOWARDS NEGOTIATING SAFER SEX

Knowledge about HIV transmission and ways to prevent it are of little use if people feel powerless to negotiate safer sex practices with their partners. In an effort to assess the ability of women to negotiate safer sex with a spouse who has an STI, women and men were asked if they thought that a wife is justified in refusing to have sexual intercourse with her husband or asking that he uses condoms, if she knows he has an STI.

Table 13.6 shows that the majority of respondents (86 percent of women and 91 percent of men) agree that a woman is justified in refusing to have sexual intercourse with her husband if she knows he has an STI. Approximately nine in ten respondents (87 percent of women and 93 percent of men) think that a woman is justified in asking her husband to use a condom if he has an STI. Nearly all respondents (94 percent of women and 96 percent of men) agree with one or both statements.

Table 13.6 Attitudes towards negotiating safer sexual relations with husband

Percentage of women and men age 15-49 who think that, if a husband has a sexually transmitted disease, his wife is justified in refusing to have sexual intercourse with him or asking that they use a condom, by background characteristics, Ghana 2008

Background characteristic	Percentage of women who think that a woman is justified in:			Number of women	Percentage of men who think that a woman is justified in:			Number of men
	Refusing to have sexual intercourse	Asking that they use a condom	Refusing sexual intercourse or asking that they use a condom		Refusing to have sexual intercourse	Asking that they use a condom	Refusing sexual intercourse or asking that they use a condom	
Age								
15-24	85.9	86.5	93.2	1,902	88.8	92.1	95.5	1,615
15-19	85.7	84.0	91.8	1,025	87.9	90.9	94.8	911
20-24	86.1	89.4	94.7	878	90.0	93.7	96.4	704
25-29	86.5	88.6	94.3	832	90.5	93.3	96.2	624
30-39	86.7	88.4	95.1	1,283	92.5	95.1	97.2	1,061
40-49	86.4	85.4	94.7	899	93.0	92.6	96.5	758
Marital status								
Never married	87.2	87.9	93.9	1,593	89.5	92.5	95.8	1,936
Ever had sex	88.4	92.2	96.8	819	89.8	94.2	96.2	984
Never had sex	85.9	83.4	90.8	774	89.2	90.7	95.5	952
Married/living together	85.7	86.7	94.2	2,876	92.2	94.1	96.8	1,950
Divorced/separated/ widowed	87.1	87.1	94.7	446	90.4	90.3	94.3	172
Residence								
Urban	88.5	91.7	96.1	2,383	91.0	93.6	96.7	1,866
Rural	84.2	82.9	92.4	2,533	90.7	92.8	95.9	2,191
Region								
Western	93.4	92.2	97.6	447	90.5	93.4	94.7	403
Central	86.4	90.9	94.6	424	93.9	96.6	97.8	326
Greater Accra	91.5	96.1	98.5	853	88.7	93.3	97.3	649
Volta	86.6	87.2	93.4	431	92.7	95.0	97.6	373
Eastern	89.0	94.6	97.1	483	83.5	89.0	90.9	411
Ashanti	84.7	84.9	93.6	1,011	94.3	93.5	97.7	785
Brong Ahafo	81.1	84.5	90.5	425	89.6	92.7	97.5	347
Northern	76.8	67.2	88.3	467	88.5	90.5	93.9	435
Upper East	86.9	80.2	90.5	253	95.8	96.0	97.1	219
Upper West	78.8	82.1	88.1	122	95.6	94.9	98.9	108
Education								
No education	81.7	77.0	89.9	1,042	89.5	89.8	94.4	540
Primary	85.5	83.8	92.0	988	89.2	92.4	95.3	619
Middle/JSS	87.2	91.0	95.7	2,039	90.4	92.6	95.8	1,721
Secondary+	90.7	94.3	98.3	844	92.9	95.9	98.2	1,167
Wealth quintile								
Lowest	79.2	72.2	87.3	783	90.1	90.6	94.5	708
Second	84.9	83.9	93.0	900	89.9	91.4	95.4	738
Middle	85.8	87.6	93.8	979	91.4	94.4	97.6	699
Fourth	88.9	93.4	97.6	1,119	90.4	94.5	96.3	974
Highest	90.2	93.4	96.8	1,135	92.2	94.2	97.1	939
Total 15-49	86.3	87.1	94.2	4,916	90.8	93.2	96.2	4,058
50-59	na	na	na	na	92.8	93.2	96.8	510
Total 15-59	na	na	na	na	91.0	93.2	96.3	4,568

Note: Total includes cases with information missing on education that are not shown separately.
na = Not applicable

The data show relatively small differences by background characteristics of the respondents. In terms of regional variations, women in the Greater Accra (99 percent), Western (98 percent), and Eastern (97 percent) regions appear to be most supportive of a woman refusing to have sexual intercourse with her husband if she knows he has an STI, or requesting her husband to use a condom, while women in the Northern and Upper West regions are the least supportive (88 percent each). On the other hand, men in the Upper West region (99 percent) are the most supportive of a woman refusing to have sexual intercourse or requesting her husband to use a condom, and men in the Eastern region are the least supportive (91 percent). Respondents with more education and those in wealthier households are slightly more supportive than other respondents of women negotiating safer sex with their husbands.

13.7 ATTITUDES TOWARDS CONDOM EDUCATION FOR YOUTH

Condom use is one of the main strategies for combating the spread of HIV. Social acceptance of condom use among young people is a key factor determining use of condoms to prevent the sexual transmission of HIV and other STIs, as well as to prevent early pregnancy. However, educating youth about condoms is sometimes controversial, with some saying it promotes early sexual experimentation. Others are in favour of teaching youth to abstain from sexual intercourse until they are married. To measure attitudes towards education about condoms, the 2008 GDHS respondents were asked if they thought that children age 12-14 should be taught about using a condom to avoid HIV. The results are shown in Table 13.7. Because the table focuses on adult opinion, results are tabulated for respondents age 18-49.

More than half of both men and women agree that children age 12-14 years should be taught about the use of condoms to avoid AIDS (56 percent of men and 53 percent of women). Never married respondents, women in their early 20s, and men younger than age 20 are somewhat more likely than other respondents to agree on safe sex education for children age 12-14. Urban women and men are more likely than their rural counterparts to agree on teaching children age 12-14 about condom use to avoid AIDS. By region, agreement on teaching children age 12-14 about the use of condoms ranges from 43

Table 13.7 Adult support of education about condom use to prevent AIDS

Percentage of women and men age 18-49 who agree that children age 12-14 years should be taught about using a condom to avoid AIDS, by background characteristics, Ghana 2008

Background characteristic	Children age 12-14 should be taught about using a condom to avoid AIDS			
	Women 18-49		Men 18-49	
	Percentage who agree	Number of women	Percentage who agree	Number of men
Age				
18-24	56.4	1,298	58.8	1,091
18-19	54.0	420	60.0	387
20-24	57.5	878	58.2	704
25-29	56.1	832	56.9	624
30-39	51.2	1,283	58.2	1,061
40-49	48.0	899	47.5	758
Marital status				
Never married	60.6	1,011	60.4	1,415
Married or living together	50.7	2,856	53.2	1,949
Divorced/separated/ widowed	50.9	444	48.4	170
Residence				
Urban	58.6	2,093	57.0	1,659
Rural	47.8	2,219	54.8	1,875
Region				
Western	45.3	396	53.4	354
Central	60.9	358	51.8	291
Greater Accra	61.9	764	57.1	588
Volta	55.8	378	43.4	296
Eastern	49.5	417	54.2	355
Ashanti	46.8	885	62.0	679
Brong Ahafo	50.2	375	60.1	307
Northern	48.3	418	54.1	394
Upper East	62.0	216	55.7	181
Upper West	58.2	105	65.5	91
Education				
No education	43.1	1,004	49.2	521
Primary	52.7	849	52.0	458
Middle/JSS	52.6	1,669	55.8	1,436
Secondary+	67.1	786	60.9	1,108
Wealth quintile				
Lowest	44.3	691	53.9	601
Second	46.3	783	50.6	621
Middle	54.4	858	55.8	602
Fourth	55.3	981	55.2	863
Highest	61.0	998	61.8	847
Total 18-49	53.0	4,311	55.9	3,534
50-59	na	na	51.0	510
Total 18-59	na	na	55.3	4,044

Note: Total includes cases with information missing on education that are not shown separately.
na = Not applicable

percent of men in the Volta region and 45 percent of women in the Western region to 66 percent of men in the Upper West region and 62 percent of women in the Upper East region. The proportion of respondents who support teaching children age 12-14 about condoms increases with level of education and wealth quintile. For example, 67 percent of women with secondary or higher education agree on instructing children 12-14 years about condoms, compared with 43 percent of women with no education. The comparable figures for men are 61 percent for those with secondary or higher education and 49 percent for those with no education.

13.8 HIGHER-RISK SEX

Given that most HIV cases in Ghana are contracted through heterosexual contact, information on sexual behaviour is important in designing and monitoring intervention programmes to control the spread of HIV.

The 2008 GDHS included questions on respondents' sexual partners during their lifetime and in the 12 months preceding the survey. For male respondents, an additional question was asked on whether they paid anyone in exchange for sex during the 12 months preceding the interview. Information on the use of condoms at the last sexual intercourse with each type of partner was collected for women and men. These questions are sensitive, and it is recognised that some respondents may have been reluctant to provide information on recent sexual behaviour.

13.8.1 Multiple Partners and Condom Use

Tables 13.8.1 and 13.8.2 show the percentage of all women and all men, respectively, age 15-49 years who had sexual intercourse with more than one partner in the past 12 months and the percentage who engaged in higher-risk sexual intercourse in the past 12 months.

The results indicate that women are less likely than men to report having had two or more sexual partners in the past 12 months (1 percent for all women, compared with 11 percent for all men). Likewise, 16 percent of all women reported having had sex with a person who was neither their spouse nor their cohabiting partner (higher-risk sex) in the year before the survey, compared with 28 percent of all men.

Among respondents who had sexual intercourse in the 12 months before the survey, only 2 percent of women reported having more than one sexual partner in that period. This is considerably lower than the 17 percent reported by men. Similarly, 23 percent of women, compared with 42 percent of men, reported that they had sexual intercourse in the past 12 months with someone who was not their spouse or marital partner.

Among both women and men who had sexual intercourse in the past 12 months, the proportion having higher-risk sexual intercourse generally decreases as age increases. By definition, sexual intercourse with a person who is not a spouse or a cohabiting partner (higher-risk sex) is more common among women and men who have never married and those who are currently divorced, separated, or widowed. For this reason, almost all (99 percent) never-married women and never-married men who had sexual intercourse in the past 12 months had higher-risk sexual intercourse. One in six (16 percent) of currently married men in Ghana had sexual intercourse with someone other than their wife or partner. Respondents who live in urban areas, men in the Greater Accra region, and women in the Eastern region are more likely than other respondents to have had higher-risk sexual intercourse in the past 12 months. Similarly, higher-risk sexual intercourse generally increases with increasing level of education and wealth quintile.

The 2008 GDHS also assessed condom use among women and men with multiple partners or higher-risk sexual intercourse in the 12 months preceding the survey. Although truly effective protection requires condom use at every sexual contact, the sexual contacts covered here are those considered to pose the greatest risk of HIV transmission.

Table 13.8.1 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months: Women

Among all women age 15-49, the percentage who had sexual intercourse with more than one partner and the percentage who had higher-risk sexual intercourse in the past 12 months; among women age 15-49 who had sexual intercourse in the past 12 months, the percentage who had sexual intercourse with more than one partner and the percentage who had higher-risk sexual intercourse; among women who had higher-risk sexual intercourse in the past 12 months, the percentage who used a condom at last higher-risk sexual intercourse; and among women who ever had sexual intercourse, the mean number of sexual partners during lifetime and the mean number of sexual partners in the past month, by background characteristics, Ghana 2008

	All women (past 12 months)			Women who had sexual intercourse (past 12 months)			Women who had higher-risk sexual intercourse[1] (past 12 months)		Women who ever had sexual intercourse		
Background characteristic	Percentage who had 2+ partners	Percentage who had higher-risk sexual intercourse[1]	Number of women	Percentage who had 2+ partners	Percentage who had higher-risk sexual intercourse[1]	Number of women	Percentage who used a condom at last sexual intercourse with that partner	Number of women	Mean number of sexual partners in lifetime	Mean number of sexual partners in past month	Number of women
Age											
15-24	1.4	26.0	1,902	2.8	52.3	946	28.2	495	1.7	0.6	1,156
15-19	1.2	21.3	1,025	4.1	73.6	297	24.4	218	1.4	0.6	381
20-24	1.6	31.5	878	2.2	42.5	649	31.1	276	1.8	0.6	775
25-29	1.7	17.0	832	2.1	20.9	675	31.3	141	2.0	0.7	798
30-39	0.5	7.4	1,283	0.6	9.0	1,060	11.0	95	2.2	0.8	1,265
40-49	0.2	4.9	899	0.3	6.6	666	(6.3)	44	2.2	0.8	893
Marital status											
Never married	2.1	37.3	1,593	5.6	99.4	598	29.6	595	1.8	0.6	817
Married or living together	0.4	1.6	2,876	0.4	1.7	2,559	(10.7)	45	2.0	0.8	2,856
Divorced/separated/ widowed	1.1	30.3	446	2.5	71.1	191	11.7	135	2.5	0.5	439
Residence											
Urban	1.2	18.4	2,383	1.8	28.5	1,538	30.4	439	2.1	0.7	1,941
Rural	0.8	13.2	2,533	1.1	18.5	1,809	18.9	336	1.9	0.7	2,171
Region											
Western	0.9	11.8	447	1.3	17.6	301	14.4	53	1.9	0.7	373
Central	0.5	16.7	424	0.7	22.8	309	28.9	71	2.1	0.7	365
Greater Accra	0.8	19.4	853	1.2	29.6	559	41.4	165	2.2	0.7	682
Volta	0.5	10.6	431	0.7	14.8	307	(13.3)	45	2.0	0.7	358
Eastern	2.4	21.7	483	3.4	31.1	338	32.3	105	2.3	0.8	413
Ashanti	0.2	21.4	1,011	1.7	30.1	719	15.3	216	2.3	0.8	858
Brong Ahafo	0.7	12.5	425	1.0	16.9	314	(16.6)	53	1.9	0.7	376
Northern	0.5	6.1	467	0.9	10.4	271	(20.6)	28	1.3	0.7	381
Upper East	1.1	9.0	253	1.8	14.5	157	(34.9)	23	1.2	0.7	204
Upper West	1.5	12.0	122	2.5	20.1	73	30.6	15	1.4	0.7	102
Education											
No education	0.2	4.7	1,042	0.3	6.5	756	12.4	49	1.6	0.7	985
Primary	1.1	13.9	988	1.6	19.1	716	11.8	137	2.1	0.8	849
Middle/JSS	1.0	18.2	2,039	1.6	27.3	1,360	22.4	371	2.2	0.7	1,631
Secondary+	1.7	25.7	844	2.7	42.4	512	41.8	217	2.0	0.6	643
Wealth quintile											
Lowest	0.5	7.3	783	0.8	11.1	516	23.1	57	1.5	0.7	673
Second	0.8	15.2	900	1.1	21.1	650	14.3	137	2.0	0.8	784
Middle	0.7	19.2	979	1.0	27.8	679	20.2	188	2.1	0.7	829
Fourth	1.1	18.6	1,119	1.6	27.5	756	28.7	208	2.1	0.7	943
Highest	1.6	16.3	1,135	2.5	24.7	748	35.8	184	2.1	0.8	883
Total	1.0	15.8	4,916	1.5	23.1	3,348	25.4	775	2.0	0.7	4,112

Note: Total includes cases with information missing on education that are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.

[1] Sexual intercourse with a non-marital, non-cohabiting partner

Table 13.8.2 Multiple sexual partners and higher-risk sexual intercourse in the past 12 months: Men

Among all men age 15-49, the percentage who had sexual intercourse with more than one partner and the percentage who had higher-risk sexual intercourse in the past 12 months; among men age 15-49 who had sexual intercourse in the past 12 months, the percentage who had sexual intercourse with more than one partner and the percentage who had higher-risk sexual intercourse; among men who had more than one partner in the past 12 months, the percentage who used a condom at last sexual intercourse; among men who had higher-risk sexual intercourse in the past 12 months, the percentage who used a condom at last sexual higher-risk intercourse with that person; and among men who ever had sexual intercourse, the mean number of sexual partners during lifetime and the mean number of sexual partners in the past month, by background characteristics, Ghana 2008

	All men (past 12 months)			Men who had sexual intercourse (past 12 months)			Men who had 2+ partners (past 12 months)		Men who had higher-risk sexual intercourse[1] (past 12 months)		Men who ever had sexual intercourse		
Background characteristic	Percentage who had 2+ partners	Percentage who had higher-risk sexual intercourse[1]	Number of men	Percentage who had 2+ partners	Percentage who had higher-risk sexual intercourse[1]	Number of men	Percentage who used a condom at last sexual intercourse	Number of men	Percentage who used a condom at last sexual intercourse with that partner	Number of men	Mean number of sexual partners in lifetime	Mean number of sexual partners in past month	Number of men
Age													
15-24	5.9	29.8	1,615	17.2	86.4	556	42.0	96	46.4	481	3.3	0.7	713
15-19	3.1	15.2	911	19.4	96.2	144	(24.4)	28	40.3	139	2.5	0.6	198
20-24	9.6	48.6	704	16.5	83.0	412	49.2	68	48.9	342	3.5	0.8	516
25-29	16.7	46.4	624	20.4	56.7	510	42.8	104	49.3	289	4.8	0.8	570
30-39	15.5	25.6	1,061	17.4	28.7	947	19.6	165	45.0	272	5.6	0.9	1,023
40-49	12.4	13.4	758	13.7	14.8	688	3.5	94	27.1	102	7.1	0.9	731
Marital status													
Never married	7.8	38.1	1,936	20.4	99.1	743	52.9	152	49.6	737	3.9	0.7	974
Married or living together	14.8	15.0	1,950	15.7	16.0	1,830	12.9	288	40.7	293	5.8	0.9	1,896
Divorced/ separated/ widowed	11.0	66.1	172	14.6	88.4	128	*	19	26.9	114	7.2	0.7	168
Residence													
Urban	12.9	32.6	1,866	19.3	48.8	1,245	35.2	241	52.1	608	5.4	0.8	1,408
Rural	9.9	24.4	2,191	15.0	36.7	1,457	16.3	218	37.1	535	5.2	0.9	1,629
Region													
Western	11.6	24.6	403	16.9	35.9	276	(28.7)	47	36.4	99	5.7	0.8	293
Central	7.1	31.2	326	10.6	46.2	220	*	23	46.3	102	5.6	0.9	242
Greater Accra	15.1	35.4	649	21.2	49.9	460	35.0	98	59.5	230	5.3	0.9	511
Volta	10.9	23.2	373	17.6	37.5	230	(19.9)	41	49.4	86	5.3	0.9	267
Eastern	11.7	30.5	411	16.8	43.8	286	(38.9)	48	45.1	125	6.7	0.9	311
Ashanti	15.0	31.7	785	21.4	45.3	550	22.9	117	36.5	249	5.9	0.9	611
Brong Ahafo	8.3	33.9	347	11.2	45.7	257	(11.6)	29	38.1	118	5.0	0.8	293
Northern	6.6	15.0	435	12.5	28.5	230	(8.8)	29	30.1	65	3.0	0.9	293
Upper East	9.1	22.6	219	15.1	37.4	133	(21.8)	20	61.8	50	3.7	0.7	149
Upper West	6.7	17.6	108	12.4	32.6	58	*	7	52.8	19	4.0	0.7	67
Education													
No education	7.8	14.9	540	10.8	20.5	393	1.6	42	23.2	80	3.7	0.8	469
Primary	11.2	25.8	619	19.2	44.4	359	18.2	69	30.6	160	4.9	0.8	400
Middle/JSS	11.7	27.0	1,721	17.7	40.8	1,137	22.9	201	38.3	464	5.9	0.9	1,243
Secondary+	12.5	37.1	1,167	18.1	53.8	805	41.9	146	61.7	433	5.4	0.9	917
Wealth quintile													
Lowest	8.3	18.8	708	13.5	30.7	435	10.6	59	29.4	133	3.9	0.9	507
Second	9.5	22.7	738	14.5	34.5	485	17.0	70	36.3	167	5.3	0.8	541
Middle	9.5	28.0	699	14.9	43.8	447	21.5	66	41.1	196	5.5	0.8	517
Fourth	13.3	34.3	974	19.5	50.0	668	37.4	130	44.3	334	5.3	0.9	748
Highest	14.2	33.3	939	20.0	46.9	667	29.5	133	59.8	313	6.0	0.9	724
Total 15-49	11.3	28.2	4,058	17.0	42.3	2,702	26.2	459	45.1	1,143	5.3	0.8	3,037
50-59	12.5	10.6	510	14.9	12.7	427	7.9	64	37.9	54	8.0	0.9	482
Total 15-59	11.4	26.2	4,568	16.7	38.3	3,129	24.0	522	44.7	1,197	5.6	0.9	3,519

Note: Total includes cases missing information on education that are not shown separately. Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Sexual intercourse with a non-marital, non-cohabiting partner

Among men who had more than one partner in the 12 months before the survey, 26 percent said they used a condom during the most recent sexual intercourse. Due to small numbers, comparable data are not shown for women. Among women who reported having had higher-risk intercourse in the past 12 months, only 25 percent used a condom at the last higher-risk sex (Table 13.8.1). For men, the comparable figure is again higher—45 percent, indicating that men are nearly twice as likely to practice safe sex as women (Table 13.8.2). The smaller proportions of women with multiple partners, higher-risk sexual intercourse, and condom use, compared with men, may accurately reflect the context, but it may also reflect a bias from some women being shy about reporting behaviour that may not be widely accepted.

Condom use by respondents who had higher-risk sexual intercourse in the past 12 months is more likely among urban residents, never-married respondents, young people age 20-29, and respondents in the Upper East region. Condom use during last higher-risk sexual intercourse is higher among respondents with higher levels of education and those in the higher wealth quintiles. Differences in condom use are more pronounced among men than women.

The GDHS results show that while the proportion of women who engage in higher-risk sexual intercourse has increased slightly from 21 percent in the 2003 GDHS to 23 percent in 2008 GDHS, the proportion using condoms during last higher-risk sexual intercourse has declined from 28 percent in the 2003 GDHS to 25 percent in the 2008 GDHS. As with women, the proportion of men who engage in higher-risk sexual intercourse has increased slightly from 38 percent in the 2003 GDHS to 42 percent in 2008 GDHS; however, the proportion who used a condom at last higher-risk sexual intercourse has not changed (45 percent in both 2003 and 2008).

The findings show that women have an average of 2 partners in their lifetime. There were no significant variations in the number of lifetime partners by background characteristics.

The mean number of lifetime sexual partners reported by men is 5, but the figure varies substantially across subgroups. As expected, the number is larger for older men (3 for men age 15-19 compared with 7 for men age 40-49). Divorced, separated, and widowed men have more partners than never-married men (7 and 4 sexual partners, respectively). There are notable differences by region, from 3 sexual partners in the Northern region to nearly 7 in the Eastern region. The mean number of lifetime sexual partners increases with level of education and wealth quintile.

Based on these figures, it could be suggested that Ghanaian women are more committed in their sexual partnerships than their male counterparts. However, many other factors are involved including the Ghanaian practice of polygamous marriage.

Women and men had an average of one partner in the month before the survey. There were no substantial variations in the number of partners in the past month by background characteristics.

13.8.2 Transactional Sex

Transactional sex is the exchange of sex for money, favours, or gifts. Transactional sex is associated with high risk of contracting HIV and other sexually transmitted infections because of compromised power relations and the likelihood of having multiple partners as a result. In the 2008 GDHS, men who had had sex in the past 12 months were asked if they had paid anyone in exchange for sex.

The results on transactional sex, shown in Table 13.9, indicate that only 2 percent of men paid for sex in the 12 months before the survey. Data show that men age 25-29 were most likely to pay for sex (5 percent) and men age 40-49 were the least likely to engage in transactional sex (less than 1 percent). Divorced, widowed, or separated men are somewhat more likely to have paid for sex in the past 12 months, compared with never-married men and men who are currently married or living with a woman. Looking at regions, men in the Upper East, Upper West, Central, and Volta regions were less likely to pay for sex (less than 1 percent) than men in the other regions (1 to 3 percent). Men in the middle wealth quintile (3 percent) were more likely to pay for sex than men in the lowest quintile (less than 1 percent).

Table 13.9 Payment for sexual intercourse and condom use at last paid sexual intercourse: Men

Percentage of men age 15-49 who reported paying for sexual intercourse in the past 12 months, by background characteristics, Ghana 2008

Background characteristic	Payment for sexual intercourse in the past 12 months: Percentage who paid for sexual intercourse	Payment for sexual intercourse in the past 12 months: Number of men
Age		
15-24	1.1	1,615
15-19	0.7	911
20-24	1.6	704
25-29	5.0	624
30-39	1.7	1,061
40-49	0.6	758
Marital status		
Never married	1.9	1,936
Married or living together	1.5	1,950
Divorced/separated/widowed	3.1	172
Residence		
Urban	2.1	1,866
Rural	1.4	2,191
Region		
Western	2.3	403
Central	0.4	326
Greater Accra	2.0	649
Volta	0.4	373
Eastern	1.6	411
Ashanti	3.1	785
Brong Ahafo	2.9	347
Northern	1.1	435
Upper East	0.2	219
Upper West	0.3	108
Education		
No education	1.3	540
Primary	2.0	619
Middle/JSS	1.8	1,721
Secondary+	1.8	1,167
Wealth quintile		
Lowest	0.6	708
Second	1.2	738
Middle	2.7	699
Fourth	2.3	974
Highest	1.8	939
Total 15-49	1.8	4,058
50-59	1.5	510
Total 15-59	1.7	4,568

Note: Total includes cases with information missing on education that are not shown separately.

13.9 COVERAGE OF PRIOR HIV TESTING

For persons who are HIV negative, knowledge of their HIV status helps in making specific decisions that will reduce the risk of getting HIV, lead to safer sex practices, and enable them to remain disease free. For those who are HIV positive, knowledge of their HIV status allows them to take action to protect their sexual partners, to access treatment, and to plan for the future. In the 2008 GDHS, respondents were asked whether they had ever been tested for HIV. If they had, they were asked when they were most recently tested, whether they had received the results of their last test, and where they had been tested. If they had never been tested, they were asked if they knew a place where they could go to be tested.

Tables 13.10.1 and 13.10.2 show that 70 percent of women and 75 percent of men age 15-49 know where to get an HIV test. However, the proportions ever tested are much smaller; only 21 percent of women and 14 percent of men age 15-49 have ever been tested for HIV, and of those who were tested, only 17 percent of women and 12 percent of men received the results of their test. The proportions who received the results of their most recent test are even smaller; only 7 percent of women and 4 percent of men received the results of the last HIV test taken in the past 12 months.

The proportion of respondents ever tested for HIV is lowest for the age group 15-19 (7 percent for women and 4 percent for men) and highest among women 25-29 (33 percent) and men 30-39 (16 percent). At all ages, except age group 40-49, women are more likely to go for an HIV test than men. Currently married respondents are more likely to go for an HIV test than those who are never-married. There are regional variations in HIV testing. About one in four women in Brong Ahafo, Central, and Greater Accra regions have ever been tested for HIV, compared with one in ten women in the Northern region. For men, HIV testing by region shows that the Greater Accra region has the highest percentage of men (22 percent) who have ever been tested for HIV; just one in ten men in the Central, Volta, Upper West, and Northern regions have ever been tested. Level of education and wealth quintile are positively related to HIV testing.

Knowledge about where to get an HIV test is more common among women and men in urban areas than in rural areas. It is highest for women in the Greater Accra and Eastern regions, and highest for men in the Greater Accra and Central regions. Knowledge of the various sites for HIV testing services is also higher among educated women and men and among those in the higher wealth quintiles.

13.9.1 HIV Testing during Antenatal Care

One of the tragic consequences of HIV in women is the transmission of the virus from mother-to-child. This can occur during pregnancy, at the time of delivery, or through breastfeeding. Worldwide, the effects of mother-to-child transmission (MTCT) of HIV are staggering. As part of the strategy for the prevention of mother-to-child transmission of HIV, women are counselled about HIV/AIDS during antenatal care (ANC) visits and offered an HIV test. In the 2008 GDHS, women age 15-49 who gave birth in the two years preceding the survey were asked whether they received counselling during ANC visits for their most recent birth, whether they were offered and accepted a test for HIV as part of their antenatal care, and if tested, whether they received the test results.

Table 13.11 shows that, among women who gave birth in the two years preceding the survey, 50 percent received HIV counselling during antenatal care for their most recent birth, and 28 percent of these women were offered and accepted an HIV test and received the results of the test.

Overall, 24 percent of women who gave birth in the two years preceding the survey were counselled, were offered and voluntarily accepted an HIV test, and received the test results. Women age 25-39, those living in urban areas, women in the Greater Accra region, those with secondary or higher education, and those in the highest wealth quintile are more likely than other women to have received all three services.

Table 13.10.1 Coverage of prior HIV testing: Women

Percentage of women age 15-49 who know where to get an HIV test, percent distribution of women age 15-49 by testing status and by whether they received the results of the last test, the percentage of women ever tested, and the percentage of women age 15-49 who received their test results the last time they were tested for HIV in the past 12 months, according to background characteristics, Ghana 2008

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of women by testing status and whether they received the results of the last test			Total	Percentage ever tested	Percentage who received results from last HIV test taken in the past 12 months	Number of women
		Ever tested, and received results	Ever tested, did not receive results	Never tested[1]				
Age								
15-24	67.6	9.9	3.5	86.6	100.0	13.4	4.9	1,902
15-19	61.5	4.9	1.8	93.3	100.0	6.7	2.6	1,025
20-24	74.6	15.8	5.4	78.8	100.0	21.2	7.6	878
25-29	78.0	28.3	4.6	67.1	100.0	32.9	12.5	832
30-39	71.1	24.1	4.5	71.4	100.0	28.6	8.0	1,283
40-49	67.0	11.2	1.7	87.1	100.0	12.9	3.7	899
Marital status								
Never married	70.7	7.8	1.4	90.8	100.0	9.2	3.7	1,593
Ever had sex	76.1	11.7	2.4	85.9	100.0	14.1	5.3	819
Never had sex	65.1	3.8	0.3	96.0	100.0	4.0	1.9	774
Married/living together	70.0	21.9	5.1	73.0	100.0	27.0	8.9	2,876
Divorced/separated/ widowed	69.1	17.8	1.8	80.4	100.0	19.6	4.3	446
Residence								
Urban	80.5	20.4	3.1	76.5	100.0	23.5	8.6	2,383
Rural	60.4	13.7	4.1	82.2	100.0	17.8	5.1	2,533
Region								
Western	61.5	14.6	1.7	83.7	100.0	16.3	7.5	447
Central	76.0	18.3	6.0	75.6	100.0	24.4	6.7	424
Greater Accra	83.3	22.0	1.5	76.5	100.0	23.5	7.6	853
Volta	69.5	12.0	4.8	83.2	100.0	16.8	5.9	431
Eastern	83.2	16.6	3.3	80.1	100.0	19.9	5.2	483
Ashanti	73.5	20.1	2.9	77.1	100.0	22.9	9.2	1,011
Brong Ahafo	62.8	20.6	4.1	75.2	100.0	24.8	7.5	425
Northern	39.1	6.6	5.5	87.9	100.0	12.1	2.3	467
Upper East	68.9	12.9	5.6	81.4	100.0	18.6	4.8	253
Upper West	60.0	13.6	6.6	79.8	100.0	20.2	5.9	122
Education								
No education	48.8	10.6	4.6	84.8	100.0	15.2	3.7	1,042
Primary	62.8	12.0	5.1	82.9	100.0	17.1	4.7	988
Middle/JSS	75.9	18.9	3.3	77.7	100.0	22.3	7.6	2,039
Secondary+	91.2	25.8	1.3	72.9	100.0	27.1	11.0	844
Wealth quintile								
Lowest	45.5	10.2	4.4	85.3	100.0	14.7	3.3	783
Second	59.0	10.7	4.6	84.7	100.0	15.3	4.0	900
Middle	70.8	14.6	3.9	81.6	100.0	18.4	5.7	979
Fourth	78.7	19.3	4.2	76.6	100.0	23.4	8.0	1,119
Highest	87.0	26.3	1.4	72.3	100.0	27.7	11.1	1,135
Total	70.2	16.9	3.6	79.4	100.0	20.6	6.8	4,916

Note: Total includes cases with information missing on education that are not shown separately.
[1] Includes don't know/missing.

Table 13.10.2 Coverage of prior HIV testing: Men

Percentage of men age 15-49 who know where to get an HIV test, percent distribution of men age 15-49 by testing status and by whether they received the results of the last test, the percentage of men ever tested, and the percentage of men age 15-49 who received their test results the last time they were tested for HIV in the past 12 months, according to background characteristics, Ghana 2008

Background characteristic	Percentage who know where to get an HIV test	Percent distribution of men by testing status and whether they received the results of the last test			Total	Percentage ever tested	Percentage who received results from last HIV test taken in the past 12 months	Number of men
		Ever tested and received results	Ever tested, did not receive results	Never tested[1]				
Age								
15-24	70.9	6.6	1.6	91.8	100.0	8.2	3.4	1,615
15-19	64.0	3.1	1.3	95.6	100.0	4.4	1.6	911
20-24	79.8	11.1	2.1	86.8	100.0	13.2	5.7	704
25-29	78.6	13.8	2.0	84.2	100.0	15.8	4.7	624
30-39	79.3	18.9	2.4	78.7	100.0	21.3	5.7	1,061
40-49	75.6	14.6	1.4	84.0	100.0	16.0	2.9	758
Marital status								
Never married	73.2	8.1	1.7	90.1	100.0	9.9	3.7	1,936
Ever had sex	79.1	12.7	1.8	85.5	100.0	14.5	5.5	984
Never had sex	67.0	3.4	1.7	94.9	100.0	5.1	1.9	952
Married/living together	76.7	16.7	2.0	81.3	100.0	18.7	4.4	1,950
Divorced/separated/ widowed	79.2	12.4	1.1	86.5	100.0	13.5	5.1	172
Residence								
Urban	82.4	16.1	2.4	81.4	100.0	18.6	4.8	1,866
Rural	69.0	9.3	1.3	89.4	100.0	10.6	3.5	2,191
Region								
Western	67.8	9.1	3.0	88.0	100.0	12.0	2.7	403
Central	84.1	8.5	1.5	90.0	100.0	10.0	3.1	326
Greater Accra	83.1	19.2	2.7	78.1	100.0	21.9	5.0	649
Volta	70.3	8.7	1.3	90.0	100.0	10.0	3.8	373
Eastern	72.4	10.1	2.2	87.7	100.0	12.3	3.7	411
Ashanti	74.6	13.9	1.8	84.3	100.0	15.7	4.1	785
Brong Ahafo	80.0	13.3	1.5	85.2	100.0	14.8	5.3	347
Northern	58.9	9.3	1.0	89.6	100.0	10.4	3.6	435
Upper East	91.5	16.6	0.5	82.9	100.0	17.1	6.2	219
Upper West	75.6	9.0	1.2	89.8	100.0	10.2	3.9	108
Education								
No education	56.5	6.0	0.7	93.3	100.0	6.7	1.3	540
Primary	66.1	6.1	1.0	92.8	100.0	7.2	2.3	619
Middle/JSS	72.4	10.0	1.9	88.1	100.0	11.9	3.0	1,721
Secondary+	92.6	22.5	2.7	74.8	100.0	25.2	8.0	1,167
Wealth quintile								
Lowest	61.3	6.5	0.7	92.8	100.0	7.2	1.8	708
Second	65.5	7.8	1.3	90.9	100.0	9.1	3.0	738
Middle	73.0	8.8	1.4	89.8	100.0	10.2	4.1	699
Fourth	80.2	13.7	2.0	84.3	100.0	15.7	4.5	974
Highest	89.5	22.0	3.3	74.7	100.0	25.3	6.4	939
Total 15-49	75.2	12.4	1.8	85.7	100.0	14.3	4.1	4,058
50-59	81.0	14.8	2.4	82.8	100.0	17.2	4.4	510
Total 15-59	75.8	12.7	1.9	85.4	100.0	14.6	4.1	4,568

Note: Total includes cases with information missing on education that are not shown separately
[1] Includes don't know/missing.

Table 13.11 Pregnant women counselled and tested for HIV

Among all women age 15-49 who gave birth in the two years preceding the survey, the percentage who received HIV counselling during antenatal care for their most recent birth, and percentage who accepted an offer of HIV testing by whether they received their test results, according to background characteristics, Ghana 2008

Background characteristic	Percentage who received HIV counselling during antenatal care[1]	Percentage who were offered and accepted an HIV test during antenatal care and who[2]:		Percentage who were counselled, were offered and accepted an HIV test, and who received results[2]	Number of women who gave birth in the past two years[3]
		Received results	Did not receive results		
Age					
15-24	41.6	21.9	9.9	17.0	358
15-19	30.0	18.2	9.4	12.2	80
20-24	44.9	22.9	10.1	18.4	278
25-29	54.7	30.9	4.8	26.9	342
30-39	54.0	32.3	8.1	28.2	392
40-49	46.0	22.7	3.0	21.3	85
Residence					
Urban	63.9	39.5	8.0	34.8	455
Rural	41.0	20.8	6.9	17.1	723
Region					
Western	41.1	21.5	2.3	17.3	111
Central	36.7	27.9	14.2	23.6	123
Greater Accra	67.4	49.2	6.1	44.3	133
Volta	43.5	27.5	5.5	24.9	107
Eastern	75.8	39.4	8.8	36.3	105
Ashanti	52.6	23.1	7.8	17.6	215
Brong Ahafo	48.4	42.3	6.3	32.7	107
Northern	30.3	8.9	3.9	8.4	177
Upper East	59.1	27.0	12.4	22.5	63
Upper West	67.7	22.2	12.9	21.4	36
Education					
No education	35.3	16.2	5.9	13.5	363
Primary	43.2	20.1	9.5	14.4	288
Middle/JSS	61.5	38.6	8.0	34.1	412
Secondary+	70.7	48.1	3.7	44.6	113
Wealth quintile					
Lowest	34.8	13.8	5.0	10.8	283
Second	35.6	18.4	8.3	14.4	261
Middle	54.5	26.0	7.0	23.9	222
Fourth	61.0	38.9	10.7	31.4	243
Highest	75.1	53.8	5.3	49.9	169
Total	49.8	28.0	7.3	23.9	1,178

Note: Total includes cases with information missing on education that are not shown separately.
[1] In this context, 'counselled' means that someone talked with the respondent about all three of the following topics: 1) babies getting the AIDS virus from their mother, 2) preventing the virus, and 3) getting tested for the virus.
[2] Only women who were offered the test are included here; women who were either required or asked for the test are excluded from the numerator of this measure.
[3] Denominator for percentages includes women who did not receive antenatal care for their last birth in the past two years.

13.10 MALE CIRCUMCISION

Circumcision is widely practiced in Ghana for religious, social, and health purposes. As a result, children are circumcised a few days after birth, except for most royal lineages. Recently, male circumcision has been shown to be associated with lower transmission of STIs, including HIV (WHO and UNAIDS, 2007). To examine this relationship, men age 15-59 interviewed in the 2008 GDHS were asked if they were circumcised.

Table 13.12 shows that male circumcision is widespread in Ghana, with more than nine in ten men being circumcised (92 percent). The practice occurs widely in all age groups and in both urban and rural areas; however, there are variations according to region, ethnicity, education, and wealth quintile. Regional variation shows that the proportion of men circumcised ranges from 79 percent in the Upper West and Northern regions to 99 percent in the Volta region. Among the various ethnic groups, male circumcision ranges from 65 percent among the Grumas to 95 percent among Guans. The relationship between circumcision and education shows that 85 percent of men with no education are circumcised compared with 94 percent of men with middle/JSS education. Men in the lowest and highest wealth quintiles are less likely to be circumcised than men in the second to fourth wealth quintiles.

Table 13.12 Male circumcision

Percentage of men age 15-49 who report having been circumcised, by background characteristics, Ghana 2008

Background characteristic	Percentage circumcised	Number of men
Age		
15-24	90.9	1,615
15-19	91.6	911
20-24	90.1	704
25-29	91.0	624
30-39	93.0	1,061
40-49	90.6	758
Residence		
Urban	91.2	1,866
Rural	91.6	2,191
Region		
Western	98.2	403
Central	97.4	326
Greater Accra	83.7	649
Volta	98.5	373
Eastern	87.4	411
Ashanti	97.1	785
Brong Ahafo	94.9	347
Northern	79.4	435
Upper East	92.9	219
Upper West	78.5	108
Ethnicity		
Akan	94.3	1,915
Ga/Dangme	90.8	253
Ewe	91.0	597
Guan	94.5	94
Mole-Dagbani	91.1	685
Grussi	90.8	104
Gruma	64.5	205
Mande	*	20
Other	94.9	182
Education		
No education	84.7	540
Primary	92.0	619
Middle/JSS	93.6	1,721
Secondary+	91.1	1,167
Wealth quintile		
Lowest	84.4	708
Second	95.8	738
Middle	95.4	699
Fourth	93.1	974
Highest	88.7	939
Total 15-49	91.4	4,058
50-59	92.6	510
Total 15-59	91.6	4,568

Note: Total includes cases with information missing on education that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

13.11 Self-reporting of Sexually Transmitted Infections

Sexually transmitted infections are closely associated with HIV because they increase the likelihood of contracting HIV and share similar risk factors. In the 2008 GDHS, all respondents who ever had sexual intercourse were asked if they had had a sexually transmitted infection (STI) or symptoms of an STI (including bad-smelling/abnormal genital discharge and genital sore or ulcer) in the 12 months preceding the survey.

Table 13.13 shows the self-reported prevalence of STIs and STI symptoms among women and men age 15-49 who have ever had sexual intercourse. The results show that 3 percent of both women and men who have ever had sex reported having had an STI in the 12 months before the survey. A higher proportion of women (16 percent) than men (5 percent) reported having had an abnormal genital discharge. Furthermore, 7 percent of women and 3 percent of men reported having had a genital sore or ulcer in the past 12 months. Overall, 18 percent of women and 7 percent of men have had either an STI or symptoms of an STI in the 12 months preceding the survey.

The results presented in Table 13.13 indicate that respondents in the younger age groups are more likely to report having had an STI or an STI symptom than older age groups, especially among women. Never-married women and divorced/separated/widowed men are more likely to report an STI or symptoms of an STI than those of other marital status, the difference being more pronounced among women (31 percent of never-married women compared with 15 percent of currently married women and 12 percent of formerly married women). Among men, those in marital unions are least likely to have an STI or symptoms of an STI (6 percent). A larger proportion of uncircumcised men (12 percent) reported having an STI or symptoms of an STI than circumcised men (6 percent); this supports the current view among researchers and health professionals that circumcision reduces the risk of genital infection in men. Respondents in urban areas were more likely to report having STIs or symptoms of STI than their rural counterparts.

Table 13.13 Self-reported prevalence of sexually transmitted infections (STIs) and STIs symptoms

Among women and men age 15-49 who ever had sexual intercourse, the percentage who report having an STI or symptoms of an STI in the past 12 months, by background characteristics, Ghana 2008

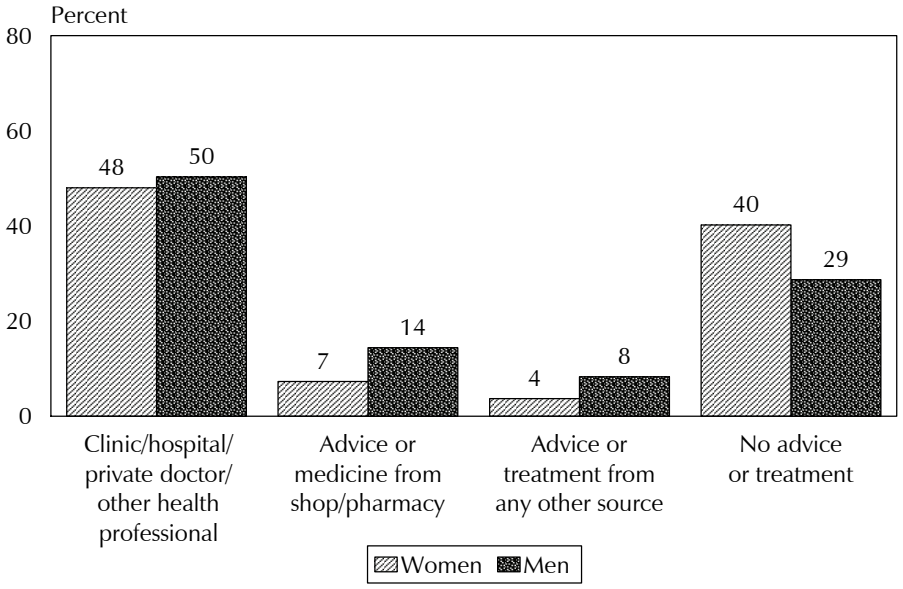
Background characteristic	Percentage of women who reported having in the past 12 months: STI	Bad-smelling/ abnormal genital discharge	Genital sore or ulcer	STI/ genital discharge/ sore or ulcer	Number of women who ever had sexual intercourse	Percentage of men who reported having in the past 12 months: STI	Bad-smelling/ abnormal genital discharge	Genital sore or ulcer	STI/ genital discharge/ sore or ulcer	Number of men who ever had sexual intercourse
Age										
15-24	5.2	24.6	8.7	26.4	1,159	3.4	6.9	1.8	8.3	720
15-19	4.9	27.2	8.4	29.1	383	2.0	6.6	1.0	7.4	200
20-24	5.3	23.2	8.9	25.1	777	3.9	6.9	2.1	8.6	520
25-29	3.5	17.5	6.8	19.4	804	6.2	6.5	4.2	10.5	581
30-39	2.8	12.4	6.3	15.3	1,280	2.6	3.7	3.2	6.2	1,048
40-49	1.9	8.8	3.6	10.0	899	1.4	2.0	1.5	3.2	756
Marital status										
Never married	6.5	28.7	10.1	30.9	819	4.0	5.9	2.7	8.4	984
Married or living together	2.7	13.3	5.8	15.3	2,876	2.5	3.7	2.5	5.7	1,950
Divorced/separated/ widowed	2.6	9.7	4.4	12.4	446	5.6	6.7	3.6	9.2	172
Male circumcision										
Circumcised	na	na	na	na	na	3.2	4.3	2.2	6.4	2,850
Not circumcised	na	na	na	na	na	2.2	7.4	7.9	12.1	230
Residence										
Urban	4.3	18.0	6.5	19.9	1,954	3.9	5.2	2.5	7.8	1,446
Rural	2.6	14.2	6.5	16.4	2,188	2.5	4.0	2.8	5.9	1,659
Region										
Western	0.6	9.2	2.5	10.4	374	2.3	2.7	1.6	3.8	304
Central	1.5	23.5	2.2	23.7	367	3.1	1.1	4.8	6.9	248
Greater Accra	2.7	13.6	3.0	15.8	687	2.1	2.0	1.5	4.9	530
Volta	0.8	12.5	4.5	14.6	360	1.5	1.2	0.8	2.3	268
Eastern	2.1	21.2	6.4	22.2	414	4.3	6.3	3.4	10.3	317
Ashanti	9.0	21.8	15.4	25.8	861	6.1	6.7	3.0	8.0	614
Brong Ahafo	0.5	11.4	0.8	11.6	376	2.4	6.0	2.4	7.3	293
Northern	3.5	10.4	7.8	13.4	391	2.8	10.4	5.1	13.1	307
Upper East	3.7	11.2	6.3	13.0	208	0.3	1.4	0.8	1.4	155
Upper West	2.6	20.4	9.3	23.6	104	1.7	4.1	3.2	5.0	68
Education										
No education	1.5	8.1	4.6	9.9	995	1.3	5.6	3.3	7.3	483
Primary	3.5	17.7	6.5	19.1	855	3.5	5.0	3.2	7.6	405
Middle/JSS	4.2	18.4	7.4	21.1	1,642	3.7	4.3	3.0	6.8	1,267
Secondary+	4.2	19.9	7.2	21.8	647	3.1	4.1	1.5	6.1	941
Wealth quintile										
Lowest	0.9	11.5	6.6	13.8	682	1.1	5.4	3.6	6.5	524
Second	2.6	13.3	6.5	16.0	787	3.6	5.2	2.6	6.9	549
Middle	3.3	16.1	5.3	17.8	838	2.5	4.0	1.5	5.5	518
Fourth	4.2	19.3	8.2	21.1	945	5.5	5.8	3.3	9.9	763
Highest	5.2	18.2	5.7	20.2	891	2.3	2.6	2.1	4.6	752
Total 15-49	3.4	16.0	6.5	18.1	4,142	3.1	4.5	2.6	6.8	3,105
50-59	na	na	na	na	na	0.8	1.8	1.4	3.5	507
Total 15-59	na	na	na	na	na	2.8	4.2	2.5	6.3	3,612

Note: Total includes cases with information missing on education and on male circumcision that are not shown separately.
na = Not applicable

One in four women in the Ashanti, Central, and Upper West regions (26-24 percent) and one in five women in the Eastern region (22 percent) reported having STI symptoms, compared with one in ten women in the Western region. Men in the Northern and Eastern regions (13 and 10 percent, respectively) are more likely to report STI symptoms than men in other regions (1-8 percent). There is a positive association between the reported prevalence of an STI or symptoms of an STI and levels of education and wealth among women, but these patterns are not seen among men. For example, 22 percent of women with secondary or higher education reported having had an STI or STI-related symptoms in the past 12 months, compared with 10 percent of women with no education.

Figure 13.1 shows the proportion of women and men who had an STI or symptoms of an STI who sought advice or treatment from various sources. About half of respondents who had an STI or symptoms of an STI sought treatment from a health facility or health professional (48 percent of women and 50 percent of men). However, 40 percent of women and 29 percent of men did not seek any advice or treatment.

Figure 13.1 **Women and Men Seeking Treatment for STIs**



GDHS 2008

13.12 PREVALENCE OF MEDICAL INJECTIONS

Injection overuse in a health care setting can contribute to the transmission of blood-borne pathogens because it amplifies the effect of unsafe practices, such as reuse of injection equipment. To measure the potential risk of transmission of HIV associated with medical injections, respondents in the 2008 GDHS were asked if they had received an injection in the past 12 months, and if so, was their last injection given with a syringe from a new, unopened package. It should be noted that medical injections can be self-administered (e.g., insulin for diabetes). These injections were not included in the calculation.

Table 13.14 shows that 33 percent of women and 27 percent of men age 15-49 received a medical injection in the past 12 months. The average number of injections was about 1 among women and men. The potential risk of transmission of HIV associated with such injections is very low because the vast majority of respondents—98 percent of women and men who received medical injections—reported that the syringe and needle were taken from a new, unopened package. These figures are encouraging for Ghanaians and for the Ministry of Health, because contaminated needles can be one means by which HIV is transmitted.

Both the likelihood of receiving an injection in the past 12 months and the likelihood that the injection was a safe one, increase with level of education and wealth quintile. Injections are particularly common among urban residents, women in the Upper East region (44 percent), and men in the Ashanti region (37 percent).

Table 13.14 Prevalence of medical injections

Percentage of women and men age 15-49 who received at least one medical injection in the past 12 months, the average number of medical injections per person in the past 12 months, and among those who received a medical injection, the percentage of last medical injections for which the syringe and needle were taken from a new, unopened package, by background characteristics, Ghana 2008

	Women					Men				
Background characteristic	Percentage who received a medical injection in the past 12 months	Average number of medical injections per person in the past 12 months	Number of women	For last injection, syringe and needle taken from a new, unopened package	Number of women receiving medical injections in the past 12 months	Percentage who received a medical injection in the past 12 months	Average number of medical injections per person in the past 12 months	Number of men	For last injection, syringe and needle taken from a new, unopened package	Number of men receiving medical injections in the past 12 months
Age										
15-24	31.0	0.8	1,902	97.6	589	23.6	0.7	1,615	96.3	381
15-19	25.6	0.7	1,025	99.0	262	23.2	0.6	911	94.8	212
20-24	37.2	0.9	878	96.4	327	24.0	0.7	704	98.2	169
25-29	39.5	1.1	832	98.5	329	28.9	1.0	624	97.6	180
30-39	35.4	1.2	1,283	97.3	454	31.8	1.1	1,061	98.3	338
40-49	29.1	1.0	899	96.7	261	27.5	0.7	758	98.3	208
Residence										
Urban	34.9	1.1	2,383	97.8	832	32.4	1.0	1,866	98.0	605
Rural	31.6	0.9	2,533	97.3	800	22.9	0.7	2,191	96.9	502
Region										
Western	31.9	1.0	447	98.6	143	35.4	1.2	403	98.0	143
Central	36.8	1.1	424	97.2	156	23.1	0.8	326	100.0	75
Greater Accra	33.2	1.1	853	97.7	283	32.0	0.9	649	99.3	208
Volta	32.2	1.0	431	99.2	139	13.6	0.4	373	99.4	51
Eastern	32.7	1.0	483	96.9	158	29.7	0.9	411	93.5	122
Ashanti	37.3	1.1	1,011	96.0	377	36.8	1.2	785	98.1	289
Brong Ahafo	23.0	0.6	425	97.3	98	21.2	0.5	347	96.2	73
Northern	29.3	0.9	467	97.9	137	19.4	0.5	435	92.8	84
Upper East	43.6	0.9	253	99.6	110	17.2	0.8	219	100.0	38
Upper West	27.1	0.6	122	99.2	33	21.8	0.5	108	98.5	24
Education										
No education	27.0	0.7	1,042	98.5	282	15.7	0.5	540	97.4	85
Primary	30.5	0.9	988	96.9	301	22.3	0.7	619	97.3	138
Middle/JSS	35.2	1.0	2,039	96.8	718	28.4	0.8	1,721	97.3	489
Secondary+	39.1	1.4	844	99.0	330	33.9	1.0	1,167	97.9	395
Wealth quintile										
Lowest	28.0	0.6	783	97.8	220	15.4	0.5	708	95.1	109
Second	28.1	1.0	900	97.0	253	24.0	0.8	738	96.8	177
Middle	32.0	0.9	979	98.0	314	22.9	0.7	699	95.4	160
Fourth	37.2	1.2	1,119	97.2	416	32.1	0.9	974	98.6	313
Highest	37.9	1.2	1,135	97.8	431	37.0	1.2	939	98.7	348
Total 15-49	33.2	1.0	4,916	97.5	1,633	27.3	0.8	4,058	97.5	1,107
50-59	na	na	0	na	0	26.0	1.1	510	98.3	132
Total 15-59	na	na	na	na	na	27.1	0.9	4,568	97.6	1,239

Note: Medical injections are those given by a doctor, nurse, pharmacist, dentist or other health worker. Total includes cases with information missing on education that are not shown separately.
na = Not applicable

Respondents who had received an injection in the past 12 months were asked where they obtained their last injection. Three in four women (75 percent) and two in three men (66 percent) age 15-49 received their last medical injection from a public sector facility; 16 percent of women and 22 percent of men received their last injection from a private medical facility (data not shown).

13.13 HIV/AIDS-Related Knowledge and Sexual Behaviour among Youth

This section addresses knowledge of HIV/AIDS issues and related sexual behaviour among youth age 15-24. Special attention is paid to this group because it accounts for half of all new HIV cases worldwide (Ross et al., 2006). In addition to knowledge of HIV transmission, results are presented on age at first sex, condom use, age differences between sexual partners, sex related to alcohol use, and voluntary counselling and testing for HIV.

13.13.1 HIV/AIDS-Related Knowledge among Young Adults

Young respondents were asked the same set of questions on beliefs about HIV transmission as other respondents. Information on the overall level of knowledge of major methods of avoiding HIV, and rejection of major misconceptions are shown in Tables 13.2, 13.3.1, and 13.3.2. These results indicate the general level of awareness of HIV prevention methods among young people.

Table 13.15 shows the level of the composite indicator, comprehensive knowledge about AIDS,[1] and knowledge of a source of condoms among young people, by background characteristics. The results show that 28 percent of young women and 34 percent of young men have comprehensive knowledge of AIDS. Comprehensive knowledge is highest among men age 23-24 (42 percent), among never-married young men who have ever had sex (37 percent), young people in urban areas (34 percent among women and 42 percent among men), female youth living in the Volta and Upper East regions (39 percent each) and male youth in the Greater Accra region (51 percent), those with secondary or higher education (42 percent of women and 55 percent of men), and youth in the highest wealth quintile (34 percent of women and 50 percent of men).

[1] Comprehensive knowledge means knowing that consistent use of condoms during sexual intercourse and having just one HIV-negative, faithful partner can reduce the chances of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about HIV/AIDS transmission or prevention. The components of comprehensive knowledge are presented in Tables 13.2, 13.3.1, and 13.3.2.

Table 13.15 Comprehensive knowledge about AIDS and of a source of condoms among youth

Percentage of young women and young men age 15-24 with comprehensive knowledge about AIDS and percentage with knowledge of a source of condoms, by background characteristics, Ghana 2008

	Women age 15-24			Men age 15-24		
Background characteristic	Percentage with comprehensive knowledge of AIDS[1]	Percentage who know a condom source[2]	Number of women	Percentage with comprehensive knowledge of AIDS[1]	Percentage who know a condom source[2]	Number of men
Age						
15-19	27.7	68.8	1,025	30.4	82.4	911
15-17	26.9	64.4	605	27.6	78.5	524
18-19	28.9	75.2	420	34.3	87.7	387
20-24	29.0	79.9	878	39.1	92.5	704
20-22	28.9	79.5	552	36.5	89.4	399
23-24	29.0	80.5	326	42.4	96.6	305
Marital status						
Never married	29.1	75.6	1,356	34.7	87.1	1,488
Ever had sex	29.2	85.3	613	37.2	96.6	593
Never had sex	29.0	67.6	743	33.0	80.9	895
Ever married	26.3	69.8	547	28.9	83.6	127
Residence						
Urban	34.3	86.2	953	41.9	93.7	748
Rural	22.3	61.6	949	27.5	80.9	867
Region						
Western	26.5	79.3	160	21.5	91.7	152
Central	28.2	70.7	173	31.0	92.1	129
Greater Accra	34.8	89.2	335	51.0	89.5	218
Volta	38.5	72.9	161	45.2	90.7	161
Eastern	27.1	83.1	188	30.7	85.6	172
Ashanti	22.6	80.3	403	32.5	91.7	333
Brong Ahafo	23.9	60.8	162	33.2	86.1	136
Northern	23.5	37.9	176	20.9	65.0	161
Upper East	38.7	75.9	93	38.7	89.7	100
Upper West	20.0	48.5	50	32.1	73.5	53
Education						
No education	17.8	37.5	202	13.1	60.2	100
Primary	16.2	60.9	380	22.3	76.2	314
Middle/JSS	29.3	77.2	899	28.6	88.2	718
Secondary+	42.0	96.1	420	55.0	97.3	478
Wealth quintile						
Lowest	16.7	42.9	263	23.3	69.9	278
Second	21.9	62.1	353	27.4	83.2	307
Middle	29.7	78.8	397	30.5	90.8	306
Fourth	32.9	81.4	461	37.6	92.0	406
Highest	34.4	90.2	427	49.6	94.8	318
Total 15-24	28.3	73.9	1,902	34.2	86.8	1,615

Note: Total includes cases with information missing on education that are not shown separately

[1] Comprehensive knowledge means knowing that consistent use of condoms during sexual intercourse and having just one HIV-negative, faithful partner can reduce the chances of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about HIV/AIDS transmission or prevention. The components of comprehensive knowledge are presented in Tables 13.2, 13.3.1, and 13.3.2.

[2] Friends, family members, and home are not considered sources for condoms.

13.13.2 Knowledge of Condom Sources among Young Adults

Condom use plays an important role in the prevention of STIs and HIV transmission, as well as prevention of unwanted pregnancies. Young adults are often at a higher risk of contracting STIs, because they are more likely to be experimenting with sex before marriage. Knowledge of a source of condoms helps young people to obtain and use condoms. As shown in Table 13.15, there is a gap in knowledge of a condom source between men and women age 15-24; more men than women know at least one source of condoms (87 percent and 74 percent, respectively). Knowledge of a condom source generally increases with age and is highest among young women and men who have ever had sex. For both women and men, knowledge of a condom source is highest among those living in urban areas, women in the Greater Accra region, and men in Central, Western, and Ashanti regions, young adults with secondary or higher education, and those in the highest wealth quintile.

13.13.3 Trends in Age at First Sex

Because HIV transmission in Ghana occurs primarily through sexual intercourse between an HIV-positive person and an HIV-negative person, age at first intercourse marks the beginning of the period in which most young adults are exposed to the risk of contracting HIV.

Table 13.16 shows the percentage of young women and men who had sexual intercourse before age 15 and before age 18, by background characteristics. More women than men have had sex by age 15 and 18. Eight percent of young women and 4 percent of young men had their first sexual intercourse before the age of 15, while 44 percent of young women and 28 percent of young men had first sexual intercourse by age 18.

Differentials by background characteristics are greater among women than men. Ever-married young women and men are substantially more likely to initiate sexual activity by age 15 or by age 18 than those who have never married.

The survey results show that urban women are less likely to have sexual intercourse by age 15 (6 percent) or by age 18 (37 percent) than their rural counterparts (10 percent and 52 percent, respectively). Among men, however, there is almost no difference by urban-rural residence in initiation of first sex by age 15 and by age 18. Across regions, young women in the Upper West region (12 percent) and men in the Greater Accra and Ashanti regions (7 percent each) are the most likely to have had sexual debut by age 15. Young women in the Eastern region (55 percent) and young men in the Brong Ahafo region (47 percent) are the most likely to have had sex by age 18. Young women in the Greater Accra region (32 percent) and young men in the Northern region (7 percent) are the least likely to have had sex by age 18. Young men in the Northern region are the least likely to have had sexual intercourse by age 18 (7 percent), and only 2 percent had sex by age 15.

For young women, higher educational attainment is associated with a lower likelihood of initiating sexual intercourse at an early age. For example, whereas 11 percent of women age 15-24 with no education and 14 percent of women with primary education had sex by age 15, only 2 percent of women with secondary or higher education had sex by age 15. The proportion of young women initiating sex by age 15 and 18 is lowest among women in the highest wealth quintile. The relationship between early initiation of sex and level of education or wealth quintile seen among young women is less apparent among young men.

Table 13.16 Age at first sexual intercourse among youth

Percentage of young women and of young men age 15-24 who had sexual intercourse before age 15 and percentage of young women and of young men age 18-24 who had sexual intercourse before age 18, by background characteristics, Ghana 2008

	Women age 15-24		Women age 18-24		Men age 15-24		Men age 18-24	
Background characteristic	Percentage who had sexual intercourse before age 15	Number of women	Percentage who had sexual intercourse before age 18	Number of women	Percentage who had sexual intercourse before age 15	Number of men	Percentage who had sexual intercourse before age 18	Number of men
Age								
15-19	8.2	1,025	na	na	3.6	911	na	na
15-17	7.5	605	na	na	4.4	524	na	na
18-19	9.3	420	49.5	420	2.5	387	29.2	387
20-24	7.2	878	41.2	878	5.2	704	26.8	704
20-22	7.0	552	42.4	552	3.5	399	25.6	399
23-24	7.6	326	39.3	326	7.4	305	28.4	305
Marital status								
Never married	4.6	1,356	31.9	773	3.9	1,488	25.7	967
Ever married	15.5	547	61.6	524	8.8	127	43.0	124
Knows condom source[1]								
Yes	7.1	1,406	42.1	1,017	4.7	1,402	28.6	991
No	9.7	496	50.5	281	1.5	213	18.6	100
Residence								
Urban	6.0	953	36.6	663	5.0	748	28.3	541
Rural	9.6	949	51.5	635	3.7	867	27.1	550
Region								
Western	6.4	160	39.4	109	2.1	152	26.0	103
Central	10.7	173	45.4	108	0.9	129	24.5	94
Greater Accra	5.7	335	32.1	246	6.6	218	26.7	157
Volta	10.2	161	44.7	108	4.6	161	31.6	84
Eastern	9.7	188	55.1	122	5.0	172	32.8	116
Ashanti	8.5	403	45.8	277	6.7	333	35.2	227
Brong Ahafo	3.7	162	51.7	112	4.3	136	46.9	96
Northern	7.9	176	41.8	127	2.4	161	7.2	119
Upper East	5.7	93	50.8	56	1.1	100	10.7	61
Upper West	11.6	50	51.1	33	1.9	53	18.2	36
Education								
No education	11.0	202	55.0	164	4.3	100	26.8	81
Primary	13.9	380	61.9	241	4.0	314	30.2	154
Middle/JSS	7.3	899	48.9	530	4.3	718	29.5	433
Secondary+	1.7	420	19.8	361	4.5	478	25.0	419
Wealth quintile								
Lowest	10.1	263	52.8	171	3.6	278	23.6	170
Second	11.7	353	52.2	236	3.7	307	30.4	191
Middle	7.3	397	50.2	277	2.9	306	25.7	209
Fourth	7.0	461	41.8	323	4.7	406	31.4	296
Highest	4.3	427	28.3	291	6.2	318	25.6	226
Total 15-24	7.8	1,902	43.9	1,298	4.3	1,615	27.7	1,091

Note: Total includes cases with information missing on education that are not shown separately.
na = Not available
[1] Friends, family members, and home are not considered sources for condoms.

13.13.4 Condom Use at First Sex

Consistent condom use is advocated by HIV control programmes to reduce the risk of sexual transmission of HIV among sexually active young adults. Young adults who use condoms the first time they have sexual intercourse are more likely to sustain condom use later in life. Condom use at first sex serves as an indicator of reduced risk of exposure at the beginning of sexual activity.

Table 13.17 shows that condom use at first sex is not common in Ghana. Among young adults age 15-24 who have ever had sexual intercourse, only 25 percent of females and 32 percent of males used a condom the first time they had sex. Never-married women and men are more likely to use a condom at first sex than those who have been married. It is also markedly higher among respondents who know where to obtain a condom. Young adults who live in urban areas, women in the Upper East region, those with secondary or higher education, and youth in the highest wealth quintiles are more likely to use a condom at first sex than other young adults.

Table 13.17 Condom use at first sexual intercourse among youth

Among young women and young men age 15-24 who have ever had sexual intercourse, percentage who used a condom the first time they had sexual intercourse, by background characteristics, Ghana 2008

Background characteristic	Women age 15-24		Men age 15-24	
	Percentage who used a condom at first sexual intercourse	Number of women who have ever had sexual intercourse	Percentage who used a condom at first sexual intercourse	Number of men who have ever had sexual intercourse
Age				
15-19	25.9	383	31.4	200
15-17	27.1	130	31.2	55
18-19	25.3	252	31.4	145
20-24	24.8	777	31.8	520
20-22	26.7	465	29.6	263
23-24	21.8	312	34.0	257
Marital status				
Never married	31.3	613	33.6	593
Ever married	18.2	546	22.7	127
Knows condom source[1]				
Yes	30.3	904	33.5	678
No	6.9	255	(1.6)	41
Residence				
Urban	31.6	549	34.5	362
Rural	19.3	610	28.7	357
Region				
Western	14.6	93	40.6	56
Central	30.3	117	(43.2)	58
Greater Accra	30.4	175	36.8	109
Volta	32.3	93	33.5	60
Eastern	32.5	125	30.5	83
Ashanti	24.1	260	18.9	169
Brong Ahafo	20.9	116	33.4	84
Northern	9.8	100	26.5	48
Upper East	35.8	48	(43.7)	36
Upper West	14.2	32	36.5	17
Education				
No education	5.2	155	11.4	54
Primary	19.5	249	16.6	104
Middle/JSS	26.0	510	32.7	279
Secondary+	41.5	244	40.3	281
Wealth quintile				
Lowest	13.0	162	24.0	102
Second	18.3	242	31.3	124
Middle	27.1	260	24.2	135
Fourth	29.1	294	35.2	210
Highest	34.9	200	39.0	148
Total	25.1	1,159	31.6	720

Note: Total includes cases with information missing on education that are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.
[1] Friends, family members, and home are not considered sources for condoms.

13.13.5 Abstinence and Premarital Sex

The period between age at first sex and age at marriage is often a time of sexual experimentation. Premarital sex and the length of the interval between sexual initiation and marriage are among the factors contributing to the spread of HIV. Table 13.18 shows, for never-married women and men age 15-24, the percentage who have never had sexual intercourse, the percentage who had sex in the past 12 months, and among those who had sex in the past 12 months, the percentage who used a condom at last sexual intercourse.

Table 13.18 Premarital sexual intercourse and condom use during premarital sexual intercourse among youth

Among never-married women and men age 15-24, the percentage who have never had sexual intercourse, the percentage who had sexual intercourse in the past 12 months, and, among those who had premarital sexual intercourse in the past 12 months, the percentage who used a condom at the last sexual intercourse, by background characteristics, Ghana 2008

	Never-married women age 15-24					Never-married men age 15-24				
				Among women who had sexual intercourse in the past 12 months:					Among men who had sexual intercourse in the past 12 months:	
Background characteristic	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the past 12 months	Number of never-married women	Percentage who used condom at last sexual intercourse	Number of women	Percentage who have never had sexual intercourse	Percentage who had sexual intercourse in the past 12 months	Number of never-married men	Percentage who used condom at last sexual intercourse	Number of men
Age										
15-19	69.1	22.7	929	25.0	210	78.8	15.2	902	37.6	137
15-17	81.5	13.6	582	26.1	79	90.0	6.9	521	(41.2)	36
18-19	48.4	37.9	346	24.3	131	63.5	26.5	382	36.3	101
20-24	23.7	59.3	427	32.4	253	31.5	51.6	586	48.6	302
20-22	29.2	54.6	298	30.4	163	38.5	47.1	355	48.2	167
23-24	11.1	69.9	130	36.0	91	20.7	58.6	231	48.9	135
Knows condom source[1]										
Yes	49.0	39.7	1,025	32.1	407	55.9	32.9	1,296	46.4	426
No	72.7	17.1	331	7.3	57	89.4	6.9	192	*	13
Residence										
Urban	53.1	34.6	762	33.8	264	55.0	31.9	702	51.5	224
Rural	57.1	33.6	594	22.8	200	64.8	27.3	786	38.5	215
Region										
Western	56.3	24.3	120	(21.6)	29	65.6	22.3	148	(35.6)	33
Central	46.3	41.3	122	(30.5)	50	61.6	28.4	115	*	33
Greater Accra	58.4	33.1	274	45.0	91	53.2	31.7	206	50.9	65
Volta	64.8	22.0	105	*	23	68.5	20.4	147	(58.6)	30
Eastern	41.9	43.3	151	46.5	65	54.8	35.8	161	47.9	58
Ashanti	49.6	42.9	287	13.7	123	54.8	33.4	299	42.4	100
Brong Ahafo	48.6	39.9	94	(23.4)	38	42.3	47.9	124	37.9	59
Northern	70.5	19.7	108	*	21	77.2	16.8	146	(27.6)	25
Upper East	70.8	20.3	63	*	13	68.3	28.9	93	(58.0)	27
Upper West	58.9	32.6	31	(34.0)	10	73.3	19.8	49	(45.2)	10
Education										
No education	68.2	21.8	68	*	15	64.8	26.1	72	(19.3)	19
Primary	58.3	31.7	225	12.4	71	71.3	23.1	295	29.6	68
Middle/JSS	55.9	32.5	697	25.2	226	65.8	25.8	668	42.0	172
Secondary+	48.1	41.3	366	43.2	151	44.0	39.6	449	56.9	178
Wealth quintile										
Lowest	67.9	21.3	149	27.4	32	69.8	24.3	251	31.8	61
Second	51.5	37.3	215	18.1	80	66.3	27.1	277	47.8	75
Middle	47.0	41.9	292	23.4	122	60.8	29.1	280	39.0	81
Fourth	50.3	37.2	333	35.1	124	52.5	34.8	374	39.1	130
Highest	61.7	28.8	368	37.2	106	55.6	30.0	306	65.8	92
Total	54.8	34.2	1,356	29.0	463	60.2	29.5	1,488	45.1	439

Note: Total includes cases with information missing on education that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.
[1] Friends, family members, and home are not considered sources for condoms.

In Ghana, never-married young adults age 15-24 show a relatively high level of abstinence: 55 percent of women and 60 percent of men in this age group have never had sexual intercourse. One-third (34 percent) of all never-married women age 15-24 and 30 percent of never-married men age 15-24 had sexual intercourse in the 12 months preceding the survey. Only 29 percent of never-married women reported using a condom at last sexual intercourse in the past 12 months, compared with 45 percent of the young men.

Condom use at last sexual intercourse increases with age, especially among men. It is also higher among respondents who know where to obtain a condom. It is notable that never-married youth in urban areas are more likely to use condoms than youth in rural areas. Condom use at last sexual intercourse is highest among young adults with secondary or higher education and those in the highest wealth quintile.

13.13.6 Higher-risk Sex and Condom Use among Young Adults

The most common means of transmission of HIV in Ghana is through unprotected sex with a person who is HIV positive. To prevent HIV/AIDS transmission, it is important that young people practice the recommended ABC methods regarding safe sex (abstinence, being faithful to one HIV-negative partner, and condom use).

Tables 13.19.1 and 13.19.2 show for young men and women age 15-24, respectively, who were sexually active in the 12 months preceding the survey, the proportion who engaged in higher-risk sex[2] during this period. The tables also show for those who engaged in higher-risk sex, the proportion who used a condom at last higher-risk sex. The results indicate that higher-risk sex is more common among young men (87 percent) than among young women (52 percent), and condom use at last higher-risk sexual intercourse is higher among young men (46 percent) than young women (28 percent).

Higher-risk sex is more prevalent among younger respondents and among those who have never married. This is expected because higher-risk sex is, by definition, sexual intercourse with a non-marital partner, and older respondents are more likely to be married. Urban women age 15-24 are more likely to have higher-risk sexual intercourse than rural women (62 percent and 44 percent, respectively). The same pattern is seen for men, but the difference is less pronounced (90 percent for men in urban areas and 83 percent for men in rural areas). Higher-risk sexual intercourse is most prevalent among women in the Eastern (69 percent), Ashanti (60 percent), and Greater Accra regions (60 percent). The proportion of young people age 15-24 who reported higher-risk sexual intercourse in the 12 months preceding the survey increases with level of education and wealth quintile. Condom use at the last higher-risk sex generally follows the same patterns.

[2] Sexual intercourse with a non-marital, non-cohabiting partner.

Table 13.19.1 Higher-risk sexual intercourse among youth and condom use at last higher-risk sexual intercourse in the past 12 months: Women

Among young women age 15-24 who had sexual intercourse in the past 12 months, the percentage who had higher-risk sexual intercourse, and among those who had higher-risk intercourse in the past 12 months, the percentage who used a condom at last higher-risk sexual intercourse, by background characteristics, Ghana 2008

	Women age 15-24 who had sexual intercourse in the past 12 months		Women age 15-24 who had higher-risk sexual intercourse in the past 12 months	
Background characteristic	Percentage who had higher-risk intercourse[1]	Number of women	Percentage who used a condom at last higher-risk intercourse[1]	Number of women
Age				
15-19	73.6	297	24.4	218
15-17	79.6	101	25.7	80
18-19	70.5	196	23.7	138
20-24	42.5	649	31.1	276
20-22	45.3	387	30.4	175
23-24	38.4	263	32.3	101
Marital status				
Never married	99.5	463	29.2	461
Ever married	6.9	483	(14.3)	33
Knows condom source[2]				
Yes	57.4	754	31.2	433
No	32.2	192	6.7	62
Residence				
Urban	62.2	440	33.5	273
Rural	43.7	506	21.6	221
Region				
Western	46.7	66	(20.3)	31
Central	51.9	100	(29.7)	52
Greater Accra	60.0	151	46.1	91
Volta	39.0	69	(22.4)	27
Eastern	68.6	98	45.0	67
Ashanti	60.1	227	12.3	136
Brong Ahafo	39.4	100	(22.5)	39
Northern	33.6	71	(18.3)	24
Upper East	41.2	39	*	16
Upper West	44.8	25	(30.3)	11
Education				
No education	14.2	125	(19.1)	18
Primary	40.7	211	11.5	86
Middle/JSS	57.3	413	25.4	236
Secondary+	78.4	196	42.4	154
Wealth quintile				
Lowest	33.1	124	26.1	41
Second	44.7	201	16.2	90
Middle	59.0	215	22.6	126
Fourth	53.4	244	33.9	130
Highest	65.8	162	38.6	107
Total 15-24	52.3	946	28.2	495

Note: Total includes cases with information missing on education that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

[1] Sexual intercourse with a non-marital, non-cohabiting partner

[2] Friends, family members, and home are not considered sources for condoms.

Table 13.19.2 Higher-risk sexual intercourse among youth and condom use at last higher-risk sexual intercourse in the past 12 months: Men

Among young men age 15-24 who had sexual intercourse in the past 12 months, the percentage who had higher-risk sexual intercourse, and among those who had higher-risk sexual intercourse in the past 12 months, the percentage who used a condom at last higher-risk sexual intercourse, by background characteristics, Ghana 2008

	Men age 15-24 who had sexual intercourse in the past 12 months		Men age 15-24 who had higher-risk sexual intercourse in the past 12 months	
Background characteristic	Percentage who had higher-risk sexual intercourse[1]	Number of men	Percentage who used a condom at last higher-risk intercourse[1]	Number of men
Age				
15-19	96.2	144	40.3	139
15-17	(98.5)	37	(45.1)	37
18-19	95.4	107	38.6	102
20-24	83.0	412	48.9	342
20-22	89.1	205	49.0	182
23-24	77.0	207	48.7	160
Marital status				
Never married	99.2	439	46.3	435
Ever married	38.7	117	(47.2)	45
Knows condom source[2]				
Yes	88.7	525	47.8	465
No	(49.4)	31	*	15
Residence				
Urban	90.4	268	52.0	242
Rural	82.7	288	40.6	238
Region				
Western	(95.9)	38	(36.0)	36
Central	(81.1)	46	(56.1)	37
Greater Accra	90.6	77	52.9	70
Volta	(83.1)	42	(61.0)	35
Eastern	91.5	68	48.7	63
Ashanti	87.7	133	41.8	116
Brong Ahafo	90.4	71	37.1	64
Northern	(61.9)	38	(28.2)	23
Upper East	(83.4)	32	(64.3)	27
Upper West	(81.8)	13	(45.6)	10
Education				
No education	47.7	45	(16.8)	22
Primary	86.3	83	26.8	72
Middle/JSS	86.8	220	45.6	191
Secondary+	94.5	205	57.8	194
Wealth quintile				
Lowest	76.8	86	35.2	66
Second	80.2	100	44.4	80
Middle	85.5	107	42.8	91
Fourth	90.5	161	42.0	146
Highest	95.2	103	65.4	98
Total 15-24	86.4	556	46.4	481

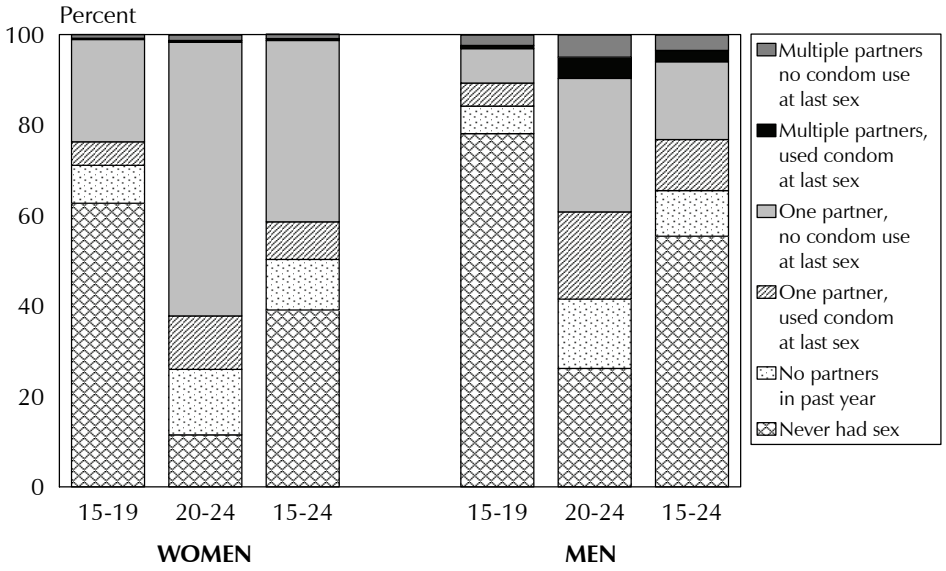
Note: Total includes cases with information missing on education that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

[1] Sexual intercourse with a non-marital, non-cohabiting partner

[2] Friends, family members, and home are not considered sources for condoms.

Figure 13.2 presents the findings on the extent of both risky and safe sex practices among young people in Ghana. Thirty-nine percent of women and 55 percent of men age 15-24 have never had sex, and an additional 11 percent of women and 10 percent of men have had sex but not in the 12 months before the survey. Although 8 percent of women and 11 percent of men 15-24 say they had sex with only one partner in the past 12 months and that they used a condom the last time, the largest proportion of young respondents fall into the category of those who say they had only one partner in the past year but did not use a condom the last time (40 percent of women and 17 percent of men). The proportion of young people who had multiple sexual partners in the past 12 months is not large—less than 2 percent of women and 6 percent of men—however, the proportion who did not use a condom the last time they had sex far exceeds the proportion who did.

Figure 13.2 Abstinence, Being Faithful, and Condom Use (ABC) Among Young Women and Men Age 15-24



Note: Number of partners refers to the 12 months preceding the survey. GDHS 2008

13.13.7 Age Mixing in Sexual Relationships among Women

In many societies, young women have sexual relationships with men who are considerably older than they are. This practice can contribute to the spread of HIV and other STIs because if a younger, HIV-negative partner has sexual intercourse with an older, HIV-positive partner, the virus can be introduced into a younger, HIV-negative cohort. To examine age differences between sexual partners, women age 15-19 who had sex in the 12 months preceding the survey with someone other than their husband or live-in partner were asked the age of such partners. In the event they did not know a partner's exact age, they were asked if the partner was older or younger than they were and, if older, whether the partner was 10 or more years older.

Only 5 percent of women age 15-19 engaged in higher-risk sexual intercourse with an older male partner in the 12 months preceding the survey (data not shown). Because of the small sample size meaningful differences by background characteristics of respondents are unclear.

13.13.8 Drunkenness during Sex among Young Adults

Engaging in sexual intercourse while under the influence of alcohol can impair judgment, compromise power relations, and increase risky sexual behaviour. Respondents who had sex in the 12 months preceding the survey were asked (for each partner) if they or their partner drank alcohol the last time they had sexual intercourse with that partner, and whether they or their partner was drunk. As shown in Table 13.20, very few young people (less than 1 percent of women and 2 percent of men) reported being drunk during their last sexual intercourse and only 3 percent each of young women and men said that either they or their partners were drunk. There is little variation by background characteristics of respondents.

Table 13.20 Drunkenness during sexual intercourse among youth

Among all young women and young men age 15-24, the percentage who had sexual intercourse in the past 12 months while being drunk and percentage who had sexual intercourse in the past 12 months while drunk or with a partner who was drunk, by background characteristics, Ghana 2008

	Women age 15-24			Men age 15-24		
Background characteristic	Percentage who had sexual intercourse in the past 12 months while drunk	Percentage who had sexual intercourse in the past 12 months while drunk or with a partner who was drunk	Number of women	Percentage who had sexual intercourse in the past 12 months while drunk	Percentage who had sexual intercourse in the past 12 months while drunk or with a partner who was drunk	Number of men
Age						
15-19	0.3	1.2	1,025	1.3	1.3	911
15-17	0.0	0.6	605	0.9	0.9	524
18-19	0.8	2.0	420	1.9	1.9	387
20-24	0.9	5.0	878	3.8	4.1	704
20-22	0.6	4.0	552	3.3	3.7	399
23-24	1.3	6.7	326	4.5	4.5	305
Marital status						
Never married	0.5	1.9	1,356	2.1	2.2	1,488
Ever married	0.9	5.4	547	6.2	6.2	127
Knows condom source[1]						
Yes	0.6	3.1	1,406	2.7	2.8	1,402
No	0.4	2.4	496	0.4	0.4	213
Residence						
Urban	0.7	2.6	953	2.4	2.4	748
Rural	0.5	3.3	949	2.4	2.6	867
Region						
Western	1.3	1.7	160	2.3	2.3	152
Central	0.0	1.6	173	0.0	0.0	129
Greater Accra	1.0	3.2	335	3.0	3.0	218
Volta	0.0	5.6	161	0.2	0.2	161
Eastern	0.8	0.8	188	4.0	4.0	172
Ashanti	0.3	5.4	403	3.9	4.3	333
Brong Ahafo	0.0	0.7	162	3.2	3.2	136
Northern	1.0	2.2	176	0.0	0.0	161
Upper East	0.4	0.4	93	4.3	4.3	100
Upper West	1.0	3.6	50	0.5	0.5	53
Education						
No education	1.1	3.6	202	0.0	1.6	100
Primary	0.6	2.7	380	1.9	1.9	314
Middle/JSS	0.1	2.2	899	3.0	3.0	718
Secondary+	1.3	4.4	420	2.3	2.3	478
Wealth quintile						
Lowest	1.0	2.6	263	2.1	2.1	278
Second	0.0	1.3	353	0.4	0.4	307
Middle	0.7	3.8	397	1.7	2.3	306
Fourth	0.4	2.8	461	4.9	4.9	406
Highest	0.9	3.9	427	2.1	2.1	318
Total 15-24	0.6	2.9	1,902	2.4	2.5	1,615

Note: Total includes cases with information missing on education that are not shown separately
[1] Friends, family members, and home are not considered sources for condoms

13.13.9 Recent HIV Tests among Youth

Individuals' knowledge of their own HIV status can provide motivation to practice safer sexual practices. People who learn that they do not have HIV may decide to take precautions in the future so as not to contract the virus, and those who learn that they are carrying the virus may decide to take precautions to avoid transmitting the virus to others. Table 13.21 shows that young women age 15-24 are slightly more likely than young men the same age to have been tested for HIV in the 12 months preceding the survey and to have received the results (8 and 5 percent, respectively).

Table 13.21 Recent HIV tests among youth

Among young women and young men age 15-24 who had sexual intercourse in the past 12 months, the percentage who were tested for HIV test in the past 12 months and received the results, by background characteristics, Ghana 2008

Background characteristic	Women age 15-24 who had sexual intercourse in the past 12 months		Men age 15-24 who had sexual intercourse in the past 12 months	
	Percentage tested for HIV in past 12 months and received results	Number of women	Percentage tested for HIV in past 12 months and received results	Number of men
Age				
15-19	6.0	297	0.0	144
15-17	1.5	101	(0.0)	37
18-19	8.3	196	0.0	107
20-24	9.1	649	6.3	412
20-22	9.3	387	7.3	205
23-24	8.9	263	5.4	207
Marital status				
Never married	4.9	463	5.5	439
Ever married	11.2	483	1.6	117
Knows condom source[1]				
Yes	8.4	754	5.0	525
No	6.9	192	(0.0)	31
Residence				
Urban	9.7	440	4.0	268
Rural	6.8	506	5.3	288
Region				
Western	7.0	66	(4.6)	38
Central	11.1	100	(12.3)	46
Greater Accra	8.1	151	5.0	77
Volta	7.5	69	(0.0)	42
Eastern	6.1	98	3.7	68
Ashanti	8.7	227	2.8	133
Brong Ahafo	11.1	100	1.6	71
Northern	3.3	71	(3.1)	38
Upper East	7.2	39	(18.8)	32
Upper West	7.5	25	(3.2)	13
Education				
No education	5.8	125	3.3	45
Primary	4.2	211	4.7	83
Middle/JSS	9.5	413	1.9	220
Secondary+	11.0	196	8.1	205
Wealth quintile				
Lowest	7.5	124	5.8	86
Second	3.5	201	4.1	100
Middle	6.5	215	1.9	107
Fourth	10.1	244	3.1	161
Highest	13.6	162	9.8	103
Total 15-24	8.1	946	4.7	556

Note: Total includes cases with information missing on education that are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.
[1] Friends, family members, and home are not considered sources for condoms

Among young women, recent HIV testing is more common among those who are ever-married, those living in urban areas, and those in the Greater Accra and Brong Ahafo regions. Among young men, recent HIV testing is more common among those who are never-married and those in the Upper West and Central regions. The likelihood that a young person has been tested recently for HIV increases with level of education and wealth quintile. It is also higher among young people who say they know a source for condoms.

WOMEN'S EMPOWERMENT AND DEMOGRAPHIC AND HEALTH OUTCOMES

14

The 2008 Ghana Demographic and Health Survey (GDHS) collected information on the general background characteristics of respondents (age, education, wealth quintile, and employment status), but also information specific to women's empowerment such as receipt of cash earnings, the magnitude of a woman's earnings relative to those of her husband, and control over the use of her own earnings and those of her spouse.[1]

The 2008 GDHS collected information on women's participation in household decision-making, the circumstances under which the respondent thinks that a woman is justified in refusing to have sexual intercourse with her husband, and her/his attitude towards wife beating. This report uses the three indices of women's empowerment developed by DHS to measure women's and men's responses to the questions. The first index is based on the number of household decisions in which the woman participates, the second is based on the respondent's opinion regarding the number of reasons that justify wife beating, and the third is based on the respondent's opinion on the number of circumstances under which a wife is justified in refusing to have sexual intercourse with her husband. The ranking of women on these three indices is then related to selected demographic and health outcomes including use of contraception; ideal family size; and the use of reproductive health care services during pregnancy, childbirth, and postnatal period.

14.1 EMPLOYMENT AND FORMS OF EARNINGS

Employment can be a source of empowerment for both women and men. It is particularly so for women if it puts them in control of the household income. In the 2008 GDHS, respondents were asked whether they were employed at the time of the survey and, if not, whether they were employed in the 12 months preceding the survey.

Table 14.1 shows that 91 percent of currently married women age 15-49 were employed at the time of the survey or within the 12 months preceding the survey, compared with 99 percent of men. Older married women and men are more likely to be employed than younger respondents.

Among currently married respondents employed in the past 12 months, equal proportion of women and men (87 percent) received earnings in cash or cash and in-kind. One in ten currently married respondents employed in the past 12 months were not paid. In general, among this group, the proportion not paid decreases with age.

14.2 CONTROL OVER WOMEN'S AND MEN'S EARNINGS

Currently married women who were employed and received cash for their work were asked who the main decision-maker is in the family regarding use of their earnings. They were also asked the relative magnitude of their earnings compared with those of their husband. Women whose husbands were employed for cash were asked who usually decides how his earnings are used. Men were also asked who mainly decides how their earnings are used. These pieces of information

[1] The questions were phrased in terms of "husband/partner" (for women) and "wife/partner" (for men), referring to marital partners; however, in this report, the word "partner" has been dropped to simplify the text and tables.

provide insight into women's level of empowerment in the family and the extent of their control over decision-making regarding the use of household income. It is expected that employment and cash earnings are more likely to empower women if they control their own earnings and perceive their earnings as important, relative to those of their husband, and to the welfare of the household.

Table 14.1 Employment and cash earnings of currently married women and men

Percentage of currently married women and men age 15-49 who were employed at any time in the past 12 months and the percent distribution of currently married women and men employed in the past 12 months by type of earnings, according to age, Ghana 2008

Age	Currently married respondents		Percent distribution of currently married respondents employed in the past 12 months, by type of earnings				Total	Number of respondents
	Percentage employed	Number of women	Cash only	Cash and in-kind	In-kind only	Not paid		
WOMEN								
15-19	70.8	85	42.6	18.3	12.1	27.0	100.0	60
20-24	81.0	414	59.6	18.9	2.3	19.2	100.0	336
25-29	90.9	612	69.2	18.2	3.1	9.5	100.0	556
30-34	92.5	539	69.2	18.9	2.7	8.8	100.0	499
35-39	96.7	527	64.2	22.2	3.5	10.1	100.0	510
40-44	95.4	380	67.8	24.2	1.9	6.1	100.0	362
45-49	94.3	319	68.5	21.7	1.7	8.0	100.0	301
Total 15-49	91.2	2,876	66.1	20.4	2.9	10.5	100.0	2,624
MEN								
15-19	*	*	*	*	*	*	100.0	6
20-24	94.6	106	63.8	17.6	4.2	14.5	100.0	100
25-29	99.5	296	65.5	21.8	2.5	10.3	100.0	295
30-34	99.1	412	68.5	19.0	1.7	10.8	100.0	409
35-39	99.4	445	65.9	21.1	2.0	11.0	100.0	443
40-44	99.0	353	61.4	25.2	2.7	10.7	100.0	350
45-49	99.3	331	59.3	27.9	1.6	11.2	100.0	329
Total 15-49	99.0	1,950	64.3	22.4	2.2	11.0	100.0	1,930
50-59	96.2	454	66.0	21.4	1.7	10.8	100.0	437
Total 15-59	98.5	2,404	64.6	22.2	2.1	11.0	100.0	2,367

Note: Total includes cases with information missing on type of earnings that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 14.2.1 shows the results on women's control over their cash earnings and the relative magnitude of their earnings relative to those of their husband, for currently married women who had cash earnings in the 12 months preceding the survey. Fifty-eight percent of married women who are employed say that they mainly control their cash earnings; 36 percent say that they and their husband jointly decide how her earnings are used; and 6 percent say that their husband mainly controls her cash earnings. Younger women are slightly more likely than older women to control their own cash earnings. Currently married women with 1-2 living children are also slightly more likely to decide themselves how their cash earnings are used than women with five or more living children.

Overall, there is little difference between urban and rural women regarding control over their own cash income (59 and 58 percent, respectively). However, rural women (8 percent) are more likely to have their earnings controlled by their husbands than urban women (4 percent).

Table 14.2.1 Control over women's cash earnings and relative magnitude of women's cash earnings: Women

Percent distribution of currently married women age 15-49 who received cash earnings for employment in the 12 months preceding the survey by person who decides how wife's cash earnings are used and by whether she earned more or less than her husband, according to background characteristics, Ghana 2008

Background characteristic	Person who decides how the wife's cash earnings are used						Women's cash earnings compared with husband's cash earnings						
	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	More	Less	About the same	Husband has no earnings	Don't know/ missing	Total	Number of women
Age													
15-19	(64.7)	(12.9)	(22.3)	(0.0)	(0.0)	100.0	(10.4)	(72.0)	(13.4)	(0.0)	(4.3)	100.0	37
20-24	59.5	33.3	6.7	0.0	0.4	100.0	12.0	75.1	6.0	2.2	4.7	100.0	264
25-29	58.3	34.7	6.8	0.0	0.2	100.0	6.2	84.4	5.6	0.6	3.3	100.0	486
30-34	58.1	35.6	5.7	0.6	0.0	100.0	7.0	76.7	10.0	0.9	5.3	100.0	440
35-39	57.3	37.3	5.1	0.0	0.2	100.0	10.0	71.2	10.5	0.9	7.3	100.0	440
40-44	56.7	37.3	5.7	0.0	0.3	100.0	15.0	63.8	14.9	0.9	5.4	100.0	333
45-49	56.7	37.2	5.0	0.0	1.1	100.0	14.0	65.5	13.5	1.2	5.8	100.0	272
Number of living children													
0	53.1	41.3	4.7	1.0	0.0	100.0	8.8	80.2	7.7	0.8	2.4	100.0	164
1-2	61.1	32.7	5.9	0.1	0.1	100.0	9.6	78.1	6.8	1.1	4.4	100.0	827
3-4	57.9	36.1	5.7	0.0	0.4	100.0	11.1	72.0	10.6	1.2	5.2	100.0	763
5+	54.4	37.4	7.6	0.0	0.6	100.0	9.8	67.7	14.5	0.6	7.5	100.0	517
Residence													
Urban	58.5	37.4	3.8	0.1	0.2	100.0	11.4	75.3	7.3	1.0	4.9	100.0	981
Rural	57.5	34.1	7.9	0.1	0.4	100.0	9.0	72.6	11.8	1.0	5.5	100.0	1,290
Region													
Western	44.8	46.6	8.6	0.0	0.0	100.0	10.3	75.0	11.1	1.1	2.6	100.0	228
Central	56.5	37.8	4.7	0.0	1.0	100.0	12.0	61.8	16.0	0.0	10.2	100.0	229
Greater Accra	60.9	35.3	3.7	0.0	0.0	100.0	10.0	79.9	5.2	0.6	4.2	100.0	351
Volta	63.9	31.3	3.7	1.1	0.0	100.0	13.0	79.3	4.3	1.7	1.7	100.0	252
Eastern	53.5	43.6	2.9	0.0	0.0	100.0	9.0	73.2	15.8	0.5	1.5	100.0	234
Ashanti	49.6	44.6	5.6	0.0	0.2	100.0	10.2	72.8	12.3	2.1	2.7	100.0	451
Brong Ahafo	57.8	26.7	15.5	0.0	0.0	100.0	8.4	81.7	7.9	1.3	0.7	100.0	163
Northern	72.6	16.4	8.7	0.0	2.3	100.0	10.3	56.0	5.5	0.0	28.2	100.0	163
Upper East	75.3	18.1	6.6	0.0	0.0	100.0	4.6	79.6	11.6	0.4	3.8	100.0	155
Upper West	66.9	22.3	10.9	0.0	0.0	100.0	11.3	79.7	2.8	1.5	4.8	100.0	45
Education													
No education	59.2	29.6	10.8	0.0	0.5	100.0	9.2	68.1	11.6	0.8	10.3	100.0	601
Primary	59.1	34.7	5.9	0.2	0.2	100.0	9.3	74.1	11.6	1.0	4.1	100.0	522
Middle/JSS	57.5	37.7	4.6	0.2	0.1	100.0	11.3	76.6	8.0	1.2	2.9	100.0	874
Secondary +	54.2	43.4	1.5	0.0	0.8	100.0	9.7	76.4	9.1	0.8	3.9	100.0	273
Wealth quintile													
Lowest	60.3	26.6	12.6	0.0	0.5	100.0	7.8	71.6	9.9	0.2	10.4	100.0	391
Second	55.9	36.0	7.7	0.0	0.4	100.0	7.8	72.8	14.1	1.1	4.3	100.0	453
Middle	62.8	33.2	3.7	0.0	0.2	100.0	11.9	74.3	9.9	0.9	3.0	100.0	425
Fourth	55.3	40.3	3.6	0.5	0.2	100.0	12.5	72.9	8.3	1.8	4.5	100.0	496
Highest	56.3	39.3	4.2	0.0	0.2	100.0	10.0	76.8	7.7	0.9	4.6	100.0	507
Total	57.9	35.5	6.1	0.1	0.3	100.0	10.1	73.8	9.9	1.0	5.2	100.0	2,271

Note: Total includes cases with information missing on education that are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.

Women's control over their cash earnings is highest among women in the three Northern regions of Ghana—Upper East (75 percent), Northern (73 percent), and Upper West (67 percent)—and lowest among women in the Western region (45 percent). Differentials by education and household wealth status show little impact on women's control over their own earnings. For example, 54 percent of women with at least secondary education control their own cash income, compared with 59 percent of women with no education; likewise, 56 percent of women in the highest wealth quintile are the sole deciders of how their cash earnings are used, compared with 60 percent of women in the lowest wealth quintile.

Seventy-four percent of currently married, employed women in Ghana say they earn less than their husband, 10 percent say they earn about the same amount, and 10 percent say either that they earn more than their husband or that their husband has no earnings. Thus, one in five currently married, employed women earns at least as much as their husband. Employed women in urban areas are only slightly more likely than employed women in rural areas to earn more than their husbands, as are better educated women and those in higher wealth quintiles.

Table 14.2.2 Control over men's cash earnings

Percent distributions of currently married men age 15-49 who receive cash earnings and of currently married women 15-49 whose husbands receive cash earnings, by person who decides how husband's cash earnings are used, according to background characteristics, Ghana 2008

	Men							Women						
	Person who decides how husband's cash earnings are used							Person who decides how husband's cash earnings are used						
Background characteristic	Mainly wife	Husband and wife jointly	Mainly husband	Other	Missing	Total	Number of men	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	Number of women
Age														
15-19	*	*	*	*	*	100.0	3	6.5	26.5	66.7	0.0	0.3	100.0	82
20-24	1.7	24.2	70.7	3.4	0.0	100.0	81	11.1	33.2	55.5	0.0	0.3	100.0	408
25-29	2.7	37.3	58.9	0.0	1.2	100.0	257	7.0	39.3	53.3	0.0	0.3	100.0	608
30-34	1.6	42.2	56.0	0.0	0.2	100.0	357	6.7	38.0	55.1	0.2	0.0	100.0	535
35-39	3.4	41.1	55.3	0.0	0.2	100.0	385	7.0	38.4	54.5	0.0	0.0	100.0	520
40-44	2.6	41.3	55.8	0.0	0.3	100.0	303	7.1	37.9	55.0	0.0	0.0	100.0	376
45-49	4.2	43.3	52.5	0.0	0.0	100.0	287	5.3	37.7	56.8	0.0	0.2	100.0	315
Number of living children														
0	3.3	35.1	59.8	1.0	0.8	100.0	163	9.5	40.0	50.3	0.0	0.1	100.0	237
1-2	2.1	36.5	60.7	0.2	0.5	100.0	638	7.6	36.6	55.6	0.0	0.3	100.0	1,067
3-4	2.4	44.7	52.9	0.0	0.0	100.0	532	7.5	37.0	55.4	0.1	0.0	100.0	904
5+	4.6	43.3	51.8	0.0	0.3	100.0	342	5.9	38.0	56.0	0.0	0.1	100.0	635
Residence														
Urban	2.0	36.6	61.0	0.2	0.2	100.0	755	6.3	39.4	54.0	0.1	0.1	100.0	1,205
Rural	3.5	43.4	52.6	0.1	0.4	100.0	920	8.1	35.7	56.0	0.0	0.2	100.0	1,639
Region														
Western	5.0	60.5	34.4	0.0	0.0	100.0	200	6.1	52.2	41.6	0.0	0.0	100.0	258
Central	0.9	41.5	56.0	0.0	1.6	100.0	142	7.6	39.7	52.3	0.0	0.4	100.0	252
Greater Accra	1.5	42.8	55.4	0.0	0.3	100.0	298	6.2	38.3	55.3	0.2	0.0	100.0	420
Volta	2.9	26.1	71.1	0.0	0.0	100.0	125	12.1	38.3	49.5	0.0	0.0	100.0	283
Eastern	3.2	27.0	69.8	0.0	0.0	100.0	180	8.0	43.5	48.5	0.0	0.0	100.0	251
Ashanti	1.3	43.4	54.0	0.8	0.5	100.0	361	9.2	48.7	42.1	0.0	0.0	100.0	531
Brong Ahafo	0.0	49.1	50.9	0.0	0.0	100.0	118	4.2	32.9	62.4	0.0	0.6	100.0	265
Northern	9.4	20.9	69.3	0.0	0.5	100.0	163	4.7	18.7	76.3	0.0	0.3	100.0	338
Upper East	1.6	38.9	59.5	0.0	0.0	100.0	62	7.2	12.4	80.2	0.0	0.1	100.0	165
Upper West	2.4	56.2	41.5	0.0	0.0	100.0	25	6.9	22.8	70.0	0.0	0.3	100.0	81
Education														
No education	5.0	33.5	61.2	0.0	0.3	100.0	276	5.2	27.7	67.0	0.0	0.1	100.0	844
Primary	2.1	40.7	56.6	0.0	0.7	100.0	203	9.8	34.8	55.4	0.0	0.0	100.0	631
Middle/JSS	2.1	42.4	54.8	0.1	0.5	100.0	738	8.1	43.4	48.3	0.1	0.1	100.0	1,045
Secondary +	2.9	41.4	55.4	0.4	0.0	100.0	454	5.7	47.7	46.0	0.0	0.7	100.0	322
Wealth quintile														
Lowest	3.8	39.4	56.8	0.0	0.0	100.0	261	8.2	24.8	66.7	0.0	0.2	100.0	570
Second	3.2	45.9	50.2	0.4	0.3	100.0	307	8.2	39.2	52.6	0.0	0.0	100.0	571
Middle	4.7	38.4	56.6	0.0	0.3	100.0	274	6.7	37.3	55.9	0.0	0.2	100.0	519
Fourth	0.7	38.1	60.4	0.0	0.8	100.0	389	7.2	41.1	51.5	0.0	0.2	100.0	587
Highest	2.6	40.2	56.7	0.4	0.2	100.0	442	6.5	43.7	49.5	0.2	0.2	100.0	596
Total 15-49	2.8	40.3	56.4	0.2	0.3	100.0	1,674	7.3	37.3	55.2	0.0	0.1	100.0	2,844
50-59	4.6	38.9	55.5	0.0	1.0	100.0	382	na	na	na	na	na	na	na
Total 15-59	3.1	40.1	56.2	0.1	0.5	100.0	2,057	na	na	na	na	na	na	na

Note: Total includes cases with information missing on education that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
na = Not applicable

Currently married men age 15-49 who receive cash earnings and currently married women age 15-49 whose husbands receive cash earnings were asked who decides how the husband's cash earnings are spent. Table 14.2.2 shows that 3 percent of men and 7 percent of women say that the wife mainly decides how the husband's earnings are used. Forty percent of men and 37 percent of women say the husband and wife decide jointly how the man's cash earnings are used. Younger couples are less likely to share control over the husband's earnings than older couples. More than one-third of urban and rural couples said that decisions about how the husband's cash earnings are spent are made jointly by the husband and wife.

Men in the Volta and Eastern regions are more likely to make decisions themselves on how to use their cash earnings than their counterparts in other regions. Women in the three northern regions, namely the Northern, Upper East, and Upper West regions, whose husbands receive cash earnings, reported that their husbands usually have sole authority over the use of their earnings. In general, men and women who have higher education and those in the higher wealth quintiles are more likely to make decisions jointly about the use of the man's cash earnings.

Table 14.3 shows the percent distribution of currently married women age 15-49 who received cash earnings in the past 12 months by the person who decides how their cash earnings are used, and the percent distribution of currently married women age 15-49 whose husbands received cash earnings in the past 12 months by the person who decides how the husband's cash earnings are used, according to the relative magnitude of the earnings of the women and her husband.

Women who earn more than their husband are more likely to decide how their cash earnings are used (63 percent) than women whose cash earnings are the same as their husband's (37 percent). Women who say they earn about the same amount as their husband are more likely to make joint decisions with their husband about how their cash earnings and those of their husband are used.

Table 14.3 Women's control over their own earnings and those of their husbands

Percent distribution of currently married women age 15-49 with cash earnings in the past 12 months by person who decides how the wife's cash earnings are used; and percent distribution of currently married women age 15-49 whose husbands have cash earnings by person who decides how the husband's cash earnings are used, according to the wife's cash earnings relative to the husband's cash earnings, Ghana 2008

	Person who decides how the wife's cash earnings are used							Person who decides how husband's cash earnings are used						
Wife's earnings relative to husband's earnings	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	Number of women	Mainly wife	Wife and husband jointly	Mainly husband	Other	Missing	Total	Number of women
More than husband	62.5	32.9	4.6	0.0	0.0	100.0	229	7.9	45.5	46.6	0.0	0.0	100.0	226
Less than husband	58.2	34.9	6.7	0.2	0.0	100.0	1,676	8.0	39.2	52.8	0.0	0.1	100.0	1,676
Same as husband	36.7	58.4	5.0	0.0	0.0	100.0	224	3.9	55.1	40.9	0.0	0.1	100.0	224
Husband has no cash earnings/did not work	*	*	*	*	*	100.0	23	na	na	na	na	na	na	na
Wife has no cash earnings	na	na	na	na	na	na	na	7.9	25.4	66.7	0.0	0.0	100.0	348
Wife did not work in past 12 months	na	na	na	na	na	na	na	6.7	31.7	60.7	0.4	0.5	100.0	250
Don't know/ missing	83.6	7.2	3.7	0.0	5.5	100.0	119	3.8	8.3	87.0	0.0	0.9	100.0	119
Total[1]	57.9	35.5	6.1	0.1	0.3	100.0	2,271	7.3	37.3	55.2	0.0	0.1	100.0	2,844

[1] Excludes cases in which the woman does not know whether she earned more or less than her husband/partner.
na = Not applicable

14.3 WOMEN'S PARTICIPATION IN HOUSEHOLD DECISION-MAKING

The ability to make decisions about one's own life is important to women's empowerment. In addition to information on women's control over cash earnings, the 2008 GDHS collected information from both women and men on other measures of women's empowerment. Respondents were asked about women's role in household decision-making, acceptance of wife beating, and their opinions about whether a wife can deny sex to her husband for specific reasons. Such information provides insight into women's control over their environment and their attitudes towards gender roles, both of which are relevant to understanding women's ability to make independent decisions about their own health care and that of their children.

To assess women's decision-making autonomy, information was collected on their participation in four types of household decisions: respondent's own health care, making large household purchases, making household purchases for daily needs, and visiting her family or relatives.[2] Having a final say in the decision-making process is the highest degree of autonomy. Women are considered to participate in a decision if they usually make that decision alone or jointly with their husband. Table 14.4.1 shows the percent distribution of currently married women age 15-49 by the person in the household who usually makes decisions about four types of issues affecting them.

Ghanaian women are usually involved in all four specific decisions, although the extent of their involvement depends on the issue being decided. About 44 percent of women say they alone make decisions about the purchase of daily household needs. However, decisions about the wife's own health care, major household purchases, and visits to the wife's family or relatives are usually made jointly by the husband and wife.

Table 14.4.1 Women's participation in decision-making

Percent distribution of currently married women age 15-49 by person who usually makes decisions about four types of issues, Ghana 2008

Decision	Mainly wife	Wife and husband jointly	Mainly husband	Someone else	Other	Missing	Total	Number of women
Own health care	25.0	43.8	30.3	0.4	0.1	0.3	100.0	2,876
Major household purchases	20.3	42.0	36.6	0.8	0.2	0.1	100.0	2,876
Purchases of daily household needs	44.4	35.2	19.3	0.9	0.2	0.0	100.0	2,876
Visits to her family or relatives	22.9	60.4	15.7	0.7	0.1	0.0	100.0	2,876

In the 2003 GDHS, only 29 percent of currently married women made decisions on daily household purchases, compared with 44 percent of currently married women in the 2008 GDHS. In addition, joint decisions regarding visits to wife's family or relatives have increased from 38 percent in the 2003 GDHS to 60 percent in the 2008 GDHS.

In the 2008 GDHS, men were asked whether the wife, the husband, or both equally should have the greater say in five specific decisions—making major household purchases, making daily household purchases, deciding when to visit the wife's family or relatives, deciding what to do with the money the wife earns, and deciding how many children to have. Table 14.4.2 shows the percent distribution of currently married men age 15-49 by the person they think should have the greater say in making decisions about five types of issues.

[2] In previous surveys, both married women and unmarried women were asked about who has the final say in decision-making. In the 2008 GDHS, only currently married women were asked about decision-making.

Table 14.4.2 Women's participation in decision-making according to men

Percent distribution of currently married men age 15-49 by person they think should have a greater say in making decisions about five types of issues, Ghana 2008

Decision	Wife	Wife and husband equally	Husband	Don't know/ depends	Missing	Total	Number of men
Major household purchases	6.9	41.2	51.5	0.3	0.1	100.0	1,950
Purchases of daily household needs	42.0	32.1	25.6	0.2	0.1	100.0	1,950
Visits to wife's family or relatives	10.9	57.8	29.7	1.4	0.2	100.0	1,950
What to do with the money the wife earns	36.7	46.3	16.4	0.5	0.0	100.0	1,950
How many children to have	2.9	67.9	28.2	1.0	0.0	100.0	1,950

Table 14.4.2 shows that for most decisions, the majority of currently married men age 15-49 think that the husband and wife should have equal say in making decisions. This is especially true for decisions about the number of children to have (68 percent) and visits to the wife's family or relatives (58 percent). Forty-two percent of married men say that the wife should have the greater say in making decisions about small household purchases, while 32 percent think the husband and wife should have equal say. On the other hand, more than half of married men say that the husband should have the greater say in making decisions about major household purchases.

Table 14.5.1 shows the percentage of married women who participate in the four decisions specified for female respondents, according to background characteristics. As noted above, a woman is considered to participate in a decision if she says she usually makes the decision alone or jointly with her husband.

Sixty-nine percent of currently married women age 15-49 say they make decisions about their own health care either by themselves or jointly with their husbands and 62 percent of women say they participate in decisions about major household purchases. Eighty percent of married women say they participate in decisions about daily household needs and 83 percent say they participate in decisions about visits to their own family or relatives. Overall, 47 percent of currently married women participate in all four decisions and less than 7 percent do not participate in any of the four decisions.

Older women are more likely than younger women to participate in all four kinds of decisions. In addition, women employed for cash are more likely to participate in all four decisions (50 percent) than women who are not employed (26 percent). Women with five or more children are more likely to participate in all four decisions (50 percent) than women with no children (41 percent).

Urban women are more likely than rural women to participate in each of the four decisions. Women in the Volta and Ashanti regions are most likely to participate in all four decisions while women in the Upper West region are the least likely to participate in all four decisions.

Better educated and wealthier women are more likely to participate in making each of the specified decisions, and in all four decisions, than women with little or no education and those in poor households. For example 57 percent of women with secondary or higher education participate in all four decisions, compared with 42 percent of women with no education. Similarly, women in the highest wealth quintile (52 percent) are more likely to participate in making all four decisions than those in the lowest wealth quintile (38 percent).

Table 14.5.1 Women's participation in decision-making by background characteristics

Percentage of currently married women age 15-49 who usually make specific decisions either by themselves or jointly with their husband, by background characteristics, Ghana 2008

Background characteristic	Specific decisions				Percentage who participate in all four decisions	Percentage who participate in none of the decisions	Number of women
	Own health care	Making major household purchases	Making purchases for daily household needs	Visits to her family or relatives			
Age							
15-19	54.1	33.2	53.7	67.2	19.8	17.1	85
20-24	64.0	54.2	70.9	77.9	38.8	10.7	414
25-29	66.0	59.4	77.5	82.2	45.1	8.1	612
30-34	66.7	62.1	82.0	83.9	46.3	4.7	539
35-39	73.0	66.8	80.5	87.2	49.5	5.1	527
40-44	73.4	67.8	86.9	85.1	54.0	5.0	380
45-49	75.2	73.0	87.5	88.1	59.0	3.5	319
Employment (past 12 months)							
Not employed	50.5	41.3	52.5	62.0	25.8	21.9	252
Employed for cash	70.9	64.5	83.4	86.0	49.7	5.1	2,271
Employed not for cash	68.0	63.5	74.8	81.6	46.7	5.9	351
Number of living children							
0	63.3	60.0	77.2	81.8	41.1	6.2	240
1-2	67.3	59.8	76.4	81.8	45.0	7.9	1,079
3-4	70.2	64.1	82.4	84.7	49.4	5.8	915
5+	71.2	65.0	81.9	84.9	50.0	5.9	641
Residence							
Urban	72.2	64.9	81.8	85.4	51.1	5.8	1,216
Rural	66.2	60.4	78.0	81.9	44.4	7.2	1,660
Region							
Western	70.9	61.4	81.0	82.4	46.9	7.8	261
Central	74.0	64.9	82.3	80.7	43.6	3.5	254
Greater Accra	60.1	57.5	77.1	82.5	41.2	9.3	422
Volta	67.2	68.4	84.6	84.9	58.5	7.8	290
Eastern	72.3	60.5	82.7	85.6	41.4	3.5	252
Ashanti	77.6	74.2	81.6	86.9	62.7	4.1	542
Brong Ahafo	56.3	58.9	71.3	77.0	38.6	11.8	267
Northern	67.6	60.0	72.0	82.2	41.9	7.1	338
Upper East	78.8	45.6	93.4	94.5	38.9	0.3	168
Upper West	50.7	43.3	70.6	66.9	32.0	14.9	82
Education							
No education	65.4	56.0	76.0	82.0	41.7	8.1	853
Primary	68.1	60.7	78.5	80.2	45.7	8.3	638
Middle/JSS	69.9	65.3	81.5	84.1	49.5	5.3	1,058
Secondary +	75.0	72.1	85.1	90.8	56.6	3.9	325
Wealth quintile							
Lowest	62.7	52.2	73.7	78.6	37.8	10.4	573
Second	65.7	59.5	77.6	82.9	44.9	7.1	577
Middle	69.4	67.9	82.2	85.6	50.7	5.6	525
Fourth	73.8	65.0	81.8	83.6	50.5	5.5	600
Highest	71.8	67.3	82.8	86.3	52.1	4.7	601
Total	68.8	62.3	79.6	83.4	47.2	6.6	2,876

Note: Total includes cases with information missing on employment and education that are not shown separately.

Table 14.5.2 shows the percentage of currently married men age 15-49 who think the wife should have the greater say or equal say with her husband on five specific kinds of decisions. Only 30 percent of men think that the wife should participate, either alone or equally with her husband, in all five decisions. However, less than 4 percent of married men think that the wife should participate in none of the five decisions, either alone or jointly with her husband.

Table 14.5.2 Men's attitudes towards wives' participation in decision-making

Percentage of currently married men age 15-49 who think a wife should have the greater say alone, or equal say with her husband, on five specific types of decisions, by background characteristics, Ghana 2008

Background characteristic	Specific decisions					Percentage who participate in all five decisions	Percentage who participate in none of the decisions	Number of men
	Making major household purchases	Making purchases for daily household needs	Visits to her family or relatives	What to do with the money the wife earns	How many children to have			
Age								
15-19	*	*	*	*	*	*	*	7
20-24	41.5	80.2	75.9	82.1	68.9	25.3	4.5	106
25-29	46.3	69.3	61.7	80.8	69.9	27.0	3.6	296
30-34	50.3	72.5	68.2	80.9	72.8	31.1	4.0	412
35-39	45.4	71.6	64.1	81.8	66.1	23.9	4.8	445
40-44	51.6	79.2	76.4	85.9	73.4	35.7	2.6	353
45-49	49.2	75.8	70.8	87.4	73.5	33.1	3.5	331
Employment (past 12 months)								
Not employed	*	*	*	*	*	*	*	20
Employed for cash	47.6	74.2	69.8	83.9	71.6	30.3	3.8	1,674
Employed not for cash	49.2	72.2	59.6	78.0	64.8	22.6	3.8	256
Number of living children								
0	53.3	77.1	72.3	84.7	73.8	31.7	1.5	192
1-2	49.8	76.1	70.0	81.9	72.7	30.8	4.3	723
3-4	46.5	71.0	66.7	83.9	70.2	29.5	4.1	617
5+	45.1	73.5	67.4	83.2	67.2	26.8	3.6	418
Residence								
Urban	48.8	75.1	70.5	84.3	70.6	29.6	3.6	832
Rural	47.6	73.3	67.3	82.2	71.0	29.6	3.9	1,118
Region								
Western	52.1	77.0	64.2	81.4	62.0	33.2	5.4	205
Central	54.1	69.4	69.8	90.2	74.3	35.7	2.3	148
Greater Accra	53.2	82.6	82.8	91.7	74.8	37.2	0.4	302
Volta	28.7	71.2	63.3	87.5	64.9	17.6	6.2	166
Eastern	51.9	77.5	74.6	86.4	72.0	34.8	5.3	189
Ashanti	43.3	59.1	65.4	75.2	73.5	24.7	5.5	374
Brong Ahafo	55.5	74.2	54.7	75.0	66.1	26.8	3.7	172
Northern	55.7	80.3	60.8	77.6	70.9	31.3	4.1	237
Upper East	30.1	84.6	81.3	90.9	76.0	21.3	0.0	109
Upper West	47.7	78.9	75.3	84.8	73.4	27.9	2.2	47
Education								
No education	47.6	78.5	66.9	81.1	71.2	26.5	3.1	398
Primary	42.2	68.3	64.2	83.0	63.4	24.6	5.3	251
Middle/JSS	45.8	70.5	67.5	80.7	68.6	27.2	4.2	812
Secondary +	55.5	79.0	74.1	88.7	78.0	38.7	3.0	485
Wealth quintile								
Lowest	48.1	76.8	65.3	81.3	67.6	26.9	3.5	380
Second	48.8	73.8	70.4	82.1	76.3	31.0	3.2	368
Middle	43.6	67.4	62.2	80.7	66.0	24.3	5.5	310
Fourth	46.2	72.9	66.1	81.6	70.7	27.5	4.2	434
Highest	52.4	77.4	76.9	88.3	72.6	36.3	2.9	458
Total 15-49	48.1	74.0	68.6	83.1	70.8	29.6	3.8	1,950
50-59	55.6	77.1	74.0	85.4	73.3	33.9	3.0	454
Total 15-59	49.5	74.6	69.7	83.5	71.3	30.4	3.6	2,404

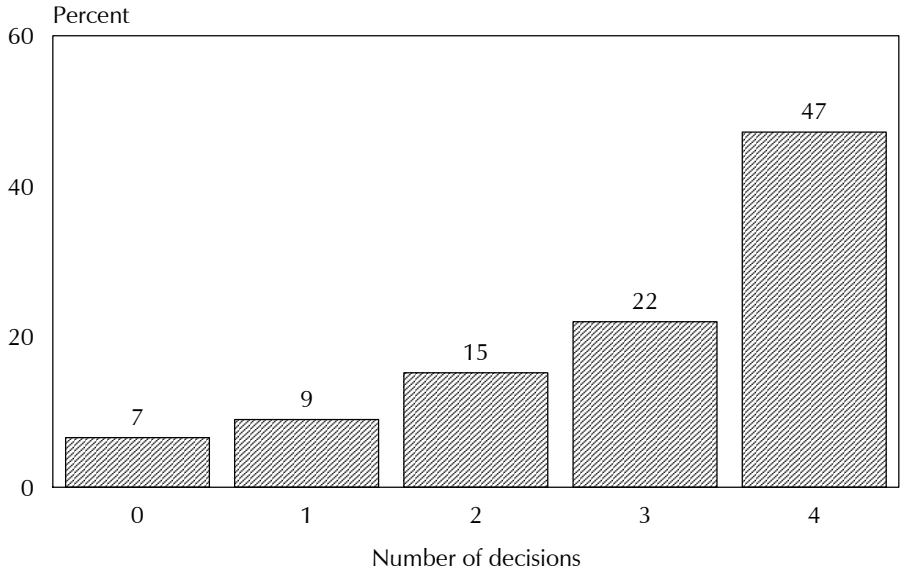
Note: Total includes cases with information missing on education that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

With regard to the specific types of decisions, slightly more than seven in ten men (74 percent) think that the wife should participate in decisions about making purchases for daily household needs, and 83 percent think the wife should participate in decisions about what to do with the money she earns. A little over seven in ten men (71 percent) think that the spouse should have a say in the number children to have. While 69 percent of the men think their wives should participate in decisions about visits to her family or relatives, just half think their wives should participate in decisions about major household purchases.

Men age 40-44, men in the Greater Accra region, men with secondary or higher education, and those who are in the highest wealth quintile, are more likely than other men to think that a wife should have the greater say or an equal say with her husband for all five decisions.

Figure 14.1 shows the distribution of currently married women by the number of decisions in which they participate, either alone or jointly with their husband. Only 7 percent of women do not participate in any of the four types of decisions, 9 percent have a say in at least one decision, 15 percent participate in at least two decisions, 22 percent participate in at least three decisions, and 47 percent participate in all four decisions.

Figure 14.1 **Number of Decisions in Which Currently Married Women Participate**



Note: See Table 14.5.1 for specific decisions. GDHS 2008

14.4 ATTITUDES TOWARDS WIFE BEATING

Another measure of women's empowerment derives from the idea that gender equity is essential to empowerment. Responses that indicate a view that the beating of wives by husbands is justified reflect a low status of women. They signify acceptance of norms that give men the right to use force against women, which is a violation of women's human rights. Violence against women has serious consequences for their mental and physical well-being, including their reproductive and sexual health (Heise et al., 1999).

The 2008 GDHS gathered information on women's and men's attitudes toward wife beating, a proxy for women's status. Respondents who believe that a husband is justified in hitting or beating his wife for any of the specified reasons may believe women to be low in status both absolutely and relative to men. Such a perception could act as a barrier for women in accessing health care for

themselves and their children, and could affect women's attitudes towards contraceptive use and impact their general well-being. Respondents were asked whether a husband is justified in beating his wife under a series of circumstances: wife burns the food, wife argues with him, wife goes out without telling him, wife neglects the children, and wife refuses to have sex with him. Table 14.6.1 summarizes women's attitudes towards wife beating in these five specific circumstances. Table 14.6.2 summarizes men's attitudes.

Table 14.6.1 Attitudes towards wife beating: Women

Percentage of all women age 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Ghana 2008

Background characteristic	Husband is justified in hitting or beating his wife if she: Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him	Percentage who agree with at least one specified reason	Number of women
Age							
15-19	10.7	23.5	24.9	28.3	11.0	40.9	1,025
20-24	7.8	21.1	22.5	26.4	10.3	36.5	878
25-29	6.8	21.0	20.6	25.6	12.1	33.5	832
30-34	9.0	21.3	24.2	28.4	14.3	38.7	644
35-39	8.1	19.7	19.9	24.7	14.6	34.4	638
40-44	7.1	17.7	20.5	22.1	11.1	33.2	470
45-49	7.1	23.3	21.3	26.3	14.3	35.9	429
Employment (past 12 months)							
Not employed	9.5	20.1	21.9	25.0	10.5	35.5	1,094
Employed for cash	7.4	20.0	20.8	25.3	11.9	34.5	3,140
Employed not for cash	10.4	29.1	29.8	33.2	16.6	48.0	677
Marital status							
Never married	7.5	20.4	20.4	24.0	8.7	34.5	1,593
Married or living together	9.0	22.0	23.3	27.6	13.7	37.5	2,876
Divorced/separated/ widowed	6.9	20.2	22.1	26.0	15.5	37.6	446
Number of living children							
0	7.6	19.0	19.0	22.8	9.1	33.2	1,691
1-2	8.2	21.3	23.1	27.9	12.1	37.5	1,447
3-4	7.3	21.2	22.6	26.3	14.2	35.7	1,050
5+	11.6	26.8	27.7	31.3	16.9	43.7	729
Residence							
Urban	5.6	16.0	16.1	20.4	8.8	28.8	2,383
Rural	10.9	26.3	28.0	31.8	15.5	43.8	2,533
Region							
Western	3.9	15.8	16.0	18.3	9.6	27.4	447
Central	8.2	23.6	28.8	35.4	10.3	44.6	424
Greater Accra	4.0	6.8	9.9	13.0	5.1	18.3	853
Volta	7.8	13.0	13.8	17.9	7.7	23.0	431
Eastern	4.6	22.7	17.1	20.8	8.7	32.7	483
Ashanti	13.4	29.2	28.8	34.7	14.2	44.6	1,011
Brong Ahafo	3.8	14.8	16.0	19.7	12.1	34.1	425
Northern	13.0	43.7	42.8	43.5	26.4	65.4	467
Upper East	9.6	21.1	22.0	27.3	15.0	35.3	253
Upper West	24.8	31.1	48.5	53.9	33.4	67.3	122
Education							
No education	12.1	30.6	32.9	34.7	21.2	49.2	1,042
Primary	10.4	24.5	24.9	31.3	14.4	41.5	988
Middle/JSS	7.6	20.3	21.7	25.6	9.5	35.6	2,039
Secondary +	2.9	8.6	7.5	12.0	5.4	17.7	844
Wealth quintile							
Lowest	12.9	32.9	33.5	35.5	21.4	51.9	783
Second	11.8	27.4	30.2	32.8	16.2	44.4	900
Middle	8.3	21.2	23.4	28.3	10.9	38.0	979
Fourth	6.7	18.3	17.8	23.0	10.1	32.3	1,119
Highest	4.0	11.5	11.6	16.3	6.2	22.6	1,135
Total	8.3	21.3	22.3	26.3	12.3	36.6	4,916

Note: Total includes cases with information on employment and education that are not shown separately.

Almost four in ten women (37 percent) think that a husband is justified in beating his wife for at least one of the five specified reasons. Few women (8 percent) think that wife beating is justified if the wife burns the food; more than two in ten women (21 percent) think that wife beating is justified if the wife argues with her husband, goes out without telling him (22 percent), or neglects the children (26 percent). Twelve percent say wife beating is justified if the wife refuses to have sexual intercourse with her husband.

Overall, women in the rural areas, younger women, those with no education or little education, and women in the lower wealth quintiles are more likely than other women to agree with at least one reason for wife beating. In addition, women who are employed but not paid in cash and those with five or more children are more likely than other women to agree with at least one of the reasons for wife beating. Women living in the Upper West and Northern regions (67 and 65 percent, respectively) are the most likely to agree with at least one specified reason for wife beating.

Urban women, those living in the Greater Accra region, women with secondary or higher education, and those in the highest wealth quintile are the least likely to agree with at least one specified reason that justifies wife beating.

Interestingly, Table 14.6.2 shows that men are less likely (22 percent) than women (37 percent) to think that a husband is justified in beating his wife for any of the specified reasons. Only 14 percent of men age 15-49 think that a husband is justified in beating the wife if she neglects the children, compared with 26 percent of women. Another 7 percent of men agree that wife beating is justified if the wife refuses to have sex with him, but less than 5 percent think that a husband is justified in beating his wife if she burns the food. Eleven percent of men think that the husband is justified in beating his wife if she argues with him or goes out without telling him.

Men show some differences in the percentage who think wife beating is justified for any of the specified reasons. Younger men, those not employed for cash, formerly married men, those with no children, and men in rural areas are more likely to agree with at least one of the reasons for wife beating than other men. As with women, male respondents who reside in the Northern and Upper West regions are most likely to agree with at least one of the reasons for wife beating. Acceptance of wife beating is lowest among the most educated men and those in the highest wealth quintile.

Table 14.6.2 Attitudes towards wife beating: Men

Percentage of all men age 15-49 who agree that a husband is justified in hitting or beating his wife for specific reasons, by background characteristics, Ghana 2008

Background characteristic	Husband is justified in hitting or beating his wife if she: Burns the food	Argues with him	Goes out without telling him	Neglects the children	Refuses to have sexual intercourse with him	Percentage who agree with at least one specified reason	Number of men
Age							
15-19	6.6	15.0	14.8	16.6	9.0	28.4	911
20-24	5.8	9.9	8.8	14.0	6.9	22.4	704
25-29	3.2	10.8	10.5	14.2	4.6	19.7	624
30-34	3.4	8.9	9.5	12.5	4.8	19.5	533
35-39	5.2	10.7	12.4	14.1	5.8	20.3	528
40-44	3.5	11.3	9.9	12.7	9.6	22.5	394
45-49	2.0	7.2	5.3	7.2	3.9	13.0	364
Employment (past 12 months)							
Not employed	5.1	12.7	10.9	14.6	7.1	24.4	781
Employed for cash	4.0	9.9	10.4	12.8	6.0	20.0	2,655
Employed not for cash	6.6	13.9	12.0	16.6	8.4	26.7	619
Marital status							
Never married	5.5	12.0	11.0	13.9	7.6	23.4	1,936
Married or living together	4.0	9.8	10.1	13.2	5.6	19.6	1,950
Divorced/separated/ widowed	1.6	14.1	15.2	16.5	6.2	29.0	172
Number of living children							
0	5.4	11.7	10.9	14.0	7.3	23.2	2,086
1-2	2.9	11.6	10.8	13.9	4.1	21.2	893
3-4	3.5	7.3	9.7	11.0	4.9	17.2	655
5+	5.7	12.4	11.3	16.1	10.9	23.6	424
Residence							
Urban	2.9	9.1	7.2	9.9	4.4	17.1	1,866
Rural	6.0	12.7	13.7	16.9	8.5	25.9	2,191
Region							
Western	2.7	5.5	8.4	12.0	3.7	17.2	403
Central	1.1	11.9	7.2	9.9	4.4	18.1	326
Greater Accra	1.6	8.0	4.8	6.4	2.2	12.4	649
Volta	4.1	7.9	12.5	8.2	5.6	17.2	373
Eastern	5.1	10.5	11.2	15.4	7.9	24.3	411
Ashanti	3.6	11.3	9.7	13.4	5.7	20.9	785
Brong Ahafo	3.3	9.6	11.0	13.7	5.4	24.5	347
Northern	15.1	25.8	26.0	33.0	18.8	42.5	435
Upper East	2.9	6.1	4.7	7.6	6.1	19.4	219
Upper West	12.7	14.0	15.1	24.8	11.5	33.5	108
Education							
No education	9.7	16.4	17.8	19.5	13.7	30.1	540
Primary	7.2	15.3	15.4	17.4	7.8	30.1	619
Middle/JSS	3.6	11.3	10.2	13.3	5.8	21.4	1,721
Secondary +	2.4	5.9	5.8	9.6	3.9	14.2	1,167
Wealth quintile							
Lowest	11.2	17.2	17.7	21.3	13.2	32.8	708
Second	4.7	11.1	13.9	17.3	7.8	25.6	738
Middle	4.1	12.1	12.7	14.8	6.6	25.4	699
Fourth	3.3	10.3	8.3	11.3	4.8	17.4	974
Highest	1.3	6.4	4.1	6.8	2.5	12.5	939
Total 15-49	4.6	11.0	10.7	13.7	6.6	21.8	4,058
50-59	2.4	7.7	10.3	8.9	6.5	16.7	510
Total 15-59	4.4	10.7	10.7	13.2	6.6	21.3	4,568

Note: Total includes cases with information missing on employment and education that are not shown separately.

14.5 ATTITUDES TOWARDS REFUSING SEX WITH HUSBAND

Beliefs about whether and when a woman can refuse to have sex with her husband reflect issues of gender equity regarding sexual rights and bodily integrity. Besides yielding an important measure of empowerment, information about women's and men's attitudes towards women's sexual rights is useful for improving and monitoring reproductive health programmes that depend on women's willingness and ability to control their own sexual lives.

The extent of control women have over when and with whom they have sex has important implications for outcomes such as transmission of HIV and other sexually transmitted infections. To measure beliefs about sexual empowerment, female and male respondents in the GDHS were asked whether they think it is justifiable for a wife to refuse sexual intercourse with her husband in the following circumstances: when she knows her husband has a sexually transmitted infection, when she knows her husband has sex with other women, and when she is tired or not in the mood.

Table 14.7.1 shows that a majority of women agree with each of the specified circumstances under which a wife is justified in refusing to have sexual intercourse with her husband, and 63 percent agree with all three of the reasons. Women are most likely to agree that a woman can refuse to have sexual intercourse with her husband if she knows her husband has a sexually transmitted infection (86 percent). Seventy-five percent think that a woman is justified in refusing sexual intercourse if she knows that her husband has intercourse with other women, and 83 percent of women think that a wife is justified if she is tired or not in the mood,. Only 4 percent of women agree with none of the specified reasons.

Although differences are small, women age 45-49 are most likely to agree that a wife is justified in refusing sexual intercourse with her husband for all the specified reasons. Women who are employed for cash and those who live in urban areas or in the Western, Central, and Greater Accra regions are more likely to agree with all of the specified reasons for a wife refusing to have sex with her husband. Similarly, a higher proportion of women with at least secondary education and those in the middle and higher wealth quintiles agree with all of the specified reasons.

Table 14.7.2 shows the percentage of men who think that a wife is justified in refusing to have sexual intercourse with her husband in the same three specified circumstances: knows husband has a sexually transmitted disease, knows husband has sexual intercourse with other women, and woman is tired or not in the mood. The results indicate that the proportion of men who think that a woman is justified in refusing sexual intercourse with her husband for all three specified reasons is almost the same as the proportion of women (64 and 63 percent, respectively). Ninety-one percent of men, compared with 86 percent of women, think that a wife is justified in refusing sexual intercourse with her husband if she knows he has a sexually transmitted infection; 73 percent of men, compared with 75 percent of women, think that it is justifiable for a wife to refuse sexual intercourse if she knows that her husband has intercourse with other women; and 86 percent of men, compared with 83 percent of women, think that a woman is justified in refusing sexual intercourse with her husband if she is tired or not in the mood. Men age 30-34, men in urban areas, those living in the Western and Ashanti regions, men with secondary or higher education, those in the highest wealth quintile, and men with at least one child are more likely to agree with all of the specified reasons for a woman to refuse to have sexual intercourse with her husband, than other men.

Table 14.7.1 Attitudes towards refusing sexual intercourse with husband: Women

Percentage of all women age 15-49 who believe that a wife is justified in refusing to have sexual intercourse with her husband in specific circumstances, by background characteristics, Ghana 2008

Background characteristic	Wife is justified in refusing intercourse with her husband if she:			Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number of women
	Knows husband has a sexually transmitted disease	Knows husband has intercourse with other women	Is tired or not in the mood			
Age						
15-19	85.7	74.1	78.3	61.1	6.1	1,025
20-24	86.1	77.5	84.8	64.7	3.9	878
25-29	86.5	75.9	83.2	63.4	3.9	832
30-34	86.1	75.0	83.9	62.0	3.9	644
35-39	87.3	73.6	83.3	62.4	3.7	638
40-44	86.8	74.0	82.7	62.5	4.1	470
45-49	86.0	76.7	83.4	66.0	4.9	429
Employment (past 12 months)						
Not employed	85.5	75.2	77.8	60.6	5.4	1,094
Employed for cash	87.4	75.9	84.8	64.9	3.8	3,140
Employed not for cash	82.3	72.5	79.5	57.7	5.9	677
Marital status						
Never married	87.2	76.7	81.3	63.7	4.3	1,593
Married or living together	85.7	73.9	83.2	62.1	4.6	2,876
Divorced/separated/ widowed	87.1	79.1	82.8	65.9	4.0	446
Number of living children						
0	86.6	76.9	80.8	63.0	4.7	1,691
1-2	86.2	75.9	84.4	64.0	4.1	1,447
3-4	87.0	74.5	84.2	63.4	4.2	1,050
5+	84.7	71.4	80.6	60.0	5.0	729
Residence						
Urban	88.5	79.2	85.2	66.4	2.8	2,383
Rural	84.2	71.6	80.0	59.7	6.0	2,533
Region						
Western	93.4	83.9	90.5	76.9	2.0	447
Central	86.4	92.7	91.5	79.2	1.9	424
Greater Accra	91.5	84.3	88.6	71.8	0.9	853
Volta	86.6	73.7	82.0	57.7	2.4	431
Eastern	89.0	77.1	87.2	67.7	2.9	483
Ashanti	84.7	70.3	77.6	56.6	5.7	1,011
Brong Ahafo	81.1	78.2	82.2	65.7	7.8	425
Northern	76.8	58.8	71.8	42.8	9.3	467
Upper East	86.9	50.1	65.3	43.9	10.3	253
Upper West	78.8	64.9	82.6	53.8	7.4	122
Education						
No education	81.7	63.9	75.6	51.5	7.9	1,042
Primary	85.5	74.3	81.6	61.0	4.9	988
Middle/JSS	87.2	79.7	84.2	67.0	3.7	2,039
Secondary +	90.7	79.6	88.2	69.5	1.5	844
Wealth quintile						
Lowest	79.2	58.4	73.1	46.6	10.0	783
Second	84.9	73.8	80.0	61.0	5.7	900
Middle	85.8	78.7	83.3	66.0	4.5	979
Fourth	88.9	80.1	87.8	68.4	1.6	1,119
Highest	90.2	80.3	85.3	67.8	2.4	1,135
Total	86.3	75.3	82.5	63.0	4.4	4,916

Note: Total includes cases with information missing on employment and education that are not shown separately.

Table 14.7.2 Attitudes towards refusing sexual intercourse with husband: Men

Percentage of all men age 15-49 who believe that a wife is justified in refusing to have sexual intercourse with her husband in specific circumstances, by background characteristics, Ghana 2008

Background characteristic	Wife is justified in refusing intercourse with her husband if she: Knows husband has a sexually transmitted disease	Knows husband has intercourse with other women	Is tired or not in the mood	Percentage who agree with all of the specified reasons	Percentage who agree with none of the specified reasons	Number
Age						
15-19	87.9	73.0	83.4	61.7	4.4	911
20-24	90.0	72.6	86.0	63.6	3.4	704
25-29	90.5	70.0	86.0	61.0	3.0	624
30-34	92.3	76.4	89.6	70.5	2.9	533
35-39	92.7	71.4	88.3	65.8	2.0	528
40-44	93.7	74.2	85.6	65.7	2.2	394
45-49	92.3	73.0	84.9	65.4	4.1	364
Employment (past 12 months)						
Not employed	89.4	76.3	84.6	65.2	3.6	781
Employed for cash	91.0	71.7	86.6	63.9	3.1	2,655
Employed not for cash	91.7	73.0	85.2	64.9	3.6	619
Marital status						
Never married	89.5	72.6	84.4	62.2	3.7	1,936
Married or living together	92.2	73.0	87.8	66.5	2.9	1,950
Divorced/separated/ widowed	90.4	73.5	84.8	64.4	3.4	172
Number of living children						
0	89.2	72.3	84.5	61.9	3.8	2,086
1-2	92.0	72.1	89.2	66.1	2.8	893
3-4	91.8	73.8	87.6	68.3	3.3	655
5+	94.8	75.3	84.3	66.7	1.6	424
Residence						
Urban	91.0	74.9	89.2	67.1	2.7	1,866
Rural	90.7	71.1	83.4	62.0	3.8	2,191
Region						
Western	90.5	77.6	93.1	71.0	1.6	403
Central	93.9	70.9	83.7	56.9	1.3	326
Greater Accra	88.7	76.1	89.9	67.5	3.2	649
Volta	92.7	55.1	77.0	44.6	2.8	373
Eastern	83.5	74.5	82.3	65.0	9.0	411
Ashanti	94.3	76.9	91.9	70.2	1.0	785
Brong Ahafo	89.6	73.2	88.1	65.1	3.6	347
Northern	88.5	69.8	76.7	60.2	6.2	435
Upper East	95.8	69.0	79.5	65.1	2.5	219
Upper West	95.6	85.1	90.4	78.6	1.5	108
Education						
No education	89.5	67.1	78.6	59.4	5.3	540
Primary	89.2	69.2	82.5	59.2	4.0	619
Middle/JSS	90.4	73.4	87.1	65.1	3.5	1,721
Secondary +	92.9	76.8	89.8	68.5	1.6	1,167
Wealth quintile						
Lowest	90.1	67.8	78.0	59.3	5.0	708
Second	89.9	71.3	83.0	61.9	4.3	738
Middle	91.4	72.2	87.7	63.2	2.2	699
Fourth	90.4	73.8	88.5	65.7	3.4	974
Highest	92.2	77.2	90.8	69.6	1.9	939
Total 15-49	90.8	72.8	86.0	64.3	3.3	4,058
50-59	92.8	72.1	85.3	63.3	1.7	510
Total 15-59	91.0	72.7	86.0	64.2	3.1	4,568

Note: Total includes cases with information missing on employment and education that are not shown separately.

In the 2008 GDHS, male respondents were also asked if they thought that a husband has the right to take specific actions when his wife refuses to have sexual intercourse with him; the actions include: get angry and reprimand her, refuse financial support, use force to have sex, and have sex with another woman. Table 14.7.3 shows the percentage of men age 15-49 in the light of these discussions. Overall, 71 percent of men rejected all four of the specified actions. About 21 percent of men think that it is acceptable for a husband to get angry and reprimand his wife if she refuses to have sex with him; 11 percent think that it is acceptable for a husband to have sex with another woman if his wife refuses to have sex with him; 8 percent think that it is alright for a husband to refuse financial support if his wife refuses to have sexual intercourse; 3 percent think that a husband has the right to use force to have sexual intercourse with his wife; and 1 percent agree with all the specified actions of the husband when the wife refuses to have sex with him. Differences by background characteristics are minimal; however younger men age 25-29, those employed for cash, formerly married men, those in the Volta region, and men in the poorest households are more likely to agree that husbands have the right to take specific actions when their wife refuses to have sexual intercourse with them, than other men.

14.6 WOMEN'S EMPOWERMENT INDICATORS

The three sets of empowerment indicators, namely women's participation in making household decisions, their attitude towards wife beating, and their attitude towards a wife's right to refuse sexual intercourse with her husband, can be summarized into three separate indices. All three indices are based on women's responses.

The first index shows the number of decisions in which women participate alone or jointly with their husband/partner (see Table 14.5.1 for the list of decisions). This index ranges in value from 0 to 4 and is positively related to women's empowerment. It reflects the degree of decision-making control that women are able to exercise in areas that affect their lives and environments.

The second index is the number of reasons for which the respondent thinks that a husband is justified in beating his wife (see Table 14.6.1 for the list of reasons). This index ranges in value from 0 to 5. A lower score on this indicator is interpreted as reflecting a greater sense of entitlement and self-esteem, and higher status of women.

The final index is the number of circumstances in which the respondent feels that a woman is justified in refusing sexual intercourse with her husband or partner (see Table 14.7.1 for the list of the circumstances). This index ranges in value from 0 to 3 and is positively related to women's sense of self-esteem and empowerment. It reflects perceptions of sexual roles and women's rights over their bodies.

Table 14.8 shows these three indicators of women's empowerment and how they relate to each other. It shows the percentage of married women age 15-49 who participate in all decision-making, the percentage of women who disagree with all the specified reasons for justifying wife beating, and the percentage of women who agree with all the specified reasons for a wife refusing to have sexual intercourse with her husband, by the value on each of the indicators. In general, the expectation is that women who participate in making household decisions are more likely to have gender-egalitarian beliefs.

Table 14.7.3 Men's attitudes towards a husband's rights when his wife refuses to have sexual intercourse

Percentage of men age 15-49 who consider that a husband has the right to certain behaviours when a wife refuses to have sex with him when he wants her to, by background characteristics, Ghana 2008

Background characteristic	When a wife refuses to have sex with her husband, he has the right to:				Percentage who agree with all of the specified behaviours	Percentage who agree with none of the specified behaviours	Number of men
	Get angry and reprimand her	Refuse her financial support	Use force to have sex	Have sex with another woman			
Age							
15-19	21.4	9.0	3.7	10.7	1.0	70.9	911
20-24	21.2	11.4	2.8	11.4	0.3	68.9	704
25-29	24.2	10.0	2.4	11.9	0.6	66.4	624
30-34	20.9	6.3	1.9	9.1	0.4	72.5	533
35-39	21.0	7.6	2.3	11.3	0.9	72.0	528
40-44	20.4	6.8	3.0	10.4	0.9	70.7	394
45-49	17.5	4.7	2.3	9.7	1.4	76.9	364
Employment (past 12 months)							
Not employed	18.6	8.5	3.0	8.4	0.6	74.5	781
Employed for cash	21.5	8.1	2.5	11.0	0.7	70.2	2,655
Employed not for cash	23.5	9.8	3.5	12.8	1.0	68.0	619
Marital status							
Never married	21.7	9.8	3.2	10.8	0.7	69.6	1,936
Married or living together	20.1	6.8	2.3	10.4	0.7	72.6	1,950
Divorced/separated/ widowed	28.8	11.9	2.7	13.5	1.4	61.7	172
Number of living children							
0	21.8	9.7	3.2	10.8	0.8	69.7	2,086
1-2	19.3	7.3	1.7	10.2	0.1	72.8	893
3-4	19.6	6.4	2.5	10.1	1.0	72.7	655
5+	25.0	7.8	3.3	12.8	1.6	68.4	424
Residence							
Urban	18.0	6.6	1.7	9.1	0.3	73.8	1,866
Rural	24.0	10.0	3.6	12.2	1.1	68.1	2,191
Region							
Western	13.4	7.2	1.1	4.0	0.5	82.4	403
Central	28.8	5.9	2.9	5.5	1.5	68.1	326
Greater Accra	12.9	3.9	2.0	11.2	0.3	76.5	649
Volta	37.6	7.9	3.0	16.5	0.6	58.3	373
Eastern	18.1	7.9	5.1	12.9	0.8	71.5	411
Ashanti	23.3	8.5	1.7	14.2	0.4	67.2	785
Brong Ahafo	23.6	7.7	2.4	6.4	0.2	69.3	347
Northern	23.8	19.5	5.8	11.7	2.0	65.8	435
Upper East	12.9	6.4	0.7	10.4	0.5	78.3	219
Upper West	16.7	13.2	3.7	6.1	1.3	75.0	108
Education							
No education	22.6	13.8	4.5	12.1	1.3	68.3	540
Primary	22.2	9.7	4.0	14.9	0.8	68.1	619
Middle/JSS	22.7	7.5	2.7	10.4	0.8	69.7	1,721
Secondary +	17.9	6.6	1.3	8.4	0.3	74.8	1,167
Wealth quintile							
Lowest	23.9	14.7	4.7	15.1	1.6	65.4	708
Second	23.1	9.6	3.0	11.5	0.8	69.3	738
Middle	23.5	6.9	2.6	9.8	0.8	70.4	699
Fourth	21.0	7.3	2.3	7.9	0.5	72.4	974
Highest	16.3	5.1	1.7	10.6	0.2	74.4	939
Total 15-49	21.2	8.4	2.7	10.7	0.7	70.7	4,058
50-59	21.2	8.6	3.4	9.8	0.6	71.7	510
Total 15-59	21.2	8.4	2.8	10.6	0.7	70.8	4,568

Note: Total includes cases with information missing on employment and education that are not shown separately.

The findings on women's empowerment indicate that women who participate in three or four of the specified household decisions are more likely to justify their right to refuse sexual intercourse with their husband for all reasons, or to disagree with all the reasons for justifying wife beating (66 percent, each), compared with women who participate in fewer decisions. Similarly, women who do not support wife beating for any reason at all are most likely to participate in all the decision-making in the household (52 percent) and most likely to agree with all the reasons justifying a wife refusing to have sexual intercourse with her husband (66 percent). Further, women who agree with all reasons that justify a woman refusing to have sexual intercourse with her husband are most likely to participate in all four decision (50 percent), and disagree with all the reasons for wife beating (66 percent), compared with women who agree with none of reasons for refusing sexual intercourse with their husband (40 and 54 percent, respectively).

Table 14.8 Indicators of women's empowerment

Percentage of women age 15-49 who participate in all decision-making, percentage who disagree with all reasons for justifying wife beating, and percentage who agree with all reasons for refusing sexual intercourse with husband, by three indicators of women's empowerment, Ghana 2008

	Currently married women		Percentage who disagree with all the reasons justifying wife beating	Percentage who agree with all the reasons for refusing sexual intercourse with husband	Number of women
Empowerment indicator	Percentage who participate in all decision making[1]	Number of women			
Number of decisions in which women participate[1]					
0	na	na	55.0	40.8	191
1-2	na	na	53.7	58.0	696
3-4	na	na	66.3	65.6	1,989
Number of reasons for which wife beating is justified[2]					
0	51.6	1,797	na	65.5	3,118
1-2	38.4	571	na	58.2	986
3-4	43.0	395	na	59.2	642
5	37.1	113	na	57.4	169
Number of reasons given for refusing to have sexual intercourse with husband[3]					
0	39.9	133	54.4	na	218
1-2	42.8	957	59.7	na	1,603
3	50.1	1,787	66.0	na	3,095

[1] Restricted to currently married women. See Table 15.5.1 for the list of decisions.
[2] See Table 15.6.1 for the list of reasons
[3] See Table 15.7.1 for the list of reasons

14.7 CURRENT USE OF CONTRACEPTION BY WOMEN'S STATUS

A woman's desire and ability to control her fertility and her choice of contraceptive method are in part affected by her status in the household and her own sense of empowerment. A woman who feels that she is unable to control her life may be less likely to feel she can make and carry out decisions about her fertility. She may also feel the need to choose methods that are less obvious or which do not depend on her husband's cooperation. Table 14.9 shows the distribution of currently married women by contraceptive method used, according to the three empowerment indicators.

The findings indicate that there is a positive relationship between use of contraception and participation in household decision-making. For example, current use of contraceptive methods increases from 19 percent among women who participate in none of the household decisions to 24 percent among women who participate in one or more household decisions. In contrast, women who think that wife beating is justified for all five specified reasons are least likely to use a method of contraception. A positive association is seen between contraceptive use and a woman's right to refuse sexual intercourse with her husband. Women who agree with all three reasons for a woman to refuse sexual intercourse with her husband are more likely to use any contraception (26 percent) and any modern contraception (18 percent) than women who agree with none of the reason (15 and 8 percent, respectively).

Table 14.9 Current use of contraception by women's status

Percent distribution of currently married women age 15-49 by current contraceptive method, according to three indicators of women's empowerment, Ghana 2008

			Modern methods						
Empowerment indicator	Any method	Any modern method	Female sterilisation	Temporary modern female methods[1]	Male condom	Any traditional method	Not currently using	Total	Number of women
Number of decisions in which women participate[2]									
0	18.8	11.2	0.0	8.7	2.5	7.6	81.2	100.0	191
1-2	24.1	18.2	0.9	13.8	3.5	5.9	75.9	100.0	696
3-4	23.8	16.5	2.1	12.4	2.1	7.2	76.2	100.0	1,989
Number of reasons for which wife beating is justified[3]									
0	24.9	17.2	1.7	12.4	3.2	7.7	75.1	100.0	1,797
1-2	22.3	15.1	1.6	11.7	1.8	7.2	77.7	100.0	571
3-4	20.1	16.1	1.5	14.3	0.2	4.1	79.9	100.0	395
5	19.5	15.2	1.0	12.3	1.8	4.3	80.5	100.0	113
Number of reasons given for refusing to have sexual intercourse with husband[4]									
0	15.2	7.5	0.8	6.1	0.6	7.7	84.8	100.0	133
1-2	19.3	15.5	1.8	11.3	2.4	3.7	80.7	100.0	957
3	26.4	17.8	1.7	13.6	2.6	8.6	73.6	100.0	1,787
Total	23.5	16.6	1.6	12.5	2.4	6.9	76.5	100.0	2,876

Note: If more than one method is used, only the most effective method is considered in this tabulation.
[1] Pill, IUD, injectables, implants, female condom, diaphragm, foam/jelly, and lactational amenorrhoea method.
[2] See Table 15.5.1 for the list of decisions.
[3] See Table 15.6.1 for the list of reasons
[4] See Table 15.7.1 for the list of reasons

14.8 IDEAL FAMILY SIZE AND UNMET NEED BY WOMEN'S STATUS

The ability of women to make household decisions has important implications for their fertility preferences and the practice of family planning. Increases in women's status and empowerment are recognized as important in efforts to reduce fertility.

Table 14.10 shows how women's ideal family size and unmet need for family planning are related to women's status indicators. The findings indicate that there is a positive association between ideal family size and two of the three empowerment indicators. Ideal family size is lower among women who think that wife beating is not justified for any reason (4.0 children) than among women who think that wife beating is justified for all five reasons (5.5 children). Similarly, ideal family size is highest among women who believe that a woman cannot refuse to have sexual intercourse with her husband for any reason (5.0 children), or for 1-2 reasons (4.6 children), and lowest among women who think that sexual intercourse can be refused for all three reasons (4.1 children).

Looking at the relationship between unmet need and women's empowerment indicators, the findings show that unmet need is highest among women who participate in none of the household decisions (40 percent), among women who think that wife beating is justified for all five reasons (37 percent), and among women who agree with all the reasons for a wife to refuse sex with her husband (36 percent). Higher unmet need among women who agree with all the reasons for a wife to refuse sex with her husband (36 percent) compared with 30 percent among women who agree with none of such reasons, indicates that not all women's empowerment indicators yield the expected negative relationship.

Table 14.10 Women's empowerment and ideal number of children and unmet need for family planning

Mean ideal number of children among women age 15-49 and the percentage of currently married women age 15-49 with an unmet need for family planning, by three indicators of women's empowerment, Ghana 2008

Empowerment indicator	Mean ideal number of children[1]	Number of women	Percentage of currently married women with an unmet need for family planning			Number of currently married women
			For spacing	For limiting	Total	
Number of decisions in which women participate[3]						
0	4.8	190	28.1	11.9	40.1	191
1-2	4.8	687	24.9	11.9	36.7	696
3-4	4.6	1,942	21.1	13.3	34.4	1,989
Number of reasons for which wife beating is justified[4]						
0	4.0	3,066	21.5	13.5	35.1	1,797
1-2	4.5	970	24.5	11.9	36.4	571
3-4	4.9	632	24.2	10.5	34.7	395
5	5.5	167	21.2	15.4	36.6	113
Number of reasons given for refusing to have sexual intercourse with husband[5]						
0	5.0	208	24.9	5.4	30.4	133
1-2	4.6	1,568	22.4	12.8	35.1	957
3	4.1	3,059	22.4	13.5	35.8	1,787
Total	4.3	4,835	22.5	12.9	35.3	2,876

[1] Mean excludes respondents who gave non-numeric responses.
[2] See table 7.3.1 for the definition of unmet need for family planning
[3] Restricted to currently married women. See Table 15.5.1 for the list of decisions.
[4] See Table 15.6.1 for the list of reasons
[5] See Table 15.7.1 for the list of reasons

14.9 REPRODUCTIVE HEALTH CARE AND WOMEN'S EMPOWERMENT STATUS

Table 14.11 examines whether women's use of antenatal, delivery, and postnatal care services from health professionals varies by level of empowerment as measured by the three indicators of women's empowerment. In societies where health care is widespread, women's empowerment may not affect their access to reproductive health services; in other societies, however, increased empowerment of women is likely to increase their ability to seek out and use health services to better meet their own reproductive health goals, including the goal of safe motherhood.

Table 14.11 shows that mothers who participate in three or four household decisions have better access to maternal health services than mothers who participate in no household decisions. Similarly, women who have more gender-egalitarian views regarding sexual behaviour within a marriage are also more likely to use antenatal, delivery, and postnatal care services. However, use of reproductive health services is not clearly related to women's attitude towards wife beating. Women who agree with none of the reasons justifying wife beating are the most likely to have received assistance at delivery (81 percent) and postnatal care soon after delivery (61 percent), compared with women who think that wife beating is justified for all five reasons (63 and 39 percent, respectively). This relationship is not very clear with regards to antenatal care received.

Table 14.11 Reproductive health care by women's empowerment

Percentage of women age 15-49 with a live birth in the five years preceding the survey who received antenatal care, delivery assistance, and postnatal care from health personnel for the most recent birth, by three indicators of women's empowerment, Ghana 2008

Empowerment indicator	Received antenatal care from health personnel	Received delivery assistance from health personnel	Received postnatal care from health personnel within the first two days after delivery[1]	Number of women with a child born in the past five years
Number of decisions in which women participate[2]				
0	90.1	73.4	50.1	140
1-2	95.6	71.6	51.6	466
3-4	96.2	77.9	57.1	1,231
Number of reasons for which wife beating is justified[3]				
0	96.1	80.6	61.4	1,265
1-2	93.4	72.1	47.6	432
3-4	94.9	70.3	46.4	322
5	97.7	63.1	39.2	80
Number of reasons given for refusing to have sexual intercourse with husband[4]				
0	91.1	63.6	37.5	91
1-2	93.4	72.5	51.7	722
3	96.9	79.8	58.7	1,286
Total	95.4	76.6	55.4	2,099

Note: 'Health personnel' includes doctor, nurse, midwife, auxiliary midwife, or community health officer.
[1] Includes deliveries in a health facility and not in a health facility.
[2] Restricted to currently married women. See Table 15.5.1 for the list of decisions.
[3] See Table 15.6.1 for the list of reasons
[4] See Table 15.7.1 for the list of reasons

DOMESTIC VIOLENCE 15

In the words of former United Nations Secretary General, Kofi Annan, 'Domestic violence, a social evil against women is perhaps the most shameful human rights violation, and it is perhaps the most pervasive. It knows no boundaries, geographic, culture, or wealth. As long as it continues, we cannot claim to be making real progress towards equality, development, and peace' (UNIFEM, 2003).

The World Health Organisation defines domestic violence as 'the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, mal-development, or deprivation' (Krug et al., 2002). Domestic violence is defined here as any act of violence resulting in physical, sexual, or psychological harm or suffering to women, girls, and also men, including threats of such acts, coercion, or arbitrary deprivation of liberty.

To stop this violence and the considerable physical harm, death, psychological abuse, separation, divorce, and other social ills that it causes, the Ghana government has developed several measures. Among them is the passage of the Domestic Violence (DV) Act 732 in February 2007, which mandates the Ministry of Women and Children Affairs (MOWAC) to fight domestic violence in all forms, to set up a victim support fund through voluntary contributions, and to enable parliament to curb the social menace (Government of Ghana, 2007). The Domestic Violence and Victim Support Unit (DOVVSU) was established in Accra, and has offices in the capital cities of each of the 10 regions and in most of the districts throughout the country, with a helpline to assist people across the country to call toll-free for support. Additionally, the Gender Violence Survivors Support Network (GVSSN), a vibrant network of NGOs consisting of professionals, the Domestic Violence Coalition, and other international groups have pulled resources together to advocate and support victims of all forms of domestic violence in Ghana (MOWAC, 2005). Other NGOs including the Federation of International Women Lawyers (FIDA) and Action Aid Ghana organise training for paralegals and community traditional authorities, throughout the country (particularly in the Northern sector) to assist with legal issues, advocacy, and education on domestic violence.

A 10-Year Domestic Violence National Plan of Action was developed to make the DV Act 732 operational (MOWAC, 2008). A Domestic Violence Management Board has been established with oversight responsibility to play an advisory role and to liaise with government agencies to promote strategies to prevent domestic violence. Additionally, a Domestic Violence Secretariat has been established under the leadership of the MOWAC and supported by national and international development partners to coordinate domestic violence prevention and ensure that the Domestic Violence Act is effectively disseminated in all 10 regions.

The 2008 GDHS included a series of questions that focus on specific aspects of domestic and interpersonal violence. The module addresses women's and men's experience of interpersonal violence, including acts of physical, sexual, and emotional violence. Information was collected on both domestic violence (also known as spousal violence or intimate partner violence) and violence by other family members or unrelated individuals. Specifically, this chapter presents the findings on women and men who ever experienced interpersonal violence—physical violence since the age of 15 for women and men, and lifetime experience of sexual violence for women—and women and men who experienced partner violence ever, and in the past 12 months. In addition, detailed information is presented on partner violence including the physical consequences of violence, and when partner violence began.

15.1 MEASUREMENT OF VIOLENCE

Collecting valid, reliable, and ethical data on intimate partner violence poses particular challenges because: a) what constitutes violence or abuse varies across cultures and individuals; b) a culture of silence usually surrounds domestic violence and can affect reporting; and c) the sensitivity of the topic. Assuring the safety of respondents and interviewers when asking about domestic violence in a familial setting and protecting women who disclose violence, raise specific ethical concerns. The responses to these challenges by the 2008 GDHS are described below.

15.1.1 The Use of Valid Measures of Violence

The 2008 GDHS measures violence committed by spouses and by other household members. Accordingly, information was obtained from ever-married women and men on violence by spouses and by others, and from never-married women and men on violence by anyone, including boyfriends/girlfriends.

International research on violence shows that intimate partner violence is one of the most common forms of violence against women. Thus, spousal/partner violence was measured in more detail than violence by other perpetrators by using a greatly shortened and modified Conflict Tactics Scale (CTS) (Strauss, 1990). Specifically, spousal violence was measured using the following set of questions for women:

(Does/did) your (last) husband/partner ever do any of the following things to you?

a) Slap you?
b) Twist your arm or pull your hair?
c) Push you, shake you, or throw something at you?
d) Punch you with his fist or with something that could hurt you?
e) Kick you, drag you or beat you up?
f) Try to choke you or burn you on purpose?
g) Threaten or attack you with a knife, gun, or any other weapon?
h) Physically force you to have sexual intercourse with him even when you did not want to?
i) Force you to perform any sexual acts you did not want to?

When the answer to the question was 'yes', women were asked about the frequency of the act in the 12 months preceding the survey. A 'yes' answer to one or more of items (a) to (g) above constitutes evidence of physical violence, while a 'yes' answer to items (h) or (i) constitutes evidence of sexual violence.

Emotional violence among ever-married women was measured in a similar way, using the following set of questions:

(Does/did) your (last) husband ever:

a) Say or do something to humiliate you in front of others?
b) Threaten to hurt or harm you or someone close to you?
c) Insult you or make you feel bad about yourself?

This approach of asking about specific acts to measure different forms of violence has the advantage of not being affected by different understandings of what constitutes a summary term such as violence. By including a wide range of acts, this approach has the additional advantage of giving the respondent multiple opportunities to disclose any experience of violence.

This same set of questions (excluding '*h*' and '*i*' on sexual violence) was asked to men to determine whether they experienced physical or emotional violence by their wives/partners. Additional questions for men on physical and emotional violence included:

(Does/did) your (last) wife ever:
a) Kicked or pulled your genitalia??
b) Screamed or shouted at you?

In addition to these questions asked only of ever-married women and men, all women and men were asked about physical violence from persons other than the current or most recent spouse/partner with the question: *From the time you were 15 years old, has anyone [other than your (current/last) husband/wife] hit, slapped, kicked, or done anything else to hurt you physically?* Respondents who answered this question in the affirmative were asked who had done this to them and the frequency of such violence during the 12 months preceding the survey.

All women were also asked: *At any time in your life, as a child or as an adult, has anyone ever forced you in any way to have sexual intercourse or perform any other sexual acts?* Respondents who said "yes" were then asked questions about the age at which this first happened and the person who committed the act.

Although this approach to questioning is generally considered to be optimal, the possibility of underreporting of violence, particularly sexual violence, cannot be entirely ruled out in any survey.

15.1.2 Ethical Considerations

Three specific protections were built into the questionnaire, in accordance with the World Health Organisation's ethical and safety recommendations for research on domestic violence (WHO, 2001b):

- Only one eligible person in each household was administered the questions on violence. Individual interviews using GDHS Women's and Men's Questionnaires were carried out in every second household selected for the DHS survey (that is 50 percent of 12,373 households in sample). The domestic violence (DV) module was administered to women in two-thirds of households selected for the GDHS individual interview and to men in one-third of the households selected for the GDHS individual interview. The DHS protocol specifies that the DV module can only be administered to one randomly selected person (male or female) per household. Therefore, in households with more than one eligible man or woman, the respondent for the module was randomly selected through a specially designed simple selection procedure (based on the 'Kish Grid') which was built into the Household Questionnaire. Interviewing only one person in each household using the domestic violence module provides assurance to the selected respondent that other respondents in the household will not talk about the types of questions the selected respondent was asked.

- Informed consent for the survey was obtained from the respondent at the beginning of the individual interview. In addition, at the beginning of the domestic violence section respondents were read an additional statement informing them that the subsequent questions could be sensitive, and reassuring them of the confidentiality of their responses.

- The domestic violence module was implemented only if privacy could be obtained. If privacy could not be obtained, the interviewer was instructed to skip the module, thank the respondent, and end the interview. If a translator was needed to conduct the interview, respondents were not asked questions from the domestic violence module to maintain privacy.

15.1.3 Special Training for Implementing the Domestic Violence Module

Complete privacy is also essential for ensuring the security of the respondent and the interviewer. Asking about or reporting violence, especially in households where the perpetrator may be present at the time of interview, carries the risk of further violence. Accordingly, interviewers were provided specific training for implementing the domestic violence module to enable the field staff to collect violence data in a secure, confidential, and ethical manner.

Although most women interviewed do not necessarily ask for help, some abused women may ask the interviewer for assistance. To prepare for this possibility, interviewers were provided with a nationwide list of offices of the Domestic Violence and Victim Support Unit (DOVVSU) and trained to instruct respondents that they can seek help from the Probation and Social Welfare Officer at the district level. These officers are responsible for handling social welfare matters in the district, including the welfare of children and families.

15.1.4 Characteristics of the Sub-sample of Respondents for the Domestic Violence Module

Given that only one person was administered the domestic violence module in each selected household, and that the violence module was not administered if privacy could not be obtained, 17 of the 2,563 women eligible for the violence module had to be excluded because of lack of privacy and 23 women refused to be interviewed with the domestic violence module. An additional 81 women were not interviewed for other reasons. Among men, 1,280 were eligible, 6 were excluded because privacy could not be obtained, 13 men refused to be interviewed with the domestic violence module and 42 were not interviewed for other reasons. It is noteworthy that the age, marital status, residential, regional, educational, and wealth index distributions of the sub-sample of respondents selected for the violence module are virtually identical to the entire GDHS sample of respondents (data not shown).

15.2 Experience of Domestic Violence by Women and Men

This section of the chapter discusses women's and men's experience of violence by any individual. The data on domestic violence for both women and men are weighted differently from the rest of the data collected in the Women's and Men's Questionnaires. This was done to adjust for the fact that only one person per household was interviewed with the domestic violence module.

The section begins by examining the experience of physical violence since age 15 and physical violence during pregnancy, and continues with the findings on women's lifetime experience of sexual violence. Background characteristics associated with increased risk of violence are also discussed. This report mainly presents information on domestic violence against women; the tables also present results for men when there is sufficient information available.

Table 15.1 shows the distribution of women and men who have experienced physical violence since age 15, ever and in the past 12 months, by background characteristics. Approximately one-third of women (37 percent) have experienced physical violence since the age 15. About half of these women, 17 percent, have experienced physical violence in the past 12 months. Three percent of women experienced physical violence often, while 14 percent experienced physical violence occasionally in the past 12 months.

The proportion of women who have ever experienced physical violence is highest among women age 20-39. However, women in their 40s are slightly more likely to report having experienced physical violence in the past 12 months (19 percent). Women who are employed but are not paid in cash are more likely to report having experienced physical violence since age 15, and having experienced physical violence in the past 12 months than women who are unemployed or employed for cash.

Table 15.1 Experience of physical violence

Percentage of women and men age 15-49 who ever experienced physical violence since age 15 and percentage who experienced physical violence during the 12 months preceding the survey, by background characteristics Ghana 2008

Background characteristic	Women: Percentage who experienced physical violence since age 15				Number of women	Men: Percentage who experienced physical violence since age 15				Number of men
		In the past 12 months					In the past 12 months			
	Ever[1]	Often	Some-times	Any		Ever[1]	Often	Some-times	Any	
Age										
15-19	32.3	1.4	16.5	17.9	475	34.2	0.2	12.2	12.4	215
20-24	39.4	1.7	13.9	15.6	470	41.6	0.0	12.8	12.8	189
25-29	39.2	3.5	12.2	15.7	407	49.3	1.0	15.6	16.7	167
30-39	38.8	4.0	13.7	17.7	647	43.8	0.8	11.9	12.7	299
40-49	32.6	3.1	15.8	18.9	443	36.9	0.0	9.5	9.5	197
Employment (past 12 months)										
Not employed	29.7	1.9	13.4	15.3	521	35.0	0.2	8.8	9.0	184
Employed for cash	37.4	3.1	14.4	17.4	1,568	44.9	0.6	12.7	13.3	711
Employed not for cash	42.6	2.2	16.4	18.5	352	32.2	0.0	14.1	14.2	170
Marital status										
Never married	32.6	1.0	11.7	12.7	771	38.2	0.2	11.1	11.3	486
Married or living together	35.6	3.2	15.1	18.3	1,425	41.4	0.5	12.0	12.5	534
Divorced/separated/widowed	54.6	6.0	19.1	25.1	246	(66.7)	(1.4)	(27.2)	(28.5)	47
Number of living children										
0	36.2	1.4	13.3	14.7	812	37.8	0.4	10.9	11.3	520
1-2	38.2	2.4	15.0	17.4	742	47.7	0.6	16.4	17.0	264
3-4	36.0	4.0	14.9	18.9	532	41.4	0.4	11.9	12.3	181
5+	35.0	5.0	15.0	20.0	356	39.6	0.0	9.3	9.3	101
Residence										
Urban	35.7	2.1	14.4	16.4	1,178	45.2	0.2	11.2	11.5	480
Rural	37.4	3.5	14.5	17.9	1,264	37.7	0.6	13.1	13.7	586
Region										
Western	22.6	2.0	10.6	12.6	226	16.5	0.0	5.1	5.1	96
Central	40.2	2.4	16.4	18.8	216	51.5	0.0	12.1	12.1	93
Greater Accra	30.2	1.4	10.7	12.1	425	48.2	0.7	12.7	13.4	167
Volta	34.7	2.3	14.0	16.3	217	48.5	0.0	18.3	18.3	103
Eastern	27.9	3.0	12.0	15.0	239	30.0	0.0	11.2	11.2	122
Ashanti	43.4	2.6	17.0	19.6	501	52.4	0.9	16.6	17.5	203
Brong Ahafo	46.3	4.9	12.8	17.7	205	39.3	0.0	13.2	13.2	86
Northern	42.4	4.9	17.9	22.9	218	36.5	1.2	9.5	10.6	108
Upper East	42.7	2.9	19.4	22.3	133	26.9	0.0	5.5	5.5	64
Upper West	38.8	4.6	19.6	24.2	62	43.0	1.9	8.7	10.7	25
Education										
No education	31.4	3.6	13.6	17.3	508	29.0	0.5	10.5	10.9	141
Primary	40.7	4.4	17.2	21.6	495	43.3	1.5	16.1	17.5	163
Middle/JSS	38.3	2.4	16.2	18.6	997	42.3	0.3	14.0	14.4	472
Secondary+	34.3	0.9	8.2	9.1	441	43.9	0.0	8.1	8.1	288
Wealth quintile										
Lowest	35.0	3.6	15.8	19.5	400	28.9	0.7	12.2	12.9	167
Second	36.5	3.8	12.3	16.2	450	38.6	0.3	14.2	14.5	213
Middle	42.9	2.6	18.9	21.5	465	38.5	0.0	17.1	17.1	180
Fourth	36.5	2.9	14.6	17.5	536	48.0	0.6	9.6	10.2	295
Highest	32.8	1.5	11.3	12.8	590	45.8	0.5	9.9	10.4	211
Total	36.6	2.8	14.4	17.2	2,442	41.1	0.4	12.3	12.7	1,066

Note: Total includes cases missing information on employment and education that are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.

[1] Includes in the past 12 months

Formerly married women (divorced, separated, or widowed) are nearly twice as likely to have ever experienced physical violence since age 15 as currently married and never-married women (55 percent, compared with 33 and 36 percent, respectively). Formerly married women are also more likely to have experienced physical violence in the past 12 months (25 percent) than currently married women (18 percent).

There is no clear pattern in the distribution of women who experienced physical violence since age 15 by number of living children. However, women with no living children are least likely to have experienced physical violence in the past 12 months.

There is little variation in the level of physical violence by urban-rural residence; however, there is substantial variation in the experience of physical violence by region. The percentage of women who ever experienced physical violence ranges from 23 percent in the Western region to 46 percent in the Brong Ahafo region. Experience of physical violence in the past 12 months is highest among women in the Upper West (24 percent) region and lowest in the Greater Accra (12 percent) region.

The proportion of women who have ever experienced physical violence and the proportion who experienced physical violence in the past 12 months is highest among women with primary education (41 and 22 percent, respectively). Although differences are small between women with no education and those with secondary education or higher who ever experienced physical violence, women with no education are nearly twice as likely to have experienced physical violence in the past 12 months (17 percent) as those with secondary or higher education (9 percent). There is no clear pattern by wealth quintile in women's experience of physical violence ever. Nevertheless, women's experience of physical violence in the past 12 months decreases with increasing wealth quintile (20 percent in the lowest quintile and 13 percent in the highest quintile).

The results presented in Table 15.1 indicate that ever experience of physical violence is higher among men than among women (41 percent compared with 37 percent). However, men are somewhat less likely than women to have experienced physical violence in the past 12 months (13 percent compared with 17 percent). In the 12 months preceding the survey, 12 percent of men experienced violence 'sometimes' while less than 1 percent experienced violence 'often'.

The proportion of men who have ever experienced physical violence is highest among those age 25-29. Unlike women, men who are employed for cash (45 percent) are more likely than other men (32-35 percent) to have ever experienced physical violence. Men's experience of physical violence in the past 12 months is also higher among men who are employed (13-14 percent) than men who are not employed (9 percent).

Men with either one or two living children are more likely than other men to have experienced physical violence ever and in the past 12 months. Men in urban areas are somewhat more likely than those in rural areas to have ever experience physical violence. Men's experience with physical violence differs markedly by region. Men in the Western region are least likely to have ever experienced physical violence (17 percent), while those in the Central and Ashanti regions are most likely to have ever experienced physical violence (52 percent each). Men with no education are less likely than educated men to have ever experienced physical violence; however, men with secondary and higher education are less likely to have experienced physical violence in the past 12 months. Men's experience of physical violence ever is lowest in the lowest wealth quintile; in contrast, the experience of physical violence in the past 12 months is lowest among men in the two highest quintiles (10 percent).

15.3 PERPETRATORS OF PHYSICAL VIOLENCE AGAINST WOMEN AND MEN

Among women and men who ever experienced physical violence, Table 15.2 shows the percentage who reported that specific persons committed the violence, by current marital status. Because respondents could have experienced violence at the hands of several people, the percentages do not sum to 100. Among ever-married women who have experienced physical violence since age 15, 41 percent reported that a current husband or partner committed the physical violence against them, while 17 percent reported that they experienced physical violence by a former husband/partner. Other perpetrators commonly reported by ever-married women are parents or stepparents (13-15 percent), sisters and brothers (12 percent), other relatives (11 percent), and teachers (9 percent).

Ever-married men who ever experienced physical violence since age 15 are much less likely than women to report that the violence was perpetrated by their current or former wife/partner (21 and 6 percent, respectively). Ever-married men are more likely to experience physical violence committed by a male friend (32 percent), father or stepfather (18 percent), other relatives or a stranger (14 percent each). One in ten men reported that the physical violence was committed against them by a teacher or siblings (12 and 10 percent, respectively).

Among women who have never been married, teachers are the most common perpetrators of physical violence, reported by 29 percent of women. Among never-married men, nearly half (47 percent) reported physical violence committed by a male friend. Never-married men and women are also likely to experience physical violence at the hands of family members. It is interesting to note that women are somewhat more likely to report physical violence perpetrated by mothers/stepmothers than by fathers/stepfathers while men are more likely to report the opposite.

Table 15.2 Persons committing physical violence

Among women and men age 15-49 who ever experienced physical violence since age 15, the percentage who reported that specific persons committed the violence, by respondent's marital status, Ghana 2008

Person	Marital status: Ever married	Marital status: Never married	Total
WOMEN			
Current husband/partner	41.4	na	29.7
Former husband/partner	16.6	na	12.0
Current boyfriend	0.5	2.1	0.9
Former boyfriend	2.1	5.6	3.1
Father/stepfather	12.5	10.9	12.1
Mother/stepmother	15.4	22.1	17.3
Sister/brother	11.9	15.8	13.0
Daughter/son	0.0	0.0	0.0
Other relative	10.6	13.4	11.4
Mother-in-law	0.1	na	0.1
Other in-law	1.5	na	1.2
Teacher	8.6	29.3	14.4
Employer/someone at work	1.0	0.7	0.9
Other	15.7	24.8	18.2
Number of women	642	251	893
MEN			
Current wife/partner	20.9	na	12.0
Former wife/partner	5.5	na	3.2
Current girlfriend	0.8	0.0	0.5
Former girlfriend	2.7	2.4	2.5
Father/stepfather	17.7	15.8	16.9
Mother/stepmother	6.6	7.3	6.9
Sister/brother	10.0	13.3	11.4
Daughter/son	0.4	0.0	0.2
Other relative	13.9	13.3	13.7
Mother-in-law	0.3	na	0.1
Other in-law	0.0	na	0.0
Teacher	12.1	21.6	16.1
Employer/someone at work	3.5	2.0	2.9
Police/soldier	2.7	1.6	2.2
Male friend	31.5	46.8	38.0
Stranger	13.7	14.9	14.2
Other	1.9	1.4	1.7
Number of men	252	186	438

na = Not applicable

15.4 WOMEN'S EXPERIENCE OF FORCE AT SEXUAL INITIATION

The 2008 GDHS investigated women's experience of sexual violence, including a question on whether the respondent's first sexual intercourse was forced against her will. Because the idea of force can be interpreted in various ways, the question was worded as follows: 'The first time you had sexual intercourse, would you say that you had it because you wanted to or because you were forced to do it against your will?' Table 15.3 shows that 15 percent of women said their first sexual experience was forced against their will. This proportion is quite higher among those who first had sex before age 15 and at age 15-19. Almost one in four (25 percent) women reported that their first sexual intercourse was before age 15 and forced against their will. There is a large difference regarding whether their first sexual experience took place at the time they first married/cohabiting (9 percent) or before marriage/cohabitation (20 percent).

Table 15.3 Force at sexual initiation

Percentage of women age 15-49 who have ever had sexual intercourse who say that their first experience of sexual intercourse was forced against their will, by age at first sexual intercourse and whether first sexual intercourse was at the time of first marriage or before, Ghana 2008

Background characteristic	Percentage whose first sexual intercourse was forced against their will	Number of women who have ever had sex
Age at first sexual intercourse		
<15	24.9	191
15-19	16.0	1,330
20-24	8.9	398
25-29	5.1	48
30-49	*	10
First sexual intercourse was:		
At the time of first marriage/ first cohabitation	9.2	860
Before first marriage/ first cohabitation[1]	19.7	1,116
Total	14.9	2,069

Note: Total includes cases with information missing on age and time at first sexual intercourse that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
[1] Includes never-married women

In addition to the question on whether first sexual intercourse was forced, the 2008 GDHS included two sets of questions on sexual violence. Sexual violence limits women's ability to practice safe sex and to protect themselves from STIs and unwanted pregnancies (Krug et al., 2002). The first set of questions asked about sexual violence committed by their current spouse, if they were currently married, and the most recent spouse, if they were currently divorced, separated, or widowed. The second set asked all respondents, irrespective of marital status, whether they had ever, as a child or as an adult, experienced sexual violence. Sexual violence here includes being forced to have sexual intercourse or perform any other sexual acts against one's will. Tables 15.3 through 15.6 present the results on the experience of any sexual violence. The findings on sexual violence among women by a spouse or intimate partner are explored later in the chapter.

15.5 EXPERIENCE OF SEXUAL VIOLENCE AND PERPETRATORS OF SEXUAL VIOLENCE

As shown in Table 15.4, almost one in five women have experienced sexual violence (19 percent). Women age 20-24 are more likely than other women to have experienced sexual violence. Differentials on women's experience of sexual violence by employment, urban-rural residence, and marital status are small. Women with one or two living children are more likely than other women to have experienced sexual violence. By region, the proportion of women who have experienced sexual violence ranges from 13 percent in the Western region to 30 percent in the Upper West region. The likelihood of experiencing sexual violence increases with women's educational attainment—from 13 percent among women with no education to 22 percent among women with secondary or higher education. Sexual violence is also higher among women in the highest wealth quintile (22 percent) than those in the other wealth quintiles.

Table 15.5 shows the percent distribution of women who have experienced sexual violence, by age at first experience of sexual violence. In the GDHS questionnaire, if a respondent experienced sexual violence committed only by their current spouse/partner (or the most recent spouse if they are currently divorced/separated), and their sexual initiation was not forced against their will, information was not collected on age at first experience of sexual violence. These respondents are included in the 'Don't know' column, which represents 6 percent of women.

For half of women who ever experienced sexual violence, the first experience of such violence occurred at age 15-19; 11 percent first experience sexual violence at age 10-14; and 2 percent first experienced sexual violence before age 10. One in four women (24 percent) who experienced sexual violence first experienced it at age 20-49.

Table 15.4 Experience of sexual violence

Percentage of women age 15-49 who have ever experienced sexual violence, by background characteristics, Ghana 2008

Background characteristic	Percentage who have ever experienced sexual violence[1]	Number of women
Age		
15-19	16.5	475
20-24	26.6	470
25-29	19.1	407
30-39	19.9	647
40-49	10.9	443
Employment (past 12 months)		
Not employed	17.8	521
Employed for cash	18.9	1,568
Employed not for cash	19.2	352
Marital status		
Never married	20.4	771
Married or living together	17.2	1,425
Divorced/separated/ widowed	22.7	246
Number of living children		
0	19.8	812
1-2	22.9	742
3-4	13.9	532
5+	15.3	356
Residence		
Urban	19.6	1,178
Rural	18.0	1,264
Region		
Western	13.3	226
Central	21.1	216
Greater Accra	22.8	425
Volta	19.1	217
Eastern	18.3	239
Ashanti	18.2	501
Brong Ahafo	19.1	205
Northern	14.5	218
Upper East	15.7	133
Upper West	29.7	62
Education		
No education	13.2	508
Primary	19.3	495
Middle/JSS	20.0	997
Secondary+	22.0	441
Wealth quintile		
Lowest	18.1	400
Second	16.9	450
Middle	16.9	465
Fourth	19.4	536
Highest	21.5	590
Total	18.8	2,442

Note: Total includes cases with information missing on employment and education that are not shown separately.
[1] Includes those whose sexual initiation was forced against their will

Table 15.5 Age at first experience of sexual violence

Percent distribution of women age 15-49 who have experienced sexual violence by age at first experience of sexual violence, according to current age, Ghana 2008

	Age at first experience of sexual violence							
Current age	Less than 10 years	10-14 years	15-19 years	20-49 years	Don't know	Missing	Total	Number of women
15-19	3.7	23.3	63.6	na	2.4	6.9	100.0	79
20-24	0.6	12.0	59.6	16.0	5.6	6.3	100.0	125
25-29	1.6	4.2	50.9	36.4	4.9	2.0	100.0	78
30-39	1.6	9.4	37.0	35.4	6.4	10.1	100.0	129
40-49	2.7	6.2	36.4	33.9	10.6	10.2	100.0	48
Total	1.8	11.3	50.0	24.1	5.7	7.2	100.0	459

na = Not applicable

Table 15.6 shows that the main perpetrators of first experience of sexual violence against women are either current or former boyfriends. Overall, 30 percent of women who have experienced sexual violence experienced it at the hands of current or former boyfriends, while 19 percent experienced sexual violence committed by a current husband or partner. Other perpetrators of sexual violence reported by women are own friend or acquaintance (14 percent), former husband or partner (9 percent), and a family friend or a stranger (7 percent each).

Table 15.6 Persons committing sexual violence

Among women age 15-49 who have experienced sexual violence, percentage who reported that specific persons committed the sexual violence, by current marital status, Ghana 2008

	Marital status		
Person	Ever married	Never married	Total
Current husband/partner	28.7	na	18.8
Former husband/partner	14.1	na	9.3
Current/former boyfriend	17.4	53.3	29.8
Step father	0.3	0.0	0.2
Other relative	2.1	4.1	2.8
In-law	0.6	0.6	0.6
Own friend/acquaintance	10.1	20.7	13.7
Family friend	5.7	9.4	7.0
Teacher	0.8	2.7	1.5
Employer/someone at work	0.3	0.0	0.2
Police/soldier	0.3	0.0	0.2
Priest/religious leader	0.3	0.0	0.2
Stranger	6.7	7.1	6.9
Other	2.1	0.3	1.5
Missing	10.4	1.9	7.5
Number of women	301	158	459

na = Not applicable

15.6 EXPERIENCE OF DIFFERENT TYPES OF VIOLENCE

Table 15.7 shows the percentage of respondents who have received different combinations of physical and sexual violence, by age. Overall, 26 percent of women age 15-49 have experienced only physical violence, while 8 percent have experienced only sexual violence. Eleven percent of women have experienced both physical and sexual violence, and more than two in five women (45 percent) have experienced either physical or sexual violence. The likelihood of having experienced either physical or sexual violence increases with age, from 41 percent among women age 15-19 to 53 percent among women 20-24 before declining to 36 percent among women in their 40s.

Table 15.7 Experience of different forms of violence

Percentage of women age 15-49 who have experienced different forms of violence by current age, Ghana 2008

Age	Physical violence only	Sexual violence only[1]	Physical and sexual violence[1]	Physical or sexual violence[1]	Number of women
15-19	24.8	9.0	7.5	41.3	475
15-17	27.2	5.7	7.1	40.0	272
18-19	21.5	13.5	8.1	43.1	203
20-24	26.3	13.5	13.1	52.9	470
25-29	26.8	6.7	12.4	46.0	407
30-39	25.5	6.6	13.3	45.4	647
40-49	25.3	3.7	7.2	36.3	443
Total	25.7	7.9	10.9	44.5	2,442

[1] Includes forced sexual initiation

15.7 VIOLENCE DURING PREGNANCY

Women who have ever been pregnant were asked about the experience of physical violence during pregnancy. The findings presented in Table 15.8 indicate that overall, 5 percent of women in Ghana experienced physical violence while pregnant. By background characteristics, the results show that the likelihood of having experienced violence during pregnancy increases with the number of living children, from 4 percent among women with no living children to 7 percent among women who have five or more children. This relationship is not unexpected because women with more living children have had more pregnancies and thus greater exposure to the risk of physical violence during pregnancy.

Only 2 percent of never-married women who have ever been pregnant have been physically abused during pregnancy, compared with 8 percent of divorced, separated, or widowed women. The proportion of women who have ever experienced physical violence while pregnant are similar in urban and rural areas. By region, the experience of violence during pregnancy is highest among women in the Ashanti region, with women in the Eastern region least likely to have experienced violence during pregnancy. Women with primary education are more likely to experience physical violence during pregnancy than women in the other educational categories. Women in the middle wealth quintile are more likely to have experienced physical violence during pregnancy than women in the other wealth quintiles.

Table 15.8 Violence during pregnancy

Among women age 15-49 who have ever been pregnant, percentage who ever experienced physical violence during pregnancy, by background characteristics, Ghana 2008

Background characteristic	Percentage who have ever experienced physical violence during pregnancy	Number of women who have ever been pregnant
Age		
15-19	1.2	79
20-24	6.3	283
25-29	5.4	337
30-39	5.8	623
40-49	4.1	439
Marital status		
Never married	2.0	143
Married or living together	5.0	1,377
Divorced/separated/widowed	8.1	240
Number of living children		
0	3.9	131
1-2	5.0	742
3-4	4.4	532
5+	7.1	356
Residence		
Urban	5.5	772
Rural	4.9	989
Region		
Western	3.8	170
Central	6.9	166
Greater Accra	6.1	269
Volta	5.2	166
Eastern	1.5	173
Ashanti	7.7	353
Brong Ahafo	5.7	159
Northern	2.2	168
Upper East	4.2	94
Upper West	3.9	44
Education		
No education	4.9	469
Primary	7.0	396
Middle/JSS	4.6	680
Secondary+	4.1	215
Wealth quintile		
Lowest	2.7	315
Second	4.2	361
Middle	7.6	349
Fourth	6.8	385
Highest	4.1	351
Total	5.2	1,761

Note: Total includes cases with information missing on education that are not shown separately.

15.8 MARITAL CONTROL

Domestic violence is not limited to physical and sexual violence. Verbal abuse, restrictions on freedom of movement, and withholding funds can also constitute violent behaviour, and this section of the chapter examines women's and men's experiences of marital control. Table 15.9.1 shows the percentage of ever-married women whose husbands have ever exhibited various types of behaviours aimed at controlling their wife/partner.

To determine the degree of marital control husbands exercise over their wives, ever-married women were asked whether their current or last husband exhibited each of the following controlling behaviours: a) becomes jealous or gets angry if she talks to other men; b) accuses her of being unfaithful; c) does not permit meetings with female friends; d) tries to limit contact with her family; e) insists on knowing where she is at all times; and f) does not trust her with any money.

Table 15.9.1 Degree of marital control exercised by husbands, according to wives

Percentage of ever-married women age 15-49 whose husband/partner ever exhibited specific types of controlling behaviour, by background characteristics, Ghana 2008

Background characteristic	Percentage of women whose husband: Is jealous or angry if she talks to other men	Frequently accuses her of being unfaithful	Does not permit her to meet her female friends	Tries to limit her contact with her family	Insists on knowing where she is at all times	Does not trust her with any money	Displays three or more of the specified behaviours	Displays none of the specified behaviours	Number of women
Age									
15-19	46.8	29.8	3.9	4.2	54.0	9.9	19.9	26.1	52
20-24	44.8	20.8	22.1	7.3	57.3	11.2	29.9	30.4	232
25-29	40.6	18.4	16.1	6.9	52.7	11.7	21.7	33.3	337
30-39	38.7	16.9	15.3	6.5	51.4	11.4	20.1	32.8	612
40-49	32.6	11.8	9.0	5.4	42.9	10.4	14.1	43.9	437
Employment (past 12 months)									
Not employed	43.5	21.7	18.9	7.1	53.0	17.4	27.3	31.2	139
Employed for cash	36.7	16.4	13.0	6.2	47.5	9.9	18.3	37.4	1,325
Employed not for cash	46.8	15.7	20.2	5.6	67.2	15.1	27.2	24.3	205
Number of living children									
0	45.8	20.5	15.1	6.8	66.7	10.3	25.6	21.4	139
1-2	41.6	18.4	16.9	5.8	54.2	11.6	23.4	32.8	648
3-4	36.2	14.2	12.3	6.1	45.0	9.9	15.9	37.9	528
5+	34.0	16.3	12.6	7.4	44.8	12.4	18.7	41.2	356
Marital status and duration									
Currently married woman	37.6	16.0	13.7	5.9	50.5	10.4	19.5	35.6	1,425
Married only once	36.2	13.6	12.8	5.7	49.6	9.7	17.9	37.0	1,079
Marital duration									
0-4 years	37.3	14.8	11.2	5.4	51.2	10.7	19.4	33.7	253
5-9 years	37.8	13.4	14.0	3.6	51.2	10.9	19.7	36.8	247
10+ years	35.0	13.2	13.0	6.7	48.1	8.8	16.4	38.5	580
Married more than once	42.0	23.3	16.5	6.5	53.5	12.5	24.4	31.2	346
Divorced/separated/ widowed	44.6	21.6	18.4	8.9	49.4	15.4	24.6	33.5	246
Residence									
Urban	39.1	15.1	15.5	5.0	53.7	11.2	19.6	32.5	712
Rural	38.2	18.1	13.6	7.3	47.9	11.1	20.6	37.3	959
Region									
Western	26.4	13.2	9.3	6.5	48.3	5.7	14.9	44.2	167
Central	37.5	13.7	15.7	6.5	69.4	10.9	20.9	20.2	152
Greater Accra	34.4	13.1	10.0	4.4	45.7	12.7	14.8	38.2	240
Volta	39.9	20.5	11.5	5.2	24.5	16.9	17.1	51.1	171
Eastern	31.9	14.4	9.0	10.0	35.1	4.0	13.8	49.0	153
Ashanti	41.9	24.8	19.2	5.4	51.5	11.2	26.0	34.1	328
Brong Ahafo	46.0	14.4	18.5	2.6	66.1	4.1	19.5	22.6	160
Northern	52.8	14.2	19.7	11.5	59.2	19.7	30.1	22.9	161
Upper East	27.7	12.4	11.2	6.1	57.8	4.5	16.4	34.1	93
Upper West	49.3	23.2	19.2	9.2	55.7	32.4	32.3	30.5	46
Education									
No education	34.3	11.7	12.6	6.8	47.1	10.0	16.6	38.4	464
Primary	43.7	22.3	16.7	8.9	54.1	14.7	25.3	30.5	388
Middle/JSS	40.5	19.6	16.0	4.7	52.8	10.0	21.6	34.5	628
Secondary+	32.5	8.8	9.1	5.4	42.3	10.2	14.0	39.6	190
Wealth quintile									
Lowest	37.9	16.3	14.1	7.4	46.9	13.3	21.0	38.7	314
Second	36.5	18.2	13.4	8.4	47.3	11.8	19.0	36.6	335
Middle	42.2	18.5	15.9	5.6	52.3	12.3	23.1	32.6	329
Fourth	41.8	19.5	17.1	5.5	54.6	8.8	22.6	32.7	357
Highest	34.4	11.3	11.3	4.9	50.1	9.8	15.3	36.0	336
Total	38.6	16.8	14.4	6.3	50.3	11.1	20.2	35.3	1,671

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women. Total includes cases with information missing on employment and education that are not shown separately

The accumulation of such behaviours is more significant than the results for any single behaviour and so, the proportion of women whose husbands exhibited at least three of the specified behaviours is highlighted.

The findings show that half of ever-married women reported that their husband insists on knowing where they are at all times; more than one-third (39 percent) said that their husband is jealous or angry if they talk to other men; and 17 percent said that their husband frequently accuses

them of being unfaithful. About one in seven women reported that their husband does not allow them to meet with their female friends, and one in ten said that their husband does not trust them with money. Relatively uncommon is the husband's attempt to limit the wife's contact with her family (reported by only 6 percent of ever-married women). Twenty percent of women said that their husband exhibits three or more of the controlling behaviours, and 35 percent said that their husband exhibits none of the controlling behaviours.

The proportion of ever-married women who reported that their husband exhibits three or more of the specified behaviours is lower among women in their 40s than younger women. There is an inverse relationship between the number of living children a woman has and the degree of control her husband exercises over her. For example, 26 percent of women with no living children reported that their husband exhibits three or more of the specified controlling behaviours, compared with 19 percent of women with five or more children. Women who married more than once and formerly married women (about 25 percent each) are more likely than currently married women (20 percent) to say that their former husband exhibited three or more of the controlling behaviours.

The extent to which husbands exhibit three or more controlling behaviour does not vary much by urban-rural residence but it does vary by region; men in the Eastern, Greater Accra, and Western regions are the least likely to exercise controlling behaviour over their wives. Women with secondary or higher education and those in the highest wealth quintile report lower proportions of controlling behaviour exhibited by their husbands.

In addition to questions about the six controlling behaviours described in Table 15.9.1, ever-married women were asked whether their current (last) husband refuses to have sexual intercourse with her; ever-married women with children living elsewhere were asked if their husband prevents her from seeing her children; and ever-married women with children three years and older were asked whether their husband refuses to pay the children's school fees. Less than 10 percent of interviewed women answered affirmatively to these questions: 6 percent of ever-married women said that their current or most recent husband/partner refuses to have sexual intercourse with her. Five percent of ever-married women with children living elsewhere said that their current or most recent husband prevents her from seeing her children, and 6 percent of women with school age children said that her husband refuses to pay their school fees (data not shown).

To determine the degree of marital control wives exercise over their husbands, ever-married men were asked similar questions about controlling behaviour exhibited by their current or last wife (with the exception of the question on whether she trusts him with any money).

Table 15.9.2 shows the percentage of ever-married men age 15-49 who reported that their wives or partners displayed each of the specified controlling behaviours, by background characteristics. Half of ever-married men (52 percent) either said that their wives/partners insist on knowing where they are at all times or that their wives/partners are jealous or angry if they talk to other women (50 percent). Three in ten ever-married men said that their wives frequently accuse them of being unfaithful, and one in ten said that their wives do not allow them to meet with their male friends. The only behaviour that is relatively uncommon is the wife attempts to limit the husband's contact with his family (reported by only 7 percent of ever-married men). Twenty-six percent of men said that their wives exhibit three or more of the controlling behaviours, and 29 percent said that their wives display none of the specified behaviours.

The proportion of ever-married men who reported that their wives exhibit three or more of the specified controlling behaviours decreases with increasing age and number of living children. For example, one-third of men with no living children said that their wives exhibit three or more of the specified controlling behaviours, compared with 17 percent of men with five or more children.

Table 15.9.2 Degree of marital control exercised by wives, according to husbands

Percentage of ever-married men age 15-49 whose wives/partner ever exhibited specific types of controlling behaviour, by background characteristics, Ghana 2008

Background characteristic	Percentage of men whose wife:							Number of men
	Is jealous or angry if he talks to other women	Frequently accuses him of being unfaithful	Does not permit him to meet his male friends	Tries to limit his contact with his family	Insists on knowing where he is at all times	Displays three or more of the specified behaviours	Displays none of the specified behaviours	
Age								
15-19	*	*	*	*	*	*	*	2
20-24	52.6	41.3	20.5	4.0	68.2	41.2	19.4	27
25-29	56.8	36.1	22.2	4.7	46.6	31.7	25.2	86
30-39	52.9	33.8	12.4	4.8	53.0	27.1	29.3	276
40-49	41.9	24.0	7.9	10.2	49.7	18.7	31.9	190
Employment (past 12 months)								
Not employed	*	*	*	*	*	*	*	9
Employed for cash	49.7	31.2	12.6	5.9	54.4	26.3	28.2	495
Employed not for cash	48.2	28.3	16.5	8.4	36.6	22.4	36.8	76
Number of living children								
0	49.9	34.2	24.4	6.2	65.2	34.3	20.5	56
1-2	57.5	38.0	12.9	6.4	53.4	30.3	25.5	242
3-4	46.9	28.2	10.8	6.7	49.9	22.5	29.6	181
5+	37.8	18.4	11.2	6.6	44.2	16.9	41.4	101
Marital status and duration								
Currently married men	47.7	29.4	13.0	6.3	52.2	24.7	30.0	534
Married only once	50.3	31.5	13.6	6.3	52.2	25.3	27.7	363
Marital duration								
0-4 years	50.5	33.9	19.4	6.6	61.4	32.0	24.9	98
5-9 years	53.0	32.7	11.1	3.3	43.2	22.3	30.8	112
10+ years	48.1	29.0	11.8	8.4	52.8	23.1	27.2	153
Married more than once	42.3	25.1	11.6	6.1	52.3	23.3	34.8	170
Divorced/separated/ widowed	(76.4)	(50.8)	(14.1)	(9.4)	(47.8)	(40.6)	(18.3)	47
Residence								
Urban	57.8	33.7	14.0	9.9	56.2	26.7	22.3	252
Rural	44.1	29.2	12.4	3.9	48.5	25.4	34.2	328
Region								
Western	41.0	32.3	11.0	5.8	52.8	23.4	34.4	56
Central	(45.0)	(20.1)	(10.1)	(0.0)	(62.8)	(19.6)	(28.8)	52
Greater Accra	44.1	29.2	10.2	14.9	51.8	24.5	33.3	98
Volta	63.6	32.8	5.1	5.0	45.3	22.1	21.1	52
Eastern	49.3	30.2	22.9	6.4	37.8	28.8	37.2	63
Ashanti	56.5	40.8	12.8	4.7	66.9	35.6	20.2	106
Brong Ahafo	69.1	38.4	16.4	9.0	74.2	42.8	18.9	44
Northern	42.0	26.1	16.4	2.7	39.4	16.9	35.9	69
Upper East	44.3	19.9	12.2	3.1	16.0	8.8	28.0	30
Upper West	(40.2)	(33.3)	(14.2)	(14.7)	(48.4)	(25.7)	(39.8)	11
Education								
No education	42.6	26.6	12.2	4.1	38.7	16.1	31.8	116
Primary	52.1	38.1	16.7	4.0	51.5	30.4	31.9	73
Middle/JSS	47.5	32.1	9.9	8.3	53.1	25.5	30.2	260
Secondary+	60.9	29.7	18.2	6.6	61.6	33.4	22.0	131
Wealth quintile								
Lowest	40.5	25.3	16.4	2.7	39.7	19.2	33.6	103
Second	50.0	34.6	12.5	5.1	55.2	31.7	31.6	117
Middle	48.7	28.5	9.9	2.8	52.4	20.5	30.4	88
Fourth	52.4	32.1	11.5	8.4	48.7	25.0	31.9	152
Highest	56.3	33.7	15.1	11.4	62.4	31.3	18.0	121
Total	50.0	31.2	13.1	6.5	51.8	25.9	29.0	581

Note: Wife/partner refers to the current wife/partner for currently married men and the most recent wife/partner for divorced, separated or widowed men. Total includes cases missing information on education that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

Women in Brong Ahafo and Ashanti regions are substantially more likely to exercise control over their husbands than women in other regions. Men with no education and those in the lowest wealth quintile report lower proportions of controlling behaviour exhibited by their wives.

In addition to the five controlling behaviours described in the Table 15.9.2, all ever-married men were additionally asked whether their current or last wife exhibited each of the following controlling behaviours: frequently complains that he does not provide enough money; refuses to have sex with him, and refuses to cook him food. One in five men said their wife often complains about the money, 14 percent complained that she refuses to have sex with him, and only 6 percent said she refused to cook for him (data not shown).

15.9 TYPES OF SPOUSAL VIOLENCE

This section of the chapter is devoted to violence perpetrated by intimate partners who are married to the respondent, or who live with the respondent as if married. Since spousal or intimate partner violence is the most common form of violence for women age 15-49, the 2008 GDHS collected detailed information on the different types of violence experienced—physical, sexual, and emotional. Currently married women were asked about violence perpetrated by their current husband, and formerly married women were asked about violence perpetrated by their most recent husband. Respondents were asked about seven specific acts of physical violence, two acts of sexual violence, and three acts of emotional violence. The acts are listed in Table 15.10.1.

Table 15.10.1 Forms of spousal violence: Women

Percentage of ever-married women age 15-49 who have experienced various forms of violence committed by their husband/partner, ever and in the 12 months preceding the survey, Ghana 2008

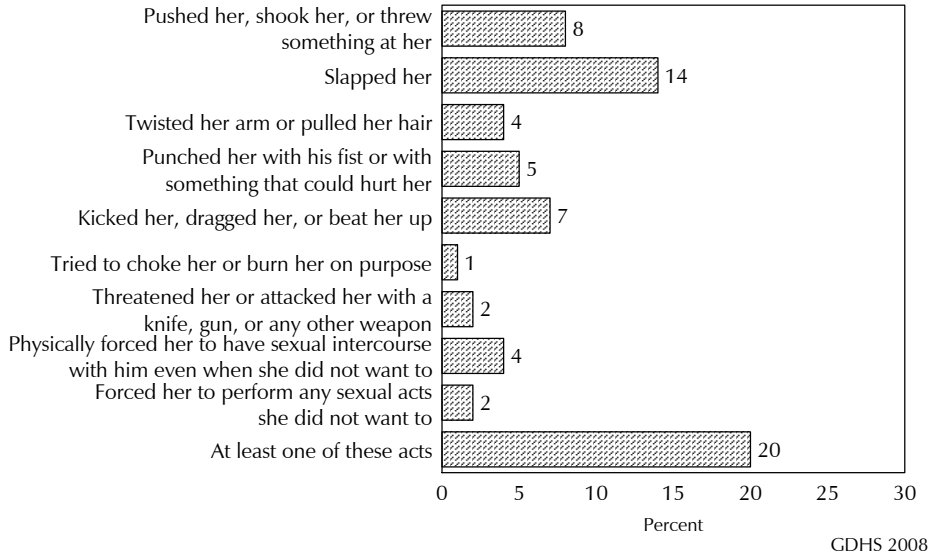
		In the past 12 months[1]		
Type of violence	Ever	Often	Sometimes	Any
Physical violence				
Any	**20.6**	**3.4**	**14.6**	**18.0**
Pushed her, shook her, or threw something at her	9.2	1.6	6.7	8.2
Slapped her	16.2	2.4	11.3	13.7
Twisted her arm or pulled her hair	4.5	0.7	3.1	3.8
Punched her with his fist or with something that could hurt her	5.2	1.2	3.4	4.6
Kicked her, dragged her, or beat her up	8.0	1.4	5.4	6.8
Tried to choke her or burn her on purpose	1.4	0.1	0.9	1.1
Threatened her or attacked her with a knife, gun, or any other weapon	1.7	0.3	1.2	1.5
Sexual violence				
Any	**8.2**	**1.3**	**3.9**	**5.2**
Physically forced her to have sexual intercourse with him even when she did not want to	5.2	1.1	3.3	4.4
Forced her to perform any sexual acts she did not want to	2.7	0.4	1.8	2.2
Sexual initiation was with current or most recent husband and was forced[2]	2.7	na	na	na
Emotional violence				
Any	**33.4**	**9.1**	**21.7**	**30.8**
Said or did something to humiliate her in front of others	17.7	4.8	11.3	16.1
Threatened to hurt or harm her or someone close to her	9.1	3.0	5.5	8.4
Insulted her or made her feel bad about herself	28.3	7.6	18.3	26.0
Any form of physical or sexual violence or both[3]	**22.9**	**4.1**	**15.9**	**20.0**
Any form of physical and sexual violence[3]	**3.9**	**0.6**	**2.2**	**2.8**
Any form of emotional or physical or sexual violence or all three forms of violence[3]	**38.7**	**10.0**	**24.8**	**34.9**
Any form of emotional and physical and sexual violence[3]	**3.1**	**0.6**	**1.1**	**1.7**
Number of ever-married women	1,671	1,608	1,608	1,608

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women
na = Not applicable
[1] Excludes widows
[2] Excludes women who have been married more than once because their sexual initiation could not have been with the current/most recent partner
[3] Excludes cases of forced sexual initiation involving the current or most recent husband

Table 15.10.1 shows that 21 percent of ever-married women have ever experienced physical violence at the hands of their husband or partner, and 18 percent have experienced physical violence in the past 12 months. Eight percent have ever experienced sexual violence, and 5 percent experienced sexual violence in the past 12 months. The findings also show that one in three women has experienced emotional violence ever and in the past 12 months. Overall, 2 in 5 of ever-married women (39 percent) have experienced some kind of violence (physical, sexual, or emotional) by a husband or partner.

Among the physical acts of violence experienced by women in the past 12 months, slapping was the most commonly reported act, experienced by 14 percent of women. Eight percent of women were pushed, shaken, or had something thrown at them by their husband or partner, and 7 percent were kicked, dragged, or beaten up. Four percent of women were forced to have sex by their husband/partner when they did not want to (Figure 15.1).

Figure 15.1 Percentage of Ever-married Women Who Have Experienced Specific Forms of Physical or Sexual Violence Committed by Their Current or Most Recent Husband/Partner During the Past 12 Months



Rates of spousal or intimate partner violence against men are lower than those for women (Table 15.10.2). Eleven percent of men reported they have ever experienced physical violence by their wives or partners, with about the same proportion having experienced such violence in the past 12 months. Almost one in four ever-married men (25 percent) experienced emotional violence ever and in the past 12 months (23 percent).

Among the physical acts of spousal or intimate partner violence experienced by men in the past 12 months, being pushed, shaken, or having something thrown at him were the most commonly reported acts, experienced by 6 percent of men at the hands of their wives or partners (Figure 15.2).

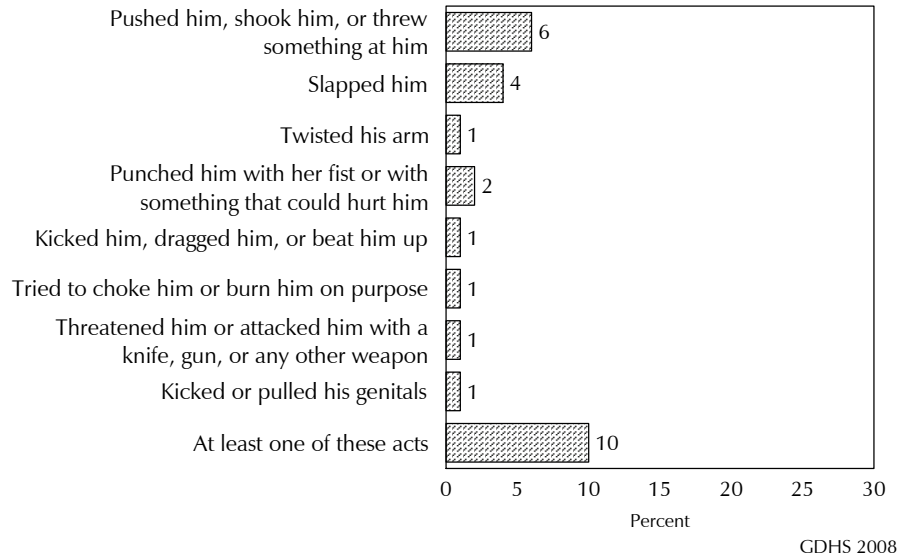
Table 15.10.2 Forms of spousal violence: Men

Percentage of ever-married men age 15-49 who have experienced various forms of violence committed by their wife/partner, ever and in the 12 months preceding the survey, Ghana 2008

Type of violence	Ever	In the past 12 months[1]		
		Often	Sometimes	Any
Physical violence				
Any	**11.2**	**0.4**	**10.0**	**10.4**
Pushed him, shook him, or threw something at him	7.0	0.4	5.8	6.2
Slapped him	3.8	0.2	3.5	3.7
Twisted his arm	2.0	0.0	1.4	1.4
Punched him with her fist or with something that could hurt him	2.7	0.2	2.2	2.4
Kicked him, dragged him, or beat him up	1.2	0.0	1.1	1.1
Tried to choke him or burn him on purpose	1.1	0.0	0.6	0.6
Threatened him or attacked him with a knife, gun, or any other weapon	1.0	0.0	1.0	1.0
Kicked or pulled his genitals	1.5	0.0	1.4	1.4
Emotional violence				
Any	**24.8**	**4.1**	**18.6**	**22.7**
Said or did something to humiliate him in front of others	14.2	2.6	10.9	13.5
Threatened to hurt or harm him or someone close to him	7.3	0.7	5.3	6.1
Insulted him or made him feel bad about himself	15.3	2.2	11.8	14.0
Screamed or shouted at him	13.9	2.0	10.4	12.4
Any form of emotional or physical violence or both	**27.6**	**4.2**	**21.1**	**25.3**
Any form of emotional and physical violence	**8.4**	**0.3**	**6.6**	**6.9**
Number of ever-married men	581	575	575	575

Note: Wife/partner refers to the current wife/partner for currently married men and the most recent wife/partner for divorced, separated or widowed men
[1] Excludes widowers

Figure 15.2 Percentage of Ever-married Men Who Have Experienced Specific Forms of Physical Violence Committed by Their Current or Most Recent Wife/Partner During the Past 12 Months



GDHS 2008

Tables 15.11.1 and 15.11.2 show the experience of spousal violence among ever-married women and ever-married men by background characteristics. Women age 15-19 are generally less likely to have experienced emotional, physical, or sexual violence than those in the older age groups. The exception is sexual violence, which is most common among ever married women age 15-19. The findings show that those who are employed but not for cash are most likely to experience all three types—emotional, physical, or sexual violence (44 percent), with the highest proportion experiencing emotional violence (38 percent).

As expected, marital status shows a strong association with experience of violence. Women who are divorced, separated, or widowed are most likely to have experienced each type of violence than other women. This finding suggests that the experience of violence may have contributed to the likelihood of termination of a relationship. Currently married women who have married more than once are more likely to experience emotional, physical, or sexual violence than currently married women married only once. Among women who have been married only once, the likelihood of having experienced violence increases with the duration of the union.

By residence, urban women are slightly more likely to experience each type of violence than rural women. Women in the Northern, Ashanti, Upper West, Central, and Greater Accra regions are more likely to have experienced emotional, physical, or sexual violence than their counterparts in other regions. Women with primary education are most likely to have suffered each type of violence at the hands of their husband. Women with a history of family violence—whose father beat their mother or whose mother beat their father—are more likely themselves to experience all three types of violence from a husband or partner than women whose fathers or mothers were not abusive.

Among ever-married men there is no clear pattern by age in the experience of emotional and physical violence committed by wives (Table 15.11.2). However, men in their 40s are generally less likely to have experienced emotional and especially physical violence than those in the younger age groups. The findings also show that spousal violence generally decreases with increasing number of children. Divorced, separated, or widowed men are more likely to have experienced each type of violence than other men. Unlike women, currently married men married once are more likely to experience emotional and physical violence by their wives than currently married men who have married more than once. However, this relationship does not extend to physical violence. Differences in the experience of violence by urban-rural residence are small, although violence committed by wives is more prominent in urban than rural areas (30 and 26 percent, respectively).

Notably, the experience of spousal emotional and physical violence among men living in Brong Ahafo is higher (42 percent) than the national average, mostly because of a high proportion of men who report experiencing emotional violence. By educational attainment, men with no education are least likely to have experienced each type of spousal violence, and men with primary education are most likely to have experienced each type (46 percent), they also have the highest proportion who have experienced emotional violence (44 percent). There is no clear pattern in the experience of spousal violence by wealth quintile. However, men in the middle quintile are more likely to experience emotional violence than other men. Similar to women, men whose father beat their mother are more likely to experience spousal violence themselves; however there is no difference by family history of maternal violence against their father.

Table 15.11.1 Spousal violence by background characteristics: Women

Percentage of ever-married women age 15-49 who have ever experienced emotional, physical, or sexual violence committed by their husband/partner, by background characteristics, Ghana 2008

Background characteristic	Emotional violence	Physical violence	Sexual violence[1]	Physical or sexual violence[1]	Emotional, physical or sexual violence[1]	Number of women
Age						
15-19	26.8	17.8	9.9	22.8	35.1	52
20-24	32.7	22.0	5.9	23.9	36.8	232
25-29	33.7	21.5	6.4	22.8	40.2	337
30-39	33.0	18.8	7.1	22.5	37.9	612
40-49	34.9	22.1	4.5	23.1	40.2	437
Employment (past 12 months)						
Not employed	29.7	20.2	6.9	23.4	37.4	139
Employed for cash	33.0	20.7	6.3	23.0	38.0	1,325
Employed not for cash	37.6	19.1	4.5	21.1	43.5	205
Number of living children						
0	33.8	19.1	5.3	23.5	36.2	139
1-2	30.5	19.0	6.7	20.6	36.2	648
3-4	36.7	21.2	6.1	24.2	42.3	528
5+	33.7	23.3	5.6	24.9	39.1	356
Marital status and duration						
Currently married women	31.7	18.5	5.6	20.7	37.1	1,425
Married only once	28.6	17.9	5.2	20.1	34.1	1,079
Marital duration						
0-4 years	25.6	14.6	4.2	16.6	30.0	253
5-9 years	25.2	21.6	6.9	23.7	32.7	247
10+ years	31.3	17.8	5.0	20.1	36.5	580
Married more than once	41.3	20.2	6.8	22.6	46.4	346
Divorced/separated/widowed	43.6	33.0	9.6	35.9	48.3	246
Residence						
Urban	35.0	22.0	5.3	23.8	40.7	712
Rural	32.2	19.6	6.8	22.2	37.3	959
Region						
Western	22.1	10.9	6.1	15.1	26.8	167
Central	36.7	28.4	5.9	30.0	44.3	152
Greater Accra	37.2	19.7	7.3	21.8	41.1	240
Volta	23.4	16.0	7.2	19.2	27.1	171
Eastern	23.4	18.4	8.0	22.8	32.5	153
Ashanti	42.5	25.3	5.2	27.4	46.3	328
Brong Ahafo	33.7	19.4	3.9	20.9	39.2	160
Northern	44.5	21.6	2.1	21.6	49.4	161
Upper East	18.2	21.0	11.7	22.5	27.6	93
Upper West	39.8	25.5	9.9	28.0	45.1	46
Education						
No education	30.1	19.1	5.1	21.1	34.9	464
Primary	37.7	25.6	6.4	27.1	43.1	388
Middle/JSS	34.4	21.8	8.1	25.2	40.8	628
Secondary+	29.5	10.2	2.4	11.3	32.5	190
Wealth quintile						
Lowest	30.5	20.0	6.4	22.0	36.3	314
Second	31.1	18.9	7.7	22.0	35.3	335
Middle	35.1	24.4	5.3	26.7	41.8	329
Fourth	36.5	22.5	5.6	23.9	41.9	357
Highest	33.5	17.2	5.9	19.9	38.0	336
Respondent's father beat her mother						
Yes	42.8	32.9	16.9	40.0	52.4	206
No	31.8	18.6	4.7	20.4	36.7	1,361
Don't know	36.5	22.5	4.0	22.5	38.4	102
Respondent's mother beat her father						
Yes	55.0	28.4	15.8	37.3	57.1	50
No	32.0	19.9	6.0	22.1	37.6	1,529
Don't know	44.5	29.3	4.6	29.3	46.7	88
Total	33.4	20.6	6.2	22.9	38.7	1,671

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated or widowed women. Total includes cases with information missing on employment, education, whether respondent's father beat her mother and whether respondent's mother beat her father that are not shown separately.

[1] Excludes cases of forced first sex

Table 15.11.2 Spousal violence by background characteristics: Men

Percentage of ever-married men age 15-49 who have ever experienced emotional or physical violence committed by their wife/partner, by background characteristics, Ghana 2008

Background characteristic	Emotional violence	Physical violence	Physical or emotional violence	Number of men
Age				
15-19	*	*	*	2
20-24	25.1	10.3	29.8	27
25-29	31.4	16.9	33.4	86
30-39	25.2	12.4	29.4	276
40-49	21.2	7.2	22.0	190
Employment (past 12 months)				
Not employed	*	*	*	9
Employed for cash	24.6	11.6	27.7	495
Employed not for cash	24.7	7.4	25.6	76
Number of living children				
0	29.8	5.6	30.2	56
1-2	27.0	16.1	31.7	242
3-4	22.4	10.2	24.9	181
5+	21.2	4.6	21.2	101
Marital status and duration				
Currently married men	21.9	9.9	24.9	534
Married only once	23.0	11.1	26.4	363
Marital duration				
0-4 years	24.0	8.7	27.2	98
5-9 years	22.5	17.0	28.8	112
10+ years	22.7	8.2	24.0	153
Married more than once	19.8	7.4	21.7	170
Divorced/separated/widowed	(57.6)	(26.7)	(58.9)	47
Residence				
Urban	26.7	13.2	30.2	252
Rural	23.4	9.7	25.6	328
Region				
Western	18.5	8.8	20.4	56
Central	(24.3)	(7.2)	(26.4)	52
Greater Accra	20.3	10.8	26.4	98
Volta	30.2	13.5	32.6	52
Eastern	32.2	12.1	37.4	63
Ashanti	29.4	18.5	31.3	106
Brong Ahafo	40.0	21.4	42.3	44
Northern	15.0	1.6	15.0	69
Upper East	12.2	2.1	14.3	30
Upper West	(22.6)	(6.1)	(22.6)	11
Education				
No education	19.3	7.0	20.5	116
Primary	43.6	16.2	45.5	73
Middle/JSS	24.1	10.3	27.1	260
Secondary+	20.8	14.2	25.3	131
Wealth quintile				
Lowest	23.4	7.3	24.2	103
Second	26.1	11.3	30.3	117
Middle	31.5	12.5	33.9	88
Fourth	21.5	13.7	24.6	152
Highest	24.0	10.5	27.1	121
Respondent's father beat his mother				
Yes	31.2	15.9	33.9	161
No	21.4	9.9	24.7	516
Don't know	31.3	7.8	31.3	55
Respondent's mother beat his father				
Yes	(24.5)	(16.7)	(27.6)	35
No	24.0	10.7	27.1	662
Don't know	(29.7)	(12.7)	(29.7)	35
Total	24.8	11.2	27.6	581

Note: Wife/partner refers to the current wife/partner for currently married men and the most recent wife/partner for divorced, separated or widowed men. Total includes cases with information missing on education that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

15.10 VIOLENCE BY SPOUSAL CHARACTERISTICS AND WOMEN'S INDICATORS

Because the perpetrators of spousal violence are usually husbands or partners, it is important to understand the characteristics of husbands. It is also useful to examine whether spousal violence varies with indicators of women's status. Table 15.12 shows the percentage of ever-married women who have ever experienced different forms of spousal violence by the current or most recent husband, by spousal characteristics and women's empowerment indicators.

There are small differences in the extent of emotional violence by the level of husband's education, although it is less commonly reported by women whose husbands have no education. Physical violence is twice as common among women whose husbands have primary education as women whose husbands have secondary or higher education (31 and 16 percent, respectively). Emotional, physical or sexual violence are more commonly reported by women whose husbands have primary education (45 percent).

Husband's alcohol consumption is strongly related to the wife's reporting of violence. For example, the proportion of ever-married women who report having experienced physical violence from their husbands varies from 30 percent among those whose husbands do not drink at all to 69 percent among those whose husbands get drunk very often.

Women who are older than their husbands are more likely to experience spousal violence than those who are younger than their husbands. Women in marriages in which neither spouse is educated are the least likely to report experiencing violence from their husbands than those with more education than their husbands.

Results show that there is a strong relationship between women's empowerment status and their experience of spousal violence. Women whose husbands display five to six controlling behaviours are most likely to report experiencing emotional violence by their husbands than women whose husbands display no controlling behaviours (76 and 16 percent, respectively). There are similar differences for physical and sexual violence.

Surprisingly, women who do not participate in household decisions were less likely to experience spousal violence than women who participate in three or four decisions. Women with one or more reasons justifying the refusal to have sexual intercourse with their husbands are most likely to experience emotional violence from their husbands than those with no reasons (35 and 27 percent, respectively). Views about wife beating also appear to be related to actual experience of physical abuse. Women who believe that wife beating is justified in all five of the specified circumstances are more likely to report having experienced physical violence from their husbands than women who do not think wife beating is justified for any reason (31 and 17 percent, respectively). To some extent, this pattern could be due to women's rationalisation of the abuse they have experienced.

Table 15.12 Spousal violence by husband's characteristics and empowerment indicators

Percentage of ever-married women age 15-49 who have ever experienced emotional, physical, or sexual violence committed by their current husband/partner, by his characteristics, marital characteristics, and empowerment indicators, Ghana 2008

Characteristic	Emotional violence	Physical violence	Sexual violence[1]	Physical or sexual violence[1]	Emotional, physical or sexual violence[2]	Number of women
Husband/partner's education						
No education	31.5	19.5	5.1	20.4	36.7	320
Primary	33.6	31.3	6.9	31.9	44.5	116
Middle/JSS	34.2	21.4	7.1	24.8	39.2	718
Secondary+	32.5	16.1	5.8	18.3	37.3	426
Don't know/missing	37.9	25.4	3.9	27.0	42.0	90
Spousal education difference						
Husband has more education	32.5	21.0	6.9	23.4	38.3	869
Wife has more education	41.0	24.2	8.7	26.1	47.2	197
Both have equal education	33.2	17.9	4.5	21.2	37.1	258
Neither has any education	28.1	17.1	3.7	18.1	32.9	237
Don't know/missing	38.8	24.5	5.0	27.7	43.2	110
Husband/partner's alcohol consumption						
Does not drink	25.0	13.7	3.6	15.2	29.5	1,038
Drinks alcohol but is never drunk	36.3	14.0	8.6	17.9	42.8	78
Is sometimes drunk	43.4	27.5	8.0	31.3	50.5	406
Is often drunk	63.4	54.4	18.5	57.0	69.4	147
Spousal age difference[1]						
Wife older	37.3	25.6	8.4	27.6	48.8	48
Wife 0-4 years younger	33.1	20.7	5.0	22.6	38.1	526
Wife 5-9 years younger	33.5	19.5	7.0	22.1	39.8	443
Wife 10 or more years younger	27.1	13.6	4.5	15.8	31.5	392
Number of marital control behaviours displayed by husband/partner						
0	15.5	8.5	2.4	9.8	18.9	589
1-2	33.6	19.4	5.3	22.0	40.4	744
3-4	61.8	40.1	11.0	43.3	66.8	278
5-6	75.7	64.9	32.8	68.7	82.9	60
Number of decisions in which she participates[2]	24.1	10.3	3.9	14.0	25.4	64
0	36.3	19.7	7.8	22.8	40.1	299
1-2	32.9	21.4	6.6	23.8	40.3	698
3-4	26.9	13.4	2.3	14.1	30.6	365
Number of reasons given for refusing to have sexual intercourse with husband						
0	27.3	13.9	4.0	13.9	31.8	72
1-2	34.7	19.2	6.5	22.2	39.9	540
3	33.2	21.8	6.2	23.9	38.6	1,059
Number of reasons for which wife beating is justified						
0	28.5	17.4	5.5	19.5	33.8	1,043
1-2	43.1	26.5	7.6	29.2	48.7	341
3-4	36.2	23.6	6.4	26.2	41.4	224
5	52.6	31.3	10.0	33.5	57.1	64
Total	33.4	20.6	6.2	22.9	38.7	1,671

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated or widowed women. Total includes cases missing information on husband/partner's alcohol consumption and spouse's age difference that are not shown separately.

[1] Excludes cases of forced first sex

[2] Includes only currently married women

15.11 FREQUENCY OF SPOUSAL VIOLENCE BY HUSBANDS

Table 15.13 shows the percent distribution of ever-married women (excluding widows) who reported emotional violence and physical or sexual violence by current or most recent spouse in the 12 months preceding the survey by frequency with which violence was experienced, according to selected background characteristics. Ninety-three percent of women who ever experienced emotional violence by their current or most recent husband have experienced such violence in the 12 months preceding the survey, and 27 percent of them experienced emotional violence often. Similarly, 88 percent of women who have ever experienced physical or sexual violence by their current or most recent husband have experienced such violence in the 12 months preceding the survey, and 18 percent have experienced such violence often.

Table 15.13 Frequency of spousal violence among women who report violence

Among ever-married women age 15-49 (excluding widows), percent distribution of those who have ever experienced emotional violence committed by their current or most recent husband/partner by frequency of violence in the 12 months preceding the survey; and percent distribution of those who have ever experienced physical or sexual violence committed by their current or most recent husband/partner by frequency of violence in the 12 months preceding the survey, according to background characteristics, Ghana 2008

Background characteristic	Frequency of emotional violence in the past 12 months					Frequency of physical or sexual violence in the past 12 months				
	Often	Some-times	Not at all	Total	Number of women	Often	Some-times	Not at all	Total	Number of women
Age										
15-19	*	*	*	100.0	14	*	*	*	100.0	12
20-24	26.6	64.9	8.5	100.0	74	14.2	73.5	12.3	100.0	55
25-29	27.5	64.6	7.9	100.0	110	21.1	67.4	11.5	100.0	75
30-39	30.8	62.5	6.6	100.0	196	18.4	67.7	13.9	100.0	135
40-49	24.1	68.9	7.0	100.0	138	18.9	68.8	12.3	100.0	89
Employment (past 12 months)										
Not employed	(25.1)	(70.9)	(4.0)	100.0	40	(19.8)	(73.4)	(6.9)	100.0	32
Employed for cash	28.7	62.9	8.4	100.0	413	17.6	68.6	13.7	100.0	289
Employed not for cash	20.7	77.4	1.9	100.0	77	15.8	76.7	7.6	100.0	43
Number of living children										
0	16.8	77.7	5.5	100.0	46	(12.1)	(76.5)	(11.4)	100.0	32
1-2	29.3	64.2	6.5	100.0	189	14.6	74.5	10.9	100.0	130
3-4	25.9	66.9	7.2	100.0	189	19.2	65.3	15.6	100.0	126
5+	31.3	60.2	8.5	100.0	109	23.3	66.9	9.9	100.0	79
Marital status and duration										
Currently married woman	25.6	68.8	5.6	100.0	449	17.5	72.9	9.5	100.0	295
Married only once	22.7	72.2	5.1	100.0	306	16.5	74.3	9.1	100.0	217
Marital duration										
0-4 years	15.2	77.2	7.6	100.0	65	(8.7)	(85.8)	(5.4)	100.0	42
5-9 years	25.1	73.9	1.0	100.0	61	15.6	72.4	12.0	100.0	58
10+ years	24.5	69.8	5.6	100.0	181	19.8	71.2	9.0	100.0	116
Married more than once	32.0	61.5	6.5	100.0	142	20.3	69.0	10.7	100.0	78
Divorced/separated	37.0	47.7	15.3	100.0	84	19.1	57.2	23.8	100.0	72
Residence										
Urban	26.1	67.2	6.7	100.0	238	18.1	71.3	10.6	100.0	162
Rural	28.5	64.1	7.4	100.0	294	17.6	68.7	13.7	100.0	204
Education										
No education	22.3	73.5	4.1	100.0	137	18.9	72.2	8.9	100.0	96
Primary	37.8	55.5	6.7	100.0	137	19.4	70.2	10.3	100.0	98
Middle/JSS	27.6	63.6	8.8	100.0	207	16.1	69.2	14.6	100.0	151
Secondary+	12.8	78.0	9.2	100.0	52	*	*	*	100.0	21
Wealth quintile										
Lowest	23.2	75.8	1.0	100.0	93	19.6	73.9	6.5	100.0	68
Second	30.2	59.2	10.6	100.0	99	19.5	73.9	6.6	100.0	71
Middle	32.0	57.9	10.1	100.0	107	15.1	62.8	22.1	100.0	80
Fourth	29.7	64.2	6.1	100.0	126	17.6	70.5	11.9	100.0	81
Highest	21.2	71.4	7.4	100.0	108	17.8	69.0	13.2	100.0	66
Total	27.4	65.5	7.1	100.0	533	17.8	69.8	12.3	100.0	366

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women. Excludes widows who were not asked about spousal violence in the past 12 months. Total includes cases with information missing on employment that are not shown separately. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

The pattern of emotional, physical, or sexual violence against women perpetrated by their spouse varies among age groups. For example, among women who have ever experienced emotional violence, the likelihood of experiencing such violence often in the past 12 months peaks at age 30-39. Of women who often experienced physical or sexual violence the frequency was higher among the 25-29 age group. As expected, frequency of violence in the 12 months preceding the survey among women who report ever experiencing the violence is higher among women who are divorced or separated than among women who are currently married. However, currently married women who have been married more than once and those married for more than five years are more likely than currently married women not previously married to have experienced the violence in the past 12 months, and have experienced it often.

The proportion of men who have ever experienced emotional violence committed by their current or most recent wife (94 percent) is similar to the proportion of women who have ever experienced emotional violence committed by their current or most recent husband (93 percent); however, only 17 percent of the men have experienced emotional violence often, compared with 27 percent among women. A large majority of the men who have ever experienced physical violence by their current or most recent wife experienced such violence in the past 12 months (92 percent) and 4 percent have experienced such violence often (data not shown).

15.12 Onset of Spousal Violence

To examine the timing of the onset of marital violence, the 2008 GDHS asked ever-married women who had experienced physical or sexual spousal violence, when the first episode of violence took place. At least one in three (31 percent) women who had experienced spousal violence said that the violence began three to five years after marriage, while one-quarter of women said that the violence was initiated one to two years after marriage. For about one in six women who had experienced violence, the violence was initiated less than a year after marriage (12 percent). Similar proportions said that the violence was initiated either six to nine years after marriage or 10 or more years after marriage (data not shown).

Ever-married men, who experienced physical spousal violence were asked similar questions, and the results show that one in five men who had experienced violence said that the violence was initiated less than a year into the marriage; one-third of men who had experienced violence said that the violence was initiated one to two years after marriage, and similar proportion said the violence began occurring three to five years after marriage (data not shown).

15.13 Types of Injuries to Women Resulting from Spousal Violence

In the 2008 GDHS, women and men who ever experienced spousal physical violence—or sexual violence, for women only—were asked about the physical consequences of the violence. Specifically, they were asked if, as a consequence of what their spouse did to them, they ever had an injury in the following groups: a) cuts, bruises or aches; b) burns, eye injuries, sprains, or dislocations; and c) deep wounds, broken bones, broken teeth or any other serious injury. Table 15.14 shows the percentage of ever-married women and men who reported any spousal physical violence—or, sexual violence, for women only—by type of injuries sustained.

More than four in ten women who have ever experienced physical violence (42 percent) or sexual violence (44 percent) by their current or most recent husband/partner received at least one of the injuries asked about. Cuts, bruises, and aches are the most common injuries sustained by women for any type of violence. Less than 10 percent of women reported receiving deep wounds, broken bones, broken teeth, or other serious injuries. A similar pattern is seen for women who experienced spousal violence in the past 12 months.

Table 15.14 Injuries to women and men as a result of spousal violence

Percentage of ever-married women age 15-49 who experienced specific types of spousal violence, and percentage of ever-married men age 15-49 who experienced physical violence, by type of injuries received as a result of violence committed by their current or most recent spouse/partner, type of violence, and whether they experienced the violence ever and in the 12 months preceding the survey, Ghana 2008

Type of violence	Percentage of respondents who received specific types of injuries				Number of ever-married respondents
	Cuts, bruises, or aches	Eye injuries, sprains, dislocations, or burns	Deep wounds, broken bones, broken teeth, or any other serious injury	Any of the specified injuries	
WOMEN					
Experienced physical violence[1]					
Ever[2]	36.2	18.7	7.9	42.0	344
In the past 12 months[3]	38.0	18.9	8.8	43.0	290
Experienced sexual violence[4]					
Ever[2]	39.0	22.8	8.8	43.7	104
In the past 12 months[3]	43.2	21.4	9.8	45.3	84
Experienced physical or sexual violence[4]					
Ever[2]	33.4	17.2	7.1	38.8	383
In the past 12 months[3]	35.6	17.5	7.9	40.1	321
MEN					
Experienced physical violence					
Ever[2]	16.3	8.9	4.8	24.3	65
In the past 12 months[3]	15.0	8.6	3.8	22.3	60

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women.
[1] Excludes women who experienced physical violence only during pregnancy
[2] Includes violence in the past 12 months
[3] Excludes widows/widowers
[4] Excludes women whose sexual initiation was forced but who have not experienced any other form of physical or sexual violence

Unlike women, men who experience spousal violence are less likely to suffer physical consequences from the violence. Twenty-four percent of men who ever experienced physical violence reported having suffered any injury, and 22 percent of men suffered injuries in the 12 months preceding the survey. The pattern of injuries experienced by men is similar to that of women.

15.14 PHYSICAL VIOLENCE BY WOMEN AND MEN AGAINST THEIR SPOUSE

Violence by husbands against wives is not the only form of spousal violence; women may sometimes be the perpetrators of violence. In most cultures, however, the level of spousal violence initiated by wives is only a fraction of the level of spousal violence initiated by husbands. To measure spousal violence by women, the 2008 GDHS also asked women about violence they themselves initiated against their spouse or other intimate partner. Specifically, women were asked, 'Have you ever hit, slapped, kicked, or done anything else to physically hurt your (last) husband/partner at times when he was not already beating or physically hurting you?' Men were asked a corresponding question. Respondents who said yes to this question were asked about the frequency of such violence in the 12 months preceding the survey.

Table 15.15.1 shows the percentage of ever-married women (excluding widows) who have ever initiated violence against their current or most recent husband, and the percentage of all ever-married women who say that they have initiated spousal violence in the 12 months preceding the survey. Results shown indicate that overall, 7 percent of ever-married women report that they have ever initiated physical violence against their current or most recent husband, while 5 percent say they have committed such violence in the 12 months preceding the survey.

Table 15.15.1 Violence by women against their spouse

Percentage of ever-married women age 15-49 who committed physical violence against their husband/partner when he was not already beating or physically hurting them, ever and in the past 12 months, by women's own experience of spousal violence and their own and their husband/partner's characteristics, Ghana 2008

Characteristics	Percentage of women who committed physical violence against their current or most recent husband/partner			
	Ever	Number of women	In the past 12 months[1]	Number of women[1]
Woman's experience of spousal physical violence				
Ever	22.1	344	16.5	329
In the past 12 months	23.1	290	18.0	290
Not past 12 months/widow/ missing information regarding past 12 months	17.2	55	(5.9)	39
Never	3.0	1,327	2.4	1,280
Age				
15-19	1.7	52	1.7	52
20-24	9.1	232	7.2	232
25-29	8.8	337	6.4	333
30-39	5.4	612	3.9	597
40-49	7.2	437	5.7	395
Employment (past 12 months)				
Not employed	5.1	139	4.2	135
Employed for cash	7.3	1,325	5.3	1,269
Employed not for cash	5.4	205	5.3	202
Number of living children				
0	12.1	139	11.2	138
1-2	6.8	648	5.0	630
3-4	6.5	528	4.5	514
5+	6.0	356	4.6	326
Marital status and duration				
Currently married woman	6.5	1,425	5.0	1,425
Married only once	6.2	1,079	4.7	1,079
Marital duration:				
0-4 years	5.9	253	4.9	253
5-9 years	6.4	247	4.8	247
10+ years	6.2	580	4.5	580
Married more than once	7.7	346	6.2	346
Divorced/separated/widowed	9.4	246	7.0	183
Residence				
Urban	7.9	712	6.0	684
Rural	6.3	959	4.7	924
Region				
Western	4.6	167	2.4	161
Central	9.7	152	9.4	148
Greater Accra	9.4	240	6.8	229
Volta	5.8	171	3.9	166
Eastern	2.3	153	1.8	151
Ashanti	8.5	328	6.5	308
Brong Ahafo	8.5	160	6.2	152
Northern	4.0	161	3.0	159
Upper East	8.0	93	8.1	89
Upper West	6.1	46	1.8	44
Woman's education				
No education	4.2	464	3.6	445
Primary	7.5	388	6.3	371
Middle/JSS	9.4	628	6.5	606
Secondary+	4.7	190	3.3	186

Continued…

Table 15.15.1—*Continued*

Characteristics	Percentage of women who committed physical violence against their current or most recent husband/partner: Ever	Number of women	In the past 12 months[1]	Number of women[1]
Husband/partner's education				
No education	5.5	320	4.8	309
Primary	8.5	116	7.6	111
Middle/JSS	7.1	718	5.0	701
Secondary+	7.2	426	5.1	404
Don't know/missing	8.6	90	6.4	82
Husband/partner's alcohol consumption				
Does not drink	4.4	1,038	2.8	1,004
Drink alcohol but never drunk	10.6	78	7.9	78
Is sometimes drunk	9.3	406	8.0	387
Is often drunk	17.2	147	13.9	137
Spousal age difference[2]				
Wife older	5.4	48	3.5	48
Wife 0-4 years younger	8.3	526	6.3	526
Wife 5-9 years younger	6.6	443	5.4	443
Wife 10+ years younger	4.1	392	2.9	392
Spousal education difference				
Husband has more education	7.0	869	5.3	833
Wife has more education	9.7	197	6.6	194
Both have equal education	6.3	258	5.7	251
Neither has any education	2.9	237	2.6	227
Don't know/missing	11.9	110	7.3	103
Wealth quintile				
Lowest	6.7	314	5.3	303
Second	4.4	335	3.5	324
Middle	7.0	329	5.2	313
Fourth	8.8	357	6.0	339
Highest	7.8	336	6.3	329
Total	7.0	1,671	5.3	1,608

Note: Husband/partner refers to the current husband/partner for currently married women and the most recent husband/partner for divorced, separated, or widowed women. Total includes cases with information missing on employment, woman's education, spousal age difference, and husband's alcohol consumption that are not shown separately. Figures in parentheses are based on 25-49 unweighted cases.
[1] Excludes widows
[2] Currently married women

Notably, the proportion of women who say they have ever committed physical violence against their husbands is lower than the proportion of men who say they have ever experienced physical violence at the hands of their current or most recent wife/partner (11 percent, see Table 15.11.2). Differentials by background characteristics for women who initiate physical violence against their current or most recent husbands are generally small. Women who reported experiencing physical violence at the hands of their husbands in the past 12 months (23 percent), women whose husbands get drunk often (17 percent), and women with no living children (12 percent) are more likely to report initiating physical violence against their husbands than other women.

Similar information for men is presented in Table 15.15.2. Data show that overall, 17 percent of ever-married men report that they ever initiated physical violence against their current or most recent wife/partner, and 9 percent have done so within the 12 months before the survey. This figure is similar to the proportion of women who report ever having experienced physical violence by their husband (21 percent, see Table 15.11.1). Among men who have ever experienced physical violence by their wives, 58 percent have initiated physical violence against their wives, compared with 12 percent of men who have never experienced physical violence at the hands of their current or most recent wife/partner. Men age 25-29, men who live in the Upper East region, men who have been formerly married, and those with primary education are more likely than other men to have initiated physical violence against their current or most recent wife/partner at some time.

Table 15.15.2 Violence by men against their spouse

Percentage of ever-married men age 15-49 who have committed physical violence against their current or most recent wife/partner when she was not already beating or physically hurting them, ever and in the past 12 months, according to men's own experience of spousal physical violence and background characteristics, Ghana 2008

Background characteristic	Percentage of men who committed physical violence against their current or most recent wife/partner			
	Ever	Number of men	In the past 12 months[1]	Number of men[1]
Man's experience of spousal physical violence				
Ever	57.9	65	34.9	65
In the last 12 months	55.3	60	36.5	60
Never	11.9	515	5.3	510
Age				
15-19	*	2	*	2
20-24	13.3	27	5.6	27
25-29	21.3	86	15.0	86
30-39	18.0	276	10.4	273
40-49	14.6	190	3.8	187
Employment (past 12 months)				
Not employed	*	9	*	9
Employed for cash	18.3	495	8.6	490
Employed not for cash	11.2	76	10.3	76
Number of living children				
0	12.0	56	6.4	55
1-2	19.6	242	10.2	240
3-4	16.7	181	9.3	180
5+	14.8	101	5.1	101
Marital status and duration				
Currently married men	16.2	534	8.3	534
Married only once	18.2	363	9.0	363
Marital duration:				
0-4 years	14.7	98	7.0	98
5-9 years	15.5	112	9.6	112
10+ years	22.4	153	10.0	153
Married more than once	12.1	170	6.6	170
Divorced/separated/widowed	(27.0)	47	(13.9)	41
Residence				
Urban	18.0	252	9.1	249
Rural	16.4	328	8.3	326
Region				
Western	23.6	56	8.9	54
Central	(9.6)	52	(2.1)	52
Greater Accra	19.8	98	9.6	96
Volta	12.3	52	5.1	51
Eastern	12.1	63	6.1	62
Ashanti	21.6	106	15.3	106
Brong Ahafo	21.8	44	5.5	44
Northern	6.6	69	5.1	69
Upper East	28.2	30	(15.0)	30
Upper West	(19.2)	11	(14.2)	11
Education				
No education	19.2	116	11.6	115
Primary	23.3	73	10.2	73
Middle/JSS	15.3	260	7.4	257
Secondary+	15.4	131	7.8	130
Wealth quintile				
Lowest	14.1	103	5.8	102
Second	19.1	117	12.5	115
Middle	18.3	88	6.7	86
Fourth	16.4	152	8.8	151
Highest	17.7	121	8.7	120
Total	17.1	581	8.7	575

Note: Wife/partner refers to the current wife/partner for currently married men and the most recent wife/partner for divorced, separated, or widowed men. Total includes cases with information missing on education that are not shown separately An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

[1] Excludes widowers

15.15 HELP-SEEKING TO STOP VIOLENCE

All respondents who have ever experienced physical or sexual violence by any person were asked a series of questions about whether and from whom they sought help to try to end the violence. This information is presented in Tables 15.16.1 and 15.16.2 for women and men, respectively.

Table 15.16.1 Help-seeking to stop violence: Women

Percent distribution of women age 15-49 who have ever experienced physical or sexual violence by whether they told anyone about the violence and whether they sought help from any source to stop the violence, according to type of violence and background characteristics, Ghana 2008

Background characteristic	Never sought help: Percentage who never told anyone	Never sought help: Percentage who told someone	Percentage who sought help from any source	Missing	Total	Number of women
Type of violence						
Physical only	36.0	8.8	37.5	17.6	100.0	627
Sexual only	40.6	19.4	25.9	14.1	100.0	66
Both physical and sexual	36.9	8.6	44.0	10.5	100.0	266
Age						
15-19	34.8	10.1	39.2	16.0	100.0	169
20-24	34.0	10.5	40.2	15.3	100.0	204
25-29	35.8	13.7	37.6	13.0	100.0	168
30-39	40.9	6.6	36.3	16.3	100.0	271
40-49	35.1	7.9	40.7	16.3	100.0	147
Employment (past 12 months)						
Not employed	43.1	9.2	33.9	13.8	100.0	172
Employed for cash	33.4	9.7	40.1	16.8	100.0	624
Employed not for cash	41.8	8.9	37.2	12.2	100.0	161
Number of living children						
0	30.7	13.9	39.6	15.8	100.0	323
1-2	38.3	7.2	41.2	13.3	100.0	299
3-4	40.9	8.3	34.7	16.1	100.0	204
5+	40.5	5.7	35.6	18.2	100.0	132
Marital status and duration						
Never married	30.9	14.4	37.1	17.5	100.0	287
Currently married women	39.8	7.1	38.2	14.9	100.0	535
Married only once	41.7	6.2	38.1	14.0	100.0	376
Marital duration						
0-4 years	36.0	4.3	45.1	14.6	100.0	91
5-9 years	52.1	9.5	33.9	4.5	100.0	91
10+ years	39.5	5.6	36.8	18.2	100.0	194
Married more than once	35.4	9.1	38.4	17.1	100.0	159
Divorced/separated/widowed	35.8	8.5	42.7	13.0	100.0	137
Residence						
Urban	33.7	13.0	39.5	13.7	100.0	452
Rural	39.1	6.3	37.7	16.9	100.0	508
Region						
Western	25.6	22.0	45.4	7.0	100.0	56
Central	30.3	6.4	52.2	11.1	100.0	98
Greater Accra	25.1	17.5	31.6	25.8	100.0	144
Volta	25.6	6.6	55.1	12.7	100.0	87
Eastern	42.5	2.3	36.7	18.5	100.0	73
Ashanti	34.6	9.7	41.2	14.6	100.0	222
Brong Ahafo	56.2	6.4	32.8	4.6	100.0	98
Northern	44.0	5.7	19.1	31.2	100.0	97
Upper East	47.7	7.9	39.9	4.4	100.0	58
Upper West	57.7	7.1	28.3	7.0	100.0	26
Education						
No education	45.2	5.6	30.3	18.9	100.0	168
Primary	37.3	5.4	41.4	15.9	100.0	208
Middle/JSS	35.8	8.0	41.6	14.6	100.0	410
Secondary+	29.1	21.6	35.8	13.5	100.0	174
Wealth quintile						
Lowest	56.0	3.9	28.1	12.0	100.0	151
Second	37.7	6.6	39.6	16.2	100.0	178
Middle	27.8	6.7	47.6	17.8	100.0	204
Fourth	38.3	9.8	39.3	12.6	100.0	211
Highest	28.7	18.1	35.5	17.8	100.0	214
Total	36.6	9.5	38.5	15.4	100.0	959

Note: Total includes cases with information missing on employment that are not shown separately. Excludes physical violence during pregnancy and women whose sexual initiation was forced during the first sex.

Table 15.16.2 Help-seeking to stop violence: Men

Percent distribution of men age 15-49 who have ever experienced physical violence by whether they told anyone about the violence and whether they sought help from any source to stop the violence, according to background characteristics, Ghana 2008

Background characteristic	Never sought help		Percentage who sought help from any source	Missing	Total	Number of men
	Percentage who never told anyone	Percentage who told someone				
Current age						
15-19	40.2	18.0	30.2	11.7	100.0	73
20-24	25.6	23.6	33.3	17.5	100.0	79
25-29	31.6	17.0	33.5	17.9	100.0	82
30-39	31.3	17.9	31.1	19.7	100.0	131
40-49	41.8	17.7	26.1	14.3	100.0	73
Employment (last 12 months)						
Not employed	30.2	25.8	37.8	6.1	100.0	64
Employed for cash	32.6	19.1	31.1	17.2	100.0	319
Employed not for cash	43.3	8.5	21.8	26.5	100.0	55
Number of living children						
0	32.3	20.6	30.9	16.3	100.0	197
1-2	33.8	17.3	31.5	17.4	100.0	126
3-4	33.7	20.7	31.1	14.5	100.0	75
5+	(39.2)	(10.4)	(28.9)	(21.4)	100.0	40
Marital status and duration						
Never married	31.7	20.7	29.4	18.2	100.0	186
Currently married men	36.8	19.2	27.4	16.5	100.0	221
Married only once	36.8	22.1	25.8	15.3	100.0	145
Marital duration						
0-4 years	(34.3)	(19.9)	(34.2)	(11.6)	100.0	36
5-9 years	35.8	24.2	26.8	13.2	100.0	53
10+ years	39.2	21.6	19.5	19.7	100.0	56
Married more than once	37.0	13.7	30.5	18.8	100.0	76
Divorced/separated/widowed	(21.7)	(3.2)	(65.2)	(9.9)	100.0	31
Residence						
Urban	36.4	22.1	25.4	16.2	100.0	217
Rural	30.9	15.4	36.4	17.3	100.0	221
Region						
Western	*	*	*	*	100.0	16
Central	(49.5)	(5.9)	(17.7)	(26.9)	100.0	48
Greater Accra	40.1	23.9	11.5	24.5	100.0	80
Volta	(33.2)	(2.1)	(49.0)	(15.7)	100.0	50
Eastern	(41.2)	(15.9)	(20.2)	(22.7)	100.0	37
Ashanti	20.0	27.4	48.7	3.9	100.0	106
Brong Ahafo	(30.5)	(20.8)	(48.7)	(0.0)	100.0	34
Northern	(28.9)	(13.1)	(16.1)	(42.0)	100.0	39
Upper East	*	*	*	*	100.0	17
Upper West	(53.5)	(2.7)	(34.6)	(9.2)	100.0	11
Education						
No education	(35.6)	(14.2)	(34.2)	(16.0)	100.0	41
Primary	49.6	9.3	26.5	14.7	100.0	71
Middle/JSS	33.8	18.7	33.2	14.3	100.0	200
Secondary+	23.7	25.5	28.7	22.0	100.0	127
Wealth quintile						
Lowest	36.2	14.2	33.0	16.6	100.0	48
Second	35.7	14.7	30.4	19.2	100.0	82
Middle	28.2	10.8	50.2	10.8	100.0	69
Fourth	34.4	20.5	30.2	14.8	100.0	142
Highest	33.2	27.4	17.6	21.9	100.0	97
Total 15-49	33.6	18.7	30.9	16.8	100.0	438
50-59	44.1	14.5	31.2	10.2	100.0	51
Total men 15-59	34.7	18.3	31.0	16.1	100.0	489

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. Figures in parentheses are based on 25-49 unweighted cases.

Similar proportions of women and men who experience violence, seek help (37 and 34 percent, respectively). Women who experience both physical and sexual violence[1] (44 percent) are most likely to seek help. The percentage of respondents who seek help varies little by age. Unemployed women are less likely to seek help than those who are employed for cash (34 and 40 percent, respectively). Among men, however, the situation is reversed, with unemployed men more likely to seek help (38 percent) than men who are employed but not for cash (22 percent). Women with no living children or with 1-2 children are slightly more likely to seek help than other women. Formerly married women and men, and women and men who have been married only once and for less than 5 years, who experienced physical violence are more likely to have sought help than other respondents.

Regional differences are large. For example, only one in five women who experienced violence in the Northern region sought help (19 percent), compared with one in two women in the Volta and Central regions (55 and 52 percent, respectively). Women with no education and those in the lowest wealth quintile are less likely to seek help than other women.

Unlike women, rural men and men with no education are more likely than other men to have sought help to end violence. Men from the Volta, Brong Ahafo and Ashanti regions who have experienced violence are far more likely than men in other regions to seek help (49 percent each). Men in the Greater Accra region are the least likely to seek help (12 percent). Similar to the women, men in the middle wealth quintile are more likely to sought help to end violence.

Table 15.17 shows the sources of help among men and women who have ever experienced violence and have sought help, by type of violence. Men and women who have ever experienced physical violence and sought help were most likely to have sought help from their own family (67 and 62 percent, respectively). Women are also likely to seek help from their in-laws (17 percent); however, this is not a common source of help among men (11 percent). Friends and neighbours were also an important source of help for men more than women (26 and 10 percent, respectively). The use of social services institutions such as the police, religious leaders and community local administration is quite varied among men and women. While the proportions for both men and women for seeking help for physical violence from the police are similar, men are more likely to seek help from the religious leaders than women. Women are more likely to seek help from community leaders than men.

Table 15.17 Sources where help was sought to stop violence

Percentage of women and men age 15-49 who have ever experienced physical violence and sought help to stop the violence, by source from which help was sought, Ghana 2008

Source of help	Women	Men
Own family	66.6	61.7
In-laws	17.2	11.1
Spouse/partner	2.0	1.4
Friend/neighbour	10.3	26.3
Religious leader	4.3	7.3
Doctor/medical personnel	0.9	1.5
Police	5.3	5.8
Community leader/local administrator	4.4	2.9
Other	0.9	3.9
Number of respondents	235	135

[1] Physical violence here excludes violence during pregnancy, and sexual violence excludes those whose first sex was forced.

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SAMPLE DESIGN FOR THE 2008 GDHS

Appendix A

The 2008 GDHS survey is designed to allow reliable estimation of key demographic and health indicators such as fertility, contraceptive prevalence, nutritional status, infant and child mortality, and anaemia prevalence.

The major domains distinguished in the tabulation of important characteristics for the eligible female population are:

- Ghana as a whole
- Each of ten regions defined in Ghana, namely: 1) Western, 2) Central, 3) Greater Accra, 4) Volta, 5) Eastern, 6) Ashanti, 7) Brong Ahafo, 8) Northern, 9) Upper East, and 10) Upper West
- Urban and rural areas of Ghana (each as a separate domain).

The population covered in the 2008 GDHS is defined as the universe of all women age 15-49 in Ghana in a sample of 6,180 selected households (half of 12,360). Every household selected for the women's sample was also eligible for the men's sample.

All 12,360 households were selected for the household interview to identify deaths in the past three years among children under five years for administering (at the national level only) the verbal autopsy questionnaire on causes of death.

Administratively, Ghana is divided into 10 regions. Each administrative region is subdivided into districts and each district is divided into localities. In addition to these administrative units, during the 2000 Population Census, each locality was subdivided into convenient areas called census enumeration areas (EAs). Each EA was either all urban or all rural. The list of EAs includes census information on households and population information, all grouped by administrative unit. The 2000 Population Census was used as the sampling frame for the 2008 GDHS, and the stratification process for the 2008 GDHS sample used the census administrative subdivisions.

The primary sampling unit (PSU) for the 2008 GDHS was the cluster, which is defined on the basis of EAs from the 2000 census frame, with one (or more) EAs per cluster. Except for the Upper East and Upper West regions, the number of clusters assigned to each region was usually allocated proportionally, according to the total population. For the Upper East and Upper West regions, the proportion of EAs allocated for the 2008 GDHS sample was twice the proportion used in the 2000 census proportional population distribution. Table A.1 shows the distribution of EAs in Ghana by region.

Table A.1 Proportional distribution of 412 EAs by region

Region	2000 census proportional population distribution (%)	2000 census proportional household distribution (%)	Total number of EAs	Percent of EAs by region
Western	10.2	11.1	39	9.5
Central	8.4	9.9	34	8.3
Greater Accra	15.4	16.9	60	14.6
Volta	8.6	9.3	35	8.5
Eastern	11.1	12.3	43	10.4
Ashanti	19.1	18.4	67	16.3
Brong Ahafo	9.6	9.3	38	9.2
Northern	9.6	6.6	38	9.2
Upper East	4.9	3.9	28	6.8
Upper West	3.0	2.2	30	7.3
Total	100	100	412	100

The 2008 GDHS targeted 12,360 households for the verbal autopsy questionnaire. The women's and men's questionnaires were administered in half of this sample. Based on the response rates in the 2003 GDHS, the 2008 sample was expected to yield completed interviews in approximately 6,180 households, completed interviews with about 5,300 women age 15-49, and completed interviews with about 5,000 men age 15-59. Table A.2 shows the distribution of the selected households by region.

Table A.2 Expected number of selected households and completed women's interviews by region

Region	Selected households 2003 GDHS	Completed women's interviews 2003 GDHS	Target households 2008 GDHS	Expected completed women's interviews 2008 GDHS	Household sample take per cluster
Western	615	524	585	498	15
Central	510	352	510	352	15
Greater Accra	930	835	900	808	15
Volta	525	442	525	442	15
Eastern	660	506	645	495	15
Ashanti	1,140	927	1,005	817	15
Brong Ahafo	760	638	570	479	15
Northern	608	610	570	572	15
Upper East	400	395	420	415	15
Upper West	480	462	450	433	15
Total	6,628	5,691	6,180	5,310	

The 412 selected households for the country as a whole were divided into 182 clusters in urban areas and 230 clusters in rural areas. Table A.3 shows the distribution of selected households for the 2008 GDHS, and the number of EAs by urban and rural areas for each region.

Table A.3 Final allocation of households, and number of urban and rural EAs by region

Region	Percent distribution households 2000 census	Percent distribution households 2008 GDHS	Number of urban EAs	Number of rural EAs	Total number of EAs
Western	11.1	9.5	15	24	39
Central	9.9	8.2	13	21	34
Greater Accra	16.9	14.6	53	7	60
Volta	9.3	8.5	10	25	35
Eastern	12.3	10.4	16	27	43
Ashanti	18.4	16.3	36	31	67
Brong Ahafo	9.3	9.2	16	22	38
Northern	6.6	9.2	11	27	38
Upper East	3.9	6.8	5	23	28
Upper West	2.2	7.3	7	23	30
Total	100	100	182	230	412

Under this final allocation, it was expected that each of the 10 Ghana regions would have a minimum of 400 completed interviews, except the Central region with about 350. The household sample for the 2008 GDHS is not self-weighted because the distribution of the 412 EAs by region and the household sample distribution for the country as a whole were not allocated according to the population distribution in the 2000 census.

The 2008 GDHS sample was selected using a stratified, two-stage cluster design. The number of clusters in each region was calculated by dividing the total allocated number of households by the sample take of 15 (that is, the number of households per EA). In each region EAs were stratified by

urban first and then by rural, and clusters were selected systematically with probability proportional to size.

In each selected cluster a household listing operation was carried out June-July 2008 and households were selected to achieve a fixed sample take per cluster. However, because the 2008 GDHS sample was not proportional to its population by urban-rural residence area or region, a final weighting adjustment procedure was required to provide estimates for each domain.

For the male survey, in every household selected for the women's interview, men age 15-59 were eligible for the men's interview. Based on the response rate for men in selected households in the 2003 GDHS, the expected number of completed interviews for men was about 5,000.

The GDHS 2008 fieldwork was carried out from September 8 to November 25, 2008. Table A.4 shows the household results from the survey. The household response rate for all households, including the Verbal Autopsy survey component, is 98.9 percent, ranging from 97 percent in the Greater Accra region to 99.7 in the Central region.

Table A.4 Sample implementation: All households selected for interview with the Household Questionnaire (the verbal autopsy survey and individual interviews)

Percent distribution of all households by results of the household interviews and household response rate, according to urban-rural residence and region (unweighted), Ghana 2008

	Residence		Region										
Result	Urban	Rural	Western	Central	Greater Accra	Volta	Eastern	Ashanti	Brong Ahafo	Northern	Upper East	Upper West	Total
Selected households													
Completed (C)	94.8	96.2	96.3	99.2	92.9	97.0	96.9	92.5	95.6	96.2	97.9	96.0	95.6
Household present but no competent respondent at home (HP)	0.7	0.6	0.3	0.3	1.1	0.7	0.5	0.9	0.4	0.5	0.5	0.7	0.6
Refused (R)	0.5	0.1	0.1	0.0	1.0	0.1	0.0	0.4	0.4	0.1	0.2	0.0	0.3
Dwelling not Found (DNF)	0.3	0.1	0.1	0.0	0.8	0.0	0.0	0.0	0.0	0.1	0.6	0.0	0.2
Household absent (HA)	2.1	1.6	2.0	0.2	1.7	1.3	1.4	3.0	2.7	2.3	0.4	1.6	1.8
Dwelling vacant/ address not a dwelling (DV)	1.4	1.2	1.2	0.2	1.9	0.8	0.9	2.7	0.8	0.7	0.4	1.6	1.3
Dwelling destroyed (DD)	0.2	0.1	0.0	0.0	0.4	0.1	0.1	0.1	0.2	0.1	0.0	0.2	0.1
Other (O)	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.2	0.0	0.0	0.1	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	5,458	6,865	1,169	1,020	1,800	1,050	1,288	2,010	1,140	1,106	840	900	12,323
Household response rate (HRR)[1]	98.5	99.1	99.6	99.7	97.0	99.2	99.4	98.6	99.3	99.3	98.7	99.3	98.9

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + R + DNF}$$

For women, a total of 6,141 households were selected, of which almost 5,829 were successfully interviewed, with a household response rate of 98.5 percent (Table A.5). A total of 5,096 women were identified as eligible for the individual interview, with an individual women's response rate of 96.5 percent, and an overall response rate—the product of the household and individual response rates—of 95.1 percent for the entire country. By region, the response rates for women range from 90.2 percent in the Northern region to 98.5 percent in the Central region.

Table A.5 Sample implementation: Women

Percent distribution of households selected for individual interviews and eligible women by results of the household and individual interviews, and household, eligible women, and overall response rates, according to urban-rural residence and region, Ghana 2008

	Residence		Region										
Result	Urban	Rural	Western	Central	Greater Accra	Volta	Eastern	Ashanti	Brong Ahafo	Northern	Upper East	Upper West	Total
Selected households													
Completed (C)	94.1	95.5	96.2	98.6	91.9	96.2	96.1	92.0	93.3	96.0	97.4	96.2	94.9
Household present but no competent respondent at home (HP)	0.6	0.6	0.2	0.6	0.7	1.1	0.5	0.7	0.5	0.5	0.0	1.1	0.6
Refused (R)	0.8	0.3	0.2	0.0	1.7	0.2	0.0	0.7	0.7	0.2	0.5	0.0	0.5
Dwelling not found (DNF)	0.4	0.2	0.2	0.0	1.3	0.0	0.0	0.1	0.0	0.2	0.7	0.0	0.3
Household absent (HA)	2.2	1.9	2.4	0.2	1.8	1.5	2.4	3.1	4.2	2.2	0.5	0.9	2.1
Dwelling vacant/ address not a dwelling (DV)	1.5	1.2	0.9	0.4	2.0	1.0	0.8	2.9	0.9	0.7	0.7	1.3	1.3
Dwelling destroyed (DD)	0.2	0.2	0.0	0.0	0.6	0.0	0.2	0.2	0.4	0.2	0.0	0.4	0.2
Other (O)	0.1	0.1	0.0	0.2	0.1	0.0	0.2	0.3	0.0	0.0	0.2	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	2,724	3,417	582	509	900	525	638	1,002	569	550	420	446	6,141
Household response rate (HRR)[1]	98.1	98.9	99.5	99.4	96.2	98.6	99.5	98.4	98.7	99.1	98.8	98.8	98.5
Eligible women													
Completed (EWC)	96.6	96.4	97.3	99.1	94.3	97.5	98.4	97.8	96.9	91.0	98.2	96.4	96.5
Not at home (EWNH)	2.1	2.1	1.6	0.3	3.0	1.8	0.8	1.1	2.4	6.0	1.1	2.1	2.1
Postponed (EWP)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Refused (EWR)	0.6	0.3	0.0	0.3	1.4	0.0	0.4	0.1	0.2	1.3	0.0	0.0	0.4
Partly completed (EWPC)	0.3	0.2	0.7	0.3	0.8	0.0	0.0	0.2	0.0	0.2	0.0	0.2	0.3
Incapacitated (EWI)	0.4	0.7	0.4	0.0	0.5	0.7	0.4	0.6	0.2	0.9	0.5	1.3	0.6
Other (EWO)	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	2,239	2,857	450	337	734	444	487	833	416	546	380	469	5,096
Eligible women response rate (EWRR)[2]	96.6	96.4	97.3	99.1	94.3	97.5	98.4	97.8	96.9	91.0	98.2	96.4	96.5
Overall women response rate (OWRR)[3]	94.7	95.3	96.8	98.5	90.7	96.2	97.9	96.3	95.6	90.2	97.0	95.3	95.1

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + R + DNF}$$

[2] The eligible women response rate (EWRR) is equivalent to the percentage of interviews completed (EWC).

[3] The overall women response rate (OWRR) is calculated as:

$$OWRR = HRR * EWRR/100$$

For men, a total of 6,141 households were selected, of which almost 5,829 were successfully interviewed, for a household response rate of 98.5 percent (Table A.6). A total of 4,769 men were identified as eligible for the individual interview, with an individual men's response rate of 95.8 percent and an overall response rate—the product of the household and individual response rates—of 94.4 percent for the entire country. By region, the response rates for men range from 89.2 percent in the Greater Accra region to 97.2 percent in the Eastern region.

Table A.6 Sample implementation: Men

Percent distribution of households selected for individual interviews and eligible men by results of the household and individual interviews, and household, eligible men, and overall response rates, according to urban-rural residence and region, Ghana 2008

	Residence		Region										
Result	Urban	Rural	Western	Central	Greater Accra	Volta	Eastern	Ashanti	Brong Ahafo	Northern	Upper East	Upper West	Total
Selected households													
Completed (C)	94.1	95.5	96.2	98.6	91.9	96.2	96.1	92.0	93.3	96.0	97.4	96.2	94.9
Household present but no competent respondent at home (HP)	0.6	0.6	0.2	0.6	0.7	1.1	0.5	0.7	0.5	0.5	0.0	1.1	0.6
Refused (R)	0.8	0.3	0.2	0.0	1.7	0.2	0.0	0.7	0.7	0.2	0.5	0.0	0.5
Dwelling not found (DNF)	0.4	0.2	0.2	0.0	1.3	0.0	0.0	0.1	0.0	0.2	0.7	0.0	0.3
Household absent (HA)	2.2	1.9	2.4	0.2	1.8	1.5	2.4	3.1	4.2	2.2	0.5	0.9	2.1
Dwelling vacant/ address not a dwelling (DV)	1.5	1.2	0.9	0.4	2.0	1.0	0.8	2.9	0.9	0.7	0.7	1.3	1.3
Dwelling destroyed (DD)	0.2	0.2	0.0	0.0	0.6	0.0	0.2	0.2	0.4	0.2	0.0	0.4	0.2
Other (O)	0.1	0.1	0.0	0.2	0.1	0.0	0.2	0.3	0.0	0.0	0.2	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	2,724	3,417	582	509	900	525	638	1,002	569	550	420	446	6,141
Household response rate (HRR)[1]	98.1	98.9	99.5	99.4	96.2	98.6	99.5	98.4	98.7	99.1	98.8	98.8	98.5
Eligible men													
Completed (EMC)	95.0	96.3	96.9	95.0	92.7	96.5	97.6	95.0	96.8	94.8	96.7	97.8	95.8
Not at home (EMNH)	3.2	2.3	2.4	2.6	5.1	1.6	1.3	3.2	1.9	4.2	1.4	0.9	2.7
Postponed (EMP)	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.1
Refused (EMR)	0.9	0.2	0.2	0.0	1.9	0.5	0.4	0.4	0.3	0.2	0.3	0.4	0.5
Partly completed (EMPC)	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.1
Incapacitated (EMI)	0.5	0.9	0.4	1.7	0.2	1.4	0.4	0.7	1.1	0.4	1.4	0.9	0.8
Other (EMO)	0.1	0.1	0.0	0.3	0.0	0.0	0.2	0.4	0.0	0.0	0.0	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	2,014	2,755	457	303	647	431	467	716	372	553	368	455	4,769
Eligible men response rate (EMRR)[2]	95.0	96.3	96.9	95.0	92.7	96.5	97.6	95.0	96.8	94.8	96.7	97.8	95.8
Overall men's response rate (OMRR)[3]	93.3	95.3	96.4	94.5	89.2	95.2	97.2	93.5	95.5	93.9	95.6	96.7	94.4

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{100 * C}{C + HP + R + DNF}$$

[2] The eligible men response rate (EMRR) is equivalent to the percentage of interviews completed (EMC).

[3] The overall men's response rate (OMRR) is calculated as: OMRR = HRR * EMRR/100

ESTIMATES OF SAMPLING ERRORS

Appendix B

Estimates derived from a sample survey are affected by two types of errors: 1) non-sampling errors, and 2) sampling errors. Non-sampling errors are the results of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the 2008 Ghana DHS (2008 GDHS) to minimise this type of error, non-sampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the 2008 GDHS is only one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

A sampling error is usually measured in terms of the standard error for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95 percent of all possible samples of identical size and design.

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulae for calculating sampling errors. However, the 2008 GDHS sample is the result of a multi-stage, stratified design and, consequently, it was necessary to use more complex formulae, specifically, the Taylor linearisation method of variance estimation, to calculate sampling errors for means or proportions from the survey. The Jackknife repeated replication method is used for variance estimation of more complex statistics such as fertility and mortality rates.

The Taylor linearisation method treats any percentage or average as a ratio estimate, $r = y/x$, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below, with the standard error being the square root of the variance:

$$SE^2(r) = var(r) = \frac{1-f}{x^2}\sum_{h=1}^{H}\left[\frac{m_h}{m_{h-1}}\left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h}\right)\right]$$

in which

$$z_{hi} = y_{hi} - rx_{hi}\text{, and } z_h = y_h - rx_h$$

where h represents the stratum which varies from *1* to H,
m_h is the total number of clusters selected in the h^{th} stratum,
y_{hi} is the sum of the weighted values of variable y in the i^{th} cluster in the h^{th} stratum,
x_{hi} is the sum of the weighted number of cases in the i^{th} cluster in the h^{th} stratum, and
f is the overall sampling fraction, which is so small that it is ignored.

The Jackknife repeated replication method derives estimates of complex rates from each of several replications of the parent sample, and calculates standard errors for these estimates using simple formulas. Each replication considers *all but one* cluster in the calculation of the estimates. Pseudo-independent replications are thus created. In the 2008 GDHS, there were 411 non-empty clusters. Hence, 411 replications were created. The variance of a rate r is calculated as follows:

$$SE^2(r) = var(r) = \frac{1}{k(k-1)} \sum_{i=1}^{k} (r_i - r)^2$$

in which

$$r_i = kr - (k-1)r_{(i)}$$

where r is the estimate computed from the full sample of 411 clusters,
$r_{(i)}$ is the estimate computed from the reduced sample of 411 clusters (i^{th} cluster excluded), and
k is the total number of clusters.

In addition to the standard error, the design effect (DEFT) for each estimate is also calculated. The design effect is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design. Relative errors and confidence limits for the estimates are also computed.

Sampling errors for the 2008 GDHS are calculated for selected variables considered to be of primary interest for the women's and men's samples. The results are presented in this appendix for the country as a whole, for urban and rural areas, and for 10 regions. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table B.1 for women and men. Tables B.2 through B.14 present the value of the statistic (R), its standard error (SE), the number of unweighted (N) and weighted (WN) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits (R±2SE) for the selected variables including fertility and mortality rates. The sampling errors for mortality rates except for the entire country are presented for the ten-year period preceding the survey. The DEFT is considered undefined when the standard error considering a simple random sample is zero (when the estimate is close to 0 or 1). In the case of the total fertility rate, the number of unweighted cases is not relevant, because there is no known unweighted value for woman-years of exposure to childbearing.

The confidence interval (e.g., as calculated for children ever born to women age 40-49) can be interpreted as follows: the overall average from the national sample is 5.173 and its standard error is 0.098. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate (i.e., 5.173 ± 2×0.098; in others words between 4.978 and 5.369). There is a high probability (95 percent) that the true average number of children ever born to all women age 40-49 is between 4.978 and 5.369.

For the women sampling errors, and not taking into consideration the estimate for using IUD, the relative standard errors (SE/R) for the means and proportions range from 2 to 15 percent, with an

average relative standard error of 4.5 percent; the highest relative standard errors are for estimates of very low values (e.g., *currently using female sterilisation with 1.6 percent*). If estimates with very low values of relative standard errors (less than 10 percent) were removed, then the average drops to 3.6 percent. So in general, the relative standard error for most estimates for the country as a whole is small, except for estimates of very small proportions. The relative standard error for the total fertility rate is small, 3.1 percent. However, for the mortality rates, the average relative standard error for past five-year period mortality rates is much higher, about 10 percent.

There are differentials in the relative standard error for estimates of sub-populations of women. For example, for the variable *want no more children*, the relative standard errors as a percent of the estimated mean for the whole country, for the total urban area, and for the total rural area are 2.8 percent, 4.3 percent, and 3.7 percent, respectively.

For the total women sample, the value of the design effect (DEFT) averaged over all variables is 1.23, which means that because of the multi-stage clustering of the sample the average standard error is increased by a factor of 1.23 over that in an equivalent simple random sample.

Table B.1 List of selected variables for sampling errors, Ghana 2008

Variable	Estimate	Base population
	WOMEN	
Urban residence	Proportion	All women 15-49
No education	Proportion	All women 15-49
Secondary education or higher	Proportion	All women 15-49
Never married/in union	Proportion	All women 15-49
Currently married/in union	Proportion	All women 15-49
Had first sex before 18	Proportion	All women 20-49
Currently pregnant	Proportion	All women 15-49
Children ever born	Mean	All women 15-49
Children ever born to women 40-49	Mean	All women 40-49
Children living	Mean	All women 15-49
Knows any contraceptive method	Proportion	Currently married women 15-49
Knows any modern contraceptive method	Proportion	Currently married women 15-49
Ever used any contraceptive method	Proportion	Currently married women 15-49
Currently using any method	Proportion	Currently married women 15-49
Currently using a modern method	Proportion	Currently married women 15-49
Currently female sterilisation	Proportion	Currently married women 15-49
Currently using pill	Proportion	Currently married women 15-49
Currently using IUD	Proportion	Currently married women 15-49
Currently using condom	Proportion	Currently married women 15-49
Currently using injectables	Proportion	Currently married women 15-49
Currently using periodic abstinence	Proportion	Currently married women 15-49
Currently using withdrawal	Proportion	Currently married women 15-49
Using public sector source	Proportion	Currently married women 15-49 using modern method
Wants no more children	Proportion	Currently married women 15-49
Wants to delay birth at least 2 years	Proportion	Currently married women 15-49
Ideal number of children	Mean	All women 15-49
Mother received 2+ tetanus injections	Proportion	Births in past 5 years
Births protected against neonatal tetanus	Proportion	Births in past 5 years
Mother received medical care at birth	Proportion	Births in past 5 years
Child had diarrhoea in the past 2 weeks	Proportion	Children under 5
Child treated with ORS packets	Proportion	Children under 5 with diarrhoea in past 2 weeks
Child taken to health provider	Proportion	Children 12-23 months
Child health card seen	Proportion	Children 12-23 months
Child received BCG vaccination	Proportion	Children 12-23 months
Child received DPT vaccination (3 doses)	Proportion	Children 12-23 months
Child received polio vaccination (3 doses)	Proportion	Children 12-23 months
Child received measles vaccination	Proportion	Children 12-23 months
Child fully immunised	Proportion	Children 12-23 months
Weight-for-height (-2 SD)	Proportion	Children under 5 who were measured
Height-for-age (-2 SD)	Proportion	Children under 5 who were measured
Weight-for-age (-2 SD)	Proportion	Children under 5 who were measured
BMI <18.5	Proportion	Women 15-49 who were measured
Anaemia in children	Proportion	Children 6-59 months who were tested
Anaemia in women	Proportion	Women 15-49 who were tested
Has heard of HIV/AIDS	Proportion	All women 15-49
Knows condom reduces HIV/AIDS	Proportion	All women 15-49
Knows limiting partners reduces HIV/AIDS	Proportion	All women 15-49
Has comprehensive knowledge of HIV/AIDS	Proportion	All women 15-49
Higher-risk sex in past 12 months among youth	Proportion	All women 15-24 who had sex in past 12 months
Condom use at last higher-risk sex among youth	Proportion	All women 15-24 who had higher-risk sex last year
Total fertility rate (past 3 years)	Rate	All women 15-49
Neonatal mortality rate (past 10 years)[1]	Rate	Number of births in past 5 (10 years)
Post-neonatal mortality rate (past 10 years)[1]	Rate	Number of births in past 5 (10 years)
Infant mortality rate (past 10 years)[1]	Rate	Number of births in past 5 (10 years)
Child mortality rate (past 10 years)[1]	Rate	Number of births in past 5 (10 years)
Under-five mortality rate (past 10 years)[1]	Rate	Number of births in past 5 (10 years)
	MEN	
Urban residence	Proportion	All men 15-49
No education	Proportion	All men 15-49
Secondary education or higher	Proportion	All men 15-49
Never married/in union	Proportion	All men 15-49
Currently married/in union	Proportion	All men 15-49
Had first sex before 18	Proportion	All men 20-49
Knows any contraceptive method	Proportion	Currently married men 15-49
Knows any modern contraceptive method	Proportion	Currently married men 15-49
Wants no more children	Proportion	Currently married men 15-49
Wants to delay birth at least 2 years	Proportion	Currently married men 15-49
Ideal number of children	Mean	All men 15-49
Has heard of HIV/AIDS	Proportion	All men 15-49
Knows condom reduces HIV/AIDS	Proportion	All men 15-49
Knows limiting partners reduces HIV/AIDS	Proportion	All men 15-49
Has comprehensive knowledge of HIV/AIDS	Proportion	All men 15-49
Higher-risk sex in past 12 months among youth	Proportion	All men 15-24 who had sex in past 12 months
Condom use at last higher-risk sex among youth	Proportion	All men 15-24 who had higher-risk sex last year

[1] 5 years for national sample and 10 years for regional sample.

Table B.2 Sampling errors for National sample, Ghana 2008

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	0.485	0.011	4916	4916	1.513	0.022	0.463	0.506
No education	0.212	0.009	4916	4916	1.535	0.042	0.194	0.230
Secondary education or higher	0.172	0.008	4916	4916	1.574	0.049	0.155	0.189
Never married/in union	0.324	0.008	4916	4916	1.213	0.025	0.308	0.340
Currently married/in union	0.585	0.009	4916	4916	1.225	0.015	0.568	0.602
Had first sex before 18	0.437	0.011	3879	3891	1.353	0.025	0.415	0.458
Currently pregnant	0.073	0.004	4916	4916	1.170	0.059	0.065	0.082
Children ever born	2.325	0.039	4916	4916	1.106	0.017	2.248	2.403
Children living	2.067	0.033	4916	4916	1.085	0.016	2.000	2.133
Children ever born to women age 40-49	5.173	0.098	920	899	1.169	0.019	4.978	5.369
Knows any contraceptive method	0.979	0.003	2950	2876	1.322	0.004	0.972	0.986
Ever used contraceptive method	0.598	0.014	2950	2876	1.552	0.023	0.570	0.626
Currently using any contraceptive method	0.235	0.010	2950	2876	1.330	0.044	0.214	0.256
Currently using a modern method	0.166	0.009	2950	2876	1.243	0.051	0.149	0.183
Currently using pill	0.047	0.005	2950	2876	1.193	0.098	0.038	0.057
Currently using IUD	0.002	0.001	2950	2876	1.095	0.431	0.000	0.004
Currently using condom	0.024	0.003	2950	2876	1.227	0.143	0.017	0.031
Currently using female sterilisation	0.016	0.003	2950	2876	1.093	0.155	0.011	0.022
Currently using periodic abstinence	0.047	0.005	2950	2876	1.198	0.100	0.037	0.056
Using public sector source	0.394	0.023	617	612	1.176	0.059	0.347	0.440
Wants no more children	0.365	0.010	2950	2876	1.148	0.028	0.344	0.385
Wants to delay birth at least 2 years	0.357	0.010	2950	2876	1.162	0.029	0.337	0.378
Ideal number of children	4.293	0.044	4829	4835	1.556	0.010	4.204	4.381
Mother received 2+ tetanus injections	0.562	0.014	2147	2099	1.335	0.025	0.533	0.590
Births protected against neonatal tetanus	0.719	0.013	2147	2099	1.334	0.018	0.694	0.745
Mother received medical assistance at delivery	0.587	0.016	2992	2909	1.435	0.027	0.555	0.618
Child had diarrhoea in past 2 weeks	0.198	0.010	2794	2731	1.228	0.050	0.179	0.218
Child treated with oral rehydration salts (ORS)	0.445	0.026	553	542	1.146	0.058	0.394	0.497
Child taken to a health provider	0.410	0.025	553	542	1.111	0.060	0.361	0.459
Child vaccination card seen	0.859	0.017	569	552	1.133	0.020	0.825	0.893
Child received BCG	0.958	0.009	569	552	1.007	0.009	0.941	0.975
Child received DPT (3 doses)	0.888	0.016	569	552	1.147	0.018	0.857	0.919
Child received polio (3 doses)	0.864	0.016	569	552	1.084	0.018	0.832	0.896
Child received measles	0.902	0.014	569	552	1.123	0.016	0.873	0.930
Child fully immunised	0.790	0.020	569	552	1.172	0.026	0.749	0.831
Height-for-age (below -2SD)	0.280	0.011	2640	2525	1.197	0.041	0.257	0.302
Weight-for-height (below -2SD)	0.085	0.005	2640	2525	0.986	0.065	0.074	0.096
Weight-for-age (below -2SD)	0.139	0.008	2640	2525	1.033	0.056	0.124	0.155
BMI <18.5	0.086	0.005	4366	4381	1.120	0.055	0.077	0.096
Anaemia in children	0.779	0.011	2421	2313	1.206	0.014	0.757	0.801
Anaemia in women	0.587	0.010	4748	4747	1.382	0.017	0.567	0.606
Has heard of HIV/AIDS	0.982	0.002	4916	4916	1.055	0.002	0.978	0.986
Knows about condom to reduce HIV/AIDS	0.759	0.008	4916	4916	1.289	0.010	0.743	0.774
Knows about limiting partners to reduce HIV/AIDS	0.852	0.009	4916	4916	1.707	0.010	0.834	0.869
Has comprehensive knowledge of HIV/AIDS	0.254	0.010	4916	4916	1.678	0.041	0.233	0.275
Higher-risk sex in past 12 months among youth	0.523	0.020	945	946	1.251	0.039	0.482	0.563
Condom use at last higher-risk sex among youth	0.282	0.022	478	495	1.084	0.079	0.237	0.326
Total fertility rate (past 3 years)	4.027	0.126	na	13787	1.398	0.031	3.776	4.279
Neonatal mortality rate (past 5 years)	29.742	3.454	3003	2915	1.062	0.116	22.834	36.650
Post-neonatal mortality rate (past 5 years)	20.548	2.753	3006	2918	0.996	0.134	15.042	26.054
Infant mortality rate (past 5 years)	50.290	4.513	3009	2919	1.050	0.090	41.265	59.316
Child mortality rate (past 5 years)	31.134	3.805	3037	2950	1.110	0.122	23.524	38.745
Under-five mortality rate (past 5 years)	72.920	5.479	3046	2956	1.100	0.075	61.961	83.878
MEN								
Urban residence	0.460	0.011	4050	4058	1.409	0.024	0.438	0.482
No education	0.133	0.008	4050	4058	1.500	0.060	0.117	0.149
Secondary education or higher	0.288	0.010	4050	4058	1.457	0.036	0.267	0.308
Never married/in union	0.477	0.009	4050	4058	1.187	0.020	0.458	0.496
Currently married/in union	0.481	0.009	4050	4058	1.159	0.019	0.462	0.499
Had first sex before18	0.261	0.010	3108	3147	1.256	0.038	0.241	0.280
Knows any contraceptive method	0.995	0.002	1958	1950	1.146	0.002	0.992	0.999
Knows any modern method	0.995	0.002	1958	1950	1.132	0.002	0.991	0.999
Ever used any method	0.717	0.013	1958	1950	1.272	0.018	0.691	0.743
Wants no more children	0.303	0.012	1958	1950	1.146	0.039	0.279	0.326
Wants to delay birth at least 2 years	0.400	0.012	1958	1950	1.079	0.030	0.376	0.424
Ideal number of children	4.517	0.060	4014	4018	1.340	0.013	4.396	4.637
Has heard of HIV/AIDS	0.992	0.002	4050	4058	1.312	0.002	0.989	0.996
Knows condom reduces HIV/AIDS	0.824	0.008	4050	4058	1.420	0.010	0.807	0.841
Knows limiting partners reduces HIV/AIDS	0.884	0.007	4050	4058	1.483	0.008	0.869	0.899
Has comprehensive knowledge of HIV/AIDS	0.332	0.009	4050	4058	1.254	0.028	0.313	0.350
Higher-risk sex in past 12 months among youth	0.864	0.016	548	556	1.125	0.019	0.832	0.897
Condom use at last higher-risk sex among youth	0.464	0.027	468	481	1.174	0.058	0.410	0.518

na = Not applicable

Table B.3 Sampling errors for Urban sample, Ghana 2008

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
			WOMEN					
No education	0.109	0.009	2162	2383	1.324	0.081	0.092	0.127
Secondary education or higher	0.281	0.014	2162	2383	1.494	0.051	0.252	0.309
Never married/in union	0.395	0.012	2162	2383	1.123	0.030	0.371	0.418
Currently married/in union	0.510	0.012	2162	2383	1.119	0.024	0.486	0.534
Had first sex before 18	0.361	0.014	1715	1891	1.207	0.039	0.333	0.389
Currently pregnant	0.063	0.005	2162	2383	1.054	0.088	0.052	0.074
Children ever born	1.764	0.044	2162	2383	0.984	0.025	1.676	1.851
Children living	1.596	0.039	2162	2383	1.000	0.025	1.517	1.675
Children ever born to women age 40-49	4.265	0.126	363	393	1.063	0.030	4.012	4.517
Knows any contraceptive method	0.992	0.003	1117	1216	1.254	0.003	0.986	0.999
Ever used contraceptive method	0.675	0.019	1117	1216	1.378	0.029	0.637	0.714
Currently using any contraceptive method	0.271	0.016	1117	1216	1.215	0.060	0.239	0.303
Currently using a modern method	0.186	0.013	1117	1216	1.135	0.071	0.159	0.212
Currently using pill	0.048	0.008	1117	1216	1.275	0.171	0.031	0.064
Currently using IUD	0.004	0.002	1117	1216	1.058	0.477	0.000	0.009
Currently using condom	0.041	0.007	1117	1216	1.126	0.163	0.028	0.054
Currently using female sterilisation	0.017	0.004	1117	1216	1.071	0.241	0.009	0.026
Currently using periodic abstinence	0.065	0.008	1117	1216	1.148	0.131	0.048	0.081
Using public sector source	0.315	0.031	282	312	1.106	0.097	0.253	0.376
Wants no more children	0.368	0.016	1117	1216	1.090	0.043	0.337	0.400
Wants to delay birth at least 2 years	0.323	0.015	1117	1216	1.100	0.048	0.292	0.354
Ideal number of children	3.853	0.048	2132	2351	1.318	0.013	3.757	3.950
Mother received 2+ tetanus injections	0.612	0.023	763	844	1.295	0.037	0.566	0.658
Births protected against neonatal tetanus	0.755	0.020	763	844	1.310	0.027	0.714	0.795
Mother received medical assistance at delivery	0.843	0.017	1000	1104	1.282	0.020	0.809	0.878
Child had diarrhoea in past 2 weeks	0.174	0.017	933	1039	1.295	0.096	0.141	0.208
Child treated with oral rehydration salts (ORS)	0.492	0.049	165	181	1.189	0.099	0.395	0.589
Child taken to a health provider	0.375	0.040	165	181	1.022	0.107	0.295	0.455
Child vaccination card seen	0.810	0.031	196	214	1.091	0.039	0.747	0.872
Child received BCG	0.973	0.013	196	214	1.113	0.013	0.948	0.999
Child received DPT (3 doses)	0.872	0.025	196	214	1.022	0.029	0.821	0.922
Child received polio (3 doses)	0.839	0.025	196	214	0.939	0.030	0.788	0.889
Child received measles	0.934	0.017	196	214	0.946	0.018	0.901	0.968
Child fully immunised	0.783	0.031	196	214	1.039	0.040	0.721	0.846
Height-for-age (below -2SD)	0.211	0.017	903	975	1.200	0.081	0.177	0.244
Weight-for-height (below -2SD)	0.076	0.009	903	975	0.964	0.114	0.058	0.093
Weight-for-age (below -2SD)	0.106	0.012	903	975	1.090	0.113	0.082	0.130
BMI <18.5	0.061	0.006	1960	2160	1.100	0.098	0.049	0.073
Anaemia in children	0.679	0.021	811	887	1.226	0.031	0.637	0.720
Anaemia in women	0.553	0.015	2074	2290	1.396	0.028	0.522	0.583
Has heard of HIV/AIDS	0.995	0.002	2162	2383	1.283	0.002	0.991	0.999
Knows about condom to reduce HIV/AIDS	0.793	0.010	2162	2383	1.163	0.013	0.773	0.814
Knows about limiting partners to reduce HIV/AIDS	0.881	0.013	2162	2383	1.843	0.015	0.855	0.907
Has comprehensive knowledge of HIV/AIDS	0.322	0.017	2162	2383	1.692	0.053	0.288	0.356
Higher-risk sex in past 12 months among youth	0.622	0.028	403	440	1.142	0.044	0.566	0.677
Condom use at last higher-risk sex among youth	0.335	0.033	248	273	1.093	0.098	0.269	0.401
Total fertility rate (past 3 years)	3.113	0.142	na	6720	1.150	0.046	2.829	3.396
Neonatal mortality rate (past 10 years)	30.154	4.400	1905	2073	1.032	0.146	21.354	38.955
Post-neonatal mortality rate (past 10 years)	18.671	3.169	1904	2073	0.998	0.170	12.333	25.009
Infant mortality rate (past 10 years)	48.825	5.158	1906	2074	0.988	0.106	38.510	59.140
Child mortality rate (past 10 years)	27.226	4.726	1913	2082	1.184	0.174	17.774	36.678
Under-five mortality rate (past 10 years)	74.722	6.697	1916	2084	1.048	0.090	61.328	88.116
			MEN					
No education	0.056	0.007	1696	1866	1.342	0.134	0.041	0.071
Secondary education or higher	0.428	0.016	1696	1866	1.340	0.038	0.396	0.460
Never married/in union	0.517	0.013	1696	1866	1.085	0.025	0.491	0.543
Currently married/in union	0.446	0.013	1696	1866	1.074	0.029	0.420	0.472
Had first sex before18	0.249	0.012	1349	1498	1.060	0.050	0.224	0.274
Knows any contraceptive method	0.999	0.001	745	832	0.903	0.001	0.997	1.001
Knows any modern method	0.999	0.001	745	832	0.903	0.001	0.997	1.001
Ever used any method	0.818	0.016	745	832	1.143	0.020	0.786	0.850
Wants no more children	0.312	0.019	745	832	1.110	0.060	0.274	0.350
Wants to delay birth at least 2 years	0.361	0.019	745	832	1.055	0.051	0.324	0.398
Ideal number of children	3.888	0.066	1678	1844	1.151	0.017	3.756	4.019
Has heard of HIV/AIDS	0.998	0.001	1696	1866	0.961	0.001	0.995	1.000
Knows condom reduces HIV/AIDS	0.828	0.012	1696	1866	1.329	0.015	0.803	0.852
Knows limiting partners reduces HIV/AIDS	0.896	0.011	1696	1866	1.472	0.012	0.874	0.918
Has comprehensive knowledge of HIV/AIDS	0.412	0.015	1696	1866	1.235	0.036	0.382	0.441
Higher-risk sex in past 12 months among youth	0.904	0.022	249	268	1.181	0.024	0.860	0.948
Condom use at last higher-risk sex among youth	0.520	0.033	224	242	0.988	0.064	0.454	0.587

na = Not applicable

Table B.4 Sampling errors for Rural sample, Ghana 2008

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
No education	0.308	0.015	2754	2533	1.685	0.048	0.279	0.338
Secondary education or higher	0.069	0.008	2754	2533	1.598	0.112	0.054	0.085
Never married/in union	0.258	0.011	2754	2533	1.326	0.043	0.235	0.280
Currently married/in union	0.656	0.012	2754	2533	1.363	0.019	0.631	0.680
Had first sex before 18	0.508	0.016	2164	2001	1.475	0.031	0.477	0.540
Currently pregnant	0.083	0.007	2754	2533	1.257	0.080	0.070	0.096
Children ever born	2.854	0.060	2754	2533	1.171	0.021	2.734	2.974
Children living	2.510	0.051	2754	2533	1.149	0.020	2.408	2.611
Children ever born to women age 40-49	5.881	0.133	557	505	1.246	0.023	5.615	6.146
Knows any contraceptive method	0.969	0.006	1833	1660	1.368	0.006	0.958	0.980
Ever used contraceptive method	0.541	0.019	1833	1660	1.665	0.036	0.502	0.579
Currently using any contraceptive method	0.209	0.013	1833	1660	1.392	0.063	0.182	0.235
Currently using a modern method	0.151	0.011	1833	1660	1.313	0.073	0.129	0.173
Currently using pill	0.047	0.005	1833	1660	1.104	0.116	0.036	0.058
Currently using IUD	0.001	0.001	1833	1660	1.017	1.003	0.000	0.002
Currently using condom	0.012	0.003	1833	1660	1.337	0.281	0.005	0.019
Currently using female sterilization	0.016	0.003	1833	1660	1.101	0.203	0.009	0.022
Currently using periodic abstinence	0.034	0.005	1833	1660	1.195	0.150	0.024	0.044
Using public sector source	0.476	0.034	335	299	1.237	0.071	0.408	0.544
Wants no more children	0.362	0.013	1833	1660	1.188	0.037	0.335	0.389
Wants to delay birth at least 2 years	0.383	0.014	1833	1660	1.198	0.036	0.356	0.410
Ideal number of children	4.708	0.069	2697	2484	1.688	0.015	4.570	4.847
Mother received 2+ tetanus injections	0.528	0.018	1384	1255	1.347	0.034	0.491	0.564
Births protected against neonatal tetanus	0.696	0.017	1384	1255	1.341	0.024	0.663	0.729
Mothers received medical assistance at delivery	0.430	0.020	1992	1806	1.522	0.047	0.390	0.470
Child had diarrhoea in past 2 weeks	0.213	0.012	1861	1692	1.200	0.057	0.189	0.237
Child treated with oral rehydration salts (ORS)	0.422	0.029	388	361	1.114	0.069	0.363	0.480
Child taken to a health provider	0.428	0.031	388	361	1.161	0.071	0.367	0.489
Child vaccination card seen	0.890	0.019	373	338	1.147	0.021	0.853	0.928
Child received BCG	0.948	0.012	373	338	0.997	0.012	0.925	0.971
Child received DPT (3 doses)	0.898	0.020	373	338	1.245	0.022	0.859	0.938
Child received polio (3 doses)	0.880	0.020	373	338	1.203	0.023	0.840	0.921
Child received measles	0.881	0.021	373	338	1.227	0.024	0.840	0.923
Child fully immunised	0.794	0.027	373	338	1.274	0.034	0.740	0.848
Height-for-age (below -2SD)	0.323	0.015	1737	1550	1.209	0.046	0.293	0.353
Weight-for-height (below -2SD)	0.091	0.007	1737	1550	1.007	0.078	0.077	0.105
Weight-for-age (below -2SD)	0.160	0.010	1737	1550	1.016	0.063	0.140	0.180
BMI <18.5	0.111	0.007	2406	2220	1.133	0.065	0.097	0.126
Anaemia in children	0.841	0.011	1610	1426	1.175	0.014	0.818	0.864
Anaemia in women	0.618	0.013	2674	2458	1.345	0.020	0.593	0.644
Has heard of HIV/AIDS	0.970	0.003	2754	2533	1.051	0.004	0.964	0.977
Knows about condom to reduce HIV/AIDS	0.726	0.012	2754	2533	1.405	0.016	0.702	0.750
Knows about limiting partners to reduce HIV/AIDS	0.824	0.012	2754	2533	1.616	0.014	0.800	0.847
Has comprehensive knowledge of HIV/AIDS	0.190	0.012	2754	2533	1.558	0.061	0.167	0.213
Higher-risk sex past 12 months among youth	0.437	0.031	542	506	1.442	0.070	0.375	0.498
Condom use at last higher-risk sex among youth	0.216	0.028	230	221	1.049	0.132	0.159	0.273
Total fertility rate (past 3 years)	4.907	0.179	na	7067	1.485	0.037	4.549	5.266
Neonatal mortality rate (past 10 years)	33.667	3.952	3947	3576	1.215	0.117	25.762	41.572
Postneonatal mortality rate (past 10 years)	22.755	2.630	3954	3582	1.061	0.116	17.495	28.014
Infant mortality rate (past 10 years)	56.422	4.940	3955	3583	1.216	0.088	46.542	66.302
Child mortality rate (past 10 years)	36.090	3.515	3972	3597	1.117	0.097	29.060	43.120
Under-five mortality rate (past 10 years)	90.476	5.935	3981	3605	1.207	0.066	78.606	102.346
MEN								
No education	0.199	0.013	2354	2191	1.580	0.065	0.173	0.225
Secondary education or higher	0.168	0.012	2354	2191	1.612	0.074	0.143	0.193
Never married/in union	0.443	0.013	2354	2191	1.312	0.030	0.416	0.470
Currently married/in union	0.510	0.013	2354	2191	1.265	0.026	0.484	0.536
Had first sex before 18	0.271	0.015	1759	1649	1.421	0.056	0.241	0.301
Knows any contraceptive method	0.993	0.003	1213	1118	1.209	0.003	0.987	0.999
Knows any modern method	0.992	0.003	1213	1118	1.192	0.003	0.986	0.998
Ever used any method	0.641	0.018	1213	1118	1.325	0.028	0.605	0.678
Wants no more children	0.296	0.015	1213	1118	1.163	0.052	0.265	0.326
Wants to delay birth at least 2 years	0.428	0.015	1213	1118	1.089	0.036	0.397	0.459
Ideal number of children	5.051	0.093	2336	2173	1.440	0.018	4.865	5.236
Has heard of HIV/AIDS	0.988	0.003	2354	2191	1.400	0.003	0.982	0.994
Knows condom reduces HIV/AIDS	0.821	0.012	2354	2191	1.496	0.014	0.797	0.844
Knows limiting partners reduces HIV/AIDS	0.874	0.010	2354	2191	1.487	0.012	0.853	0.894
Has comprehensive knowledge of HIV/AIDS	0.264	0.011	2354	2191	1.264	0.044	0.241	0.287
Higher-risk sex past 12 months among youth	0.827	0.024	299	288	1.104	0.029	0.779	0.876
Condom use at last higher-risk sex among youth	0.406	0.043	244	238	1.379	0.107	0.319	0.493

na = Not applicable

Table B.5 Sampling errors for Western sample, Ghana 2008

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
			WOMEN					
Urban residence	0.452	0.035	438	447	1.451	0.076	0.383	0.521
No education	0.139	0.020	438	447	1.188	0.141	0.100	0.179
Secondary education or higher	0.172	0.030	438	447	1.657	0.174	0.112	0.232
Never married/in union	0.304	0.020	438	447	0.894	0.065	0.264	0.343
Currently married/in union	0.583	0.024	438	447	1.032	0.042	0.534	0.632
Had first sex before 18	0.424	0.030	343	353	1.134	0.072	0.363	0.484
Currently pregnant	0.075	0.012	438	447	0.943	0.158	0.051	0.099
Children ever born	2.440	0.129	438	447	1.101	0.053	2.182	2.697
Children living	2.257	0.119	438	447	1.101	0.053	2.019	2.494
Children ever born to women age 40-49	5.021	0.267	77	81	0.934	0.053	4.487	5.554
Knows any contraceptive method	0.976	0.012	263	261	1.275	0.012	0.951	1.000
Ever used contraceptive method	0.494	0.039	263	261	1.254	0.078	0.417	0.572
Currently using any contraceptive method	0.191	0.027	263	261	1.104	0.140	0.137	0.245
Currently using a modern method	0.132	0.019	263	261	0.897	0.142	0.095	0.170
Currently using pill	0.065	0.016	263	261	1.057	0.248	0.033	0.097
Currently using IUD	0.000	0.000	263	261	na	na	0.000	0.000
Currently using condom	0.013	0.007	263	261	1.034	0.558	0.000	0.027
Currently using female sterilisation	0.011	0.007	263	261	0.988	0.566	0.000	0.024
Currently using periodic abstinence	0.047	0.016	263	261	1.264	0.352	0.014	0.080
Using public sector source	0.293	0.081	43	46	1.156	0.277	0.130	0.455
Wants no more children	0.448	0.035	263	261	1.125	0.077	0.379	0.517
Wants to delay birth at least 2 years	0.331	0.031	263	261	1.062	0.093	0.269	0.393
Ideal number of children	4.206	0.088	437	447	1.227	0.021	4.031	4.382
Mother received 2+ tetanus injections	0.541	0.043	189	189	1.181	0.079	0.455	0.627
Births protected against neonatal tetanus	0.638	0.040	189	189	1.134	0.062	0.559	0.718
Mother received medical assistance at delivery	0.617	0.047	270	271	1.327	0.077	0.522	0.711
Child had diarrhoea in past 2 weeks	0.153	0.029	260	260	1.313	0.188	0.096	0.211
Child treated with oral rehydration salts (ORS)	0.417	0.083	39	40	1.034	0.199	0.251	0.582
Child taken to a health provider	0.452	0.084	39	40	1.033	0.185	0.285	0.619
Child vaccination card seen	0.880	0.045	51	50	0.976	0.052	0.789	0.970
Child received BCG	0.989	0.012	51	50	0.759	0.012	0.965	1.012
Child received DPT (3 doses)	0.960	0.026	51	50	0.939	0.027	0.907	1.012
Child received polio (3 doses)	0.899	0.041	51	50	0.958	0.046	0.817	0.982
Child received measles	0.897	0.038	51	50	0.883	0.043	0.820	0.973
Child fully immunised	0.821	0.054	51	50	0.990	0.066	0.712	0.929
Height-for-age (below -2SD)	0.270	0.051	239	236	1.617	0.189	0.168	0.371
Weight-for-height (below -2SD)	0.056	0.014	239	236	0.889	0.242	0.029	0.084
Weight-for-age (below -2SD)	0.103	0.023	239	236	1.095	0.223	0.057	0.148
BMI <18.5	0.086	0.017	385	397	1.164	0.193	0.053	0.119
Anaemia in children	0.804	0.042	221	218	1.428	0.053	0.719	0.889
Anaemia in women	0.712	0.034	418	423	1.508	0.047	0.645	0.780
Has heard of HIV/AIDS	0.971	0.009	438	447	1.183	0.010	0.952	0.990
Knows about condom to reduce HIV/AIDS	0.841	0.019	438	447	1.104	0.023	0.803	0.880
Knows about limiting partners to reduce HIV/AIDS	0.750	0.046	438	447	2.214	0.061	0.658	0.842
Has comprehensive knowledge of HIV/AIDS	0.257	0.032	438	447	1.548	0.126	0.192	0.321
Higher-risk sex in past 12 months among youth	0.467	0.051	72	66	0.861	0.109	0.365	0.569
Condom use at last higher-risk sex among youth	0.203	0.074	30	31	0.988	0.364	0.055	0.350
Total fertility rate (past 3 years)	4.168	0.355	na	1266	1.065	0.085	3.457	4.879
Neonatal mortality rate (past 10 years)	40.424	10.766	561	550	1.221	0.266	18.892	61.957
Post-neonatal mortality rate (past 10 years)	11.051	5.387	561	550	1.196	0.487	0.277	21.825
Infant mortality rate (past 10 years)	51.476	11.599	561	550	1.201	0.225	28.278	74.673
Child mortality rate (past 10 years)	14.378	4.964	562	551	0.990	0.345	4.449	24.307
Under-five mortality rate (past 10 years)	65.114	12.483	562	551	1.213	0.192	40.147	90.080
			MEN					
Urban residence	0.434	0.040	382	403	1.594	0.093	0.353	0.515
No education	0.061	0.015	382	403	1.199	0.240	0.032	0.091
Secondary education or higher	0.278	0.036	382	403	1.552	0.128	0.206	0.349
Never married/in union	0.443	0.026	382	403	1.013	0.058	0.391	0.494
Currently married/in union	0.509	0.025	382	403	0.966	0.049	0.460	0.558
Had first sex before18	0.223	0.029	291	301	1.201	0.132	0.164	0.282
Knows any contraceptive method	1.000	0.000	206	205	na	0.000	1.000	1.000
Knows any modern method	1.000	0.000	206	205	na	0.000	1.000	1.000
Ever used any method	0.792	0.032	206	205	1.119	0.040	0.729	0.856
Wants no more children	0.413	0.035	206	205	1.015	0.084	0.343	0.483
Wants to delay birth at least 2 years	0.283	0.033	206	205	1.048	0.117	0.217	0.348
Ideal number of children	3.979	0.130	382	403	1.292	0.033	3.719	4.240
Has heard of HIV/AIDS	0.995	0.003	382	403	0.903	0.003	0.989	1.002
Knows condom reduces HIV/AIDS	0.804	0.028	382	403	1.354	0.034	0.748	0.859
Knows limiting partners reduces HIV/AIDS	0.921	0.015	382	403	1.113	0.017	0.891	0.952
Has comprehensive knowledge of HIV/AIDS	0.207	0.021	382	403	0.992	0.099	0.166	0.249
Higher-risk sex in past 12 months among youth	0.959	0.025	37	38	0.746	0.026	0.910	1.008
Condom use at last higher-risk sex among youth	0.360	0.083	34	36	0.991	0.230	0.194	0.525

na = Not applicable

Table B.6 Sampling errors for Central sample, Ghana 2008

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
WOMEN								
Urban residence	0.341	0.034	334	424	1.315	0.100	0.273	0.410
No education	0.162	0.029	334	424	1.461	0.182	0.103	0.220
Secondary education or higher	0.128	0.026	334	424	1.396	0.199	0.077	0.179
Never married/in union	0.310	0.023	334	424	0.918	0.075	0.263	0.356
Currently married/in union	0.600	0.025	334	424	0.916	0.041	0.551	0.649
Had first sex before 18	0.492	0.035	257	323	1.131	0.072	0.422	0.563
Currently pregnant	0.078	0.019	334	424	1.274	0.241	0.040	0.115
Children ever born	2.734	0.146	334	424	1.002	0.053	2.442	3.025
Children living	2.354	0.118	334	424	0.968	0.050	2.119	2.590
Children ever born to women age 40-49	5.495	0.336	69	86	1.065	0.061	4.823	6.167
Knows any contraceptive method	0.986	0.009	200	254	1.132	0.009	0.968	1.005
Ever used contraceptive method	0.624	0.052	200	254	1.504	0.083	0.521	0.727
Currently using any contraceptive method	0.229	0.038	200	254	1.273	0.165	0.153	0.305
Currently using a modern method	0.170	0.033	200	254	1.231	0.193	0.104	0.236
Currently using pill	0.036	0.013	200	254	0.966	0.354	0.010	0.062
Currently using IUD	0.000	0.000	200	254	na	na	0.000	0.000
Currently using condom	0.008	0.006	200	254	0.903	0.708	0.000	0.020
Currently using female sterilisation	0.030	0.012	200	254	1.002	0.401	0.006	0.055
Currently using periodic abstinence	0.033	0.013	200	254	1.030	0.393	0.007	0.059
Using public sector source	0.423	0.075	45	55	1.004	0.177	0.274	0.573
Wants no more children	0.413	0.033	200	254	0.949	0.080	0.346	0.479
Wants to delay birth at least 2 years	0.368	0.034	200	254	0.992	0.092	0.300	0.436
Ideal number of children	3.821	0.092	327	414	1.283	0.024	3.636	4.006
Mother received 2+ tetanus injections	0.551	0.044	158	200	1.111	0.080	0.463	0.639
Births protected against neonatal tetanus	0.708	0.044	158	200	1.215	0.062	0.620	0.796
Mother received medical assistance at delivery	0.540	0.052	227	292	1.387	0.097	0.435	0.645
Child had diarrhoea in past 2 weeks	0.193	0.036	208	268	1.200	0.187	0.121	0.265
Child treated with oral rehydration salts (ORS)	0.547	0.083	38	52	1.105	0.153	0.380	0.714
Child taken to a health provider	0.342	0.065	38	52	0.939	0.190	0.213	0.472
Child vaccination card seen	0.835	0.064	41	56	1.152	0.077	0.707	0.964
Child received BCG	1.000	0.000	41	56	na	0.000	1.000	1.000
Child received DPT (3 doses)	0.810	0.075	41	56	1.263	0.092	0.661	0.960
Child received polio (3 doses)	0.845	0.063	41	56	1.151	0.074	0.719	0.970
Child received measles	0.873	0.061	41	56	1.211	0.070	0.751	0.995
Child fully immunised	0.732	0.093	41	56	1.392	0.127	0.546	0.918
Height-for-age (below -2SD)	0.337	0.038	188	246	1.066	0.113	0.261	0.413
Weight-for-height (below -2SD)	0.120	0.029	188	246	1.168	0.241	0.062	0.177
Weight-for-age (below -2SD)	0.172	0.032	188	246	1.060	0.186	0.108	0.236
BMI <18.5	0.087	0.012	293	374	0.736	0.139	0.063	0.111
Anaemia in children	0.845	0.022	167	219	0.856	0.026	0.801	0.888
Anaemia in women	0.637	0.023	320	408	0.840	0.035	0.592	0.682
Has heard of HIV/AIDS	0.983	0.007	334	424	0.966	0.007	0.969	0.996
Knows about condom to reduce HIV/AIDS	0.842	0.027	334	424	1.338	0.032	0.788	0.895
Knows about limiting partners to reduce HIV/AIDS	0.907	0.025	334	424	1.563	0.027	0.857	0.957
Has comprehensive knowledge of HIV/AIDS	0.221	0.032	334	424	1.429	0.147	0.156	0.286
Higher-risk sex in past 12 months among youth	0.519	0.064	78	100	1.121	0.123	0.392	0.647
Condom use at last higher-risk sex among youth	0.297	0.067	41	52	0.926	0.225	0.163	0.431
Total fertility rate (past 3 years)	5.364	0.396	na	1170	1.081	0.074	4.572	6.157
Neonatal mortality rate (past 10 years)	47.224	11.265	426	546	1.047	0.239	24.694	69.754
Post-neonatal mortality rate (past 10 years)	25.988	8.526	427	548	1.153	0.328	8.937	43.039
Infant mortality rate (past 10 years)	73.212	15.735	427	548	1.105	0.215	41.743	104.681
Child mortality rate (past 10 years)	37.926	10.950	428	550	1.163	0.289	16.025	59.826
Under-five mortality rate (past 10 years)	108.361	17.403	429	551	0.976	0.161	73.554	143.167
MEN								
Urban residence	0.348	0.035	249	326	1.151	0.100	0.278	0.417
No education	0.066	0.020	249	326	1.303	0.312	0.025	0.107
Secondary education or higher	0.263	0.039	249	326	1.384	0.147	0.186	0.340
Never married/in union	0.479	0.033	249	326	1.034	0.068	0.413	0.545
Currently married/in union	0.453	0.035	249	326	1.121	0.078	0.382	0.524
Had first sex before18	0.323	0.044	191	254	1.308	0.137	0.234	0.412
Knows any contraceptive method	1.000	0.000	112	148	na	0.000	1.000	1.000
Knows any modern method	1.000	0.000	112	148	na	0.000	1.000	1.000
Ever used any method	0.739	0.043	112	148	1.026	0.058	0.654	0.825
Wants no more children	0.363	0.049	112	148	1.064	0.134	0.266	0.460
Wants to delay birth at least 2 years	0.398	0.051	112	148	1.103	0.129	0.296	0.501
Ideal number of children	3.884	0.152	247	323	1.517	0.039	3.581	4.187
Has heard of HIV/AIDS	1.000	0.000	249	326	na	0.000	1.000	1.000
Knows condom reduces HIV/AIDS	0.922	0.016	249	326	0.967	0.018	0.889	0.955
Knows limiting partners reduces HIV/AIDS	0.953	0.014	249	326	1.049	0.015	0.925	0.981
Has comprehensive knowledge of HIV/AIDS	0.290	0.031	249	326	1.078	0.107	0.228	0.352
Higher-risk sex in past 12 months among youth	0.811	0.076	33	46	1.099	0.094	0.659	0.963
Condom use at last higher-risk sex among youth	0.561	0.097	27	37	1.001	0.174	0.366	0.755

na = Not applicable

Table B.7 Sampling errors for Greater Accra sample, Ghana 2008

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
			WOMEN					
Urban residence	0.905	0.009	692	853	0.779	0.010	0.888	0.923
No education	0.077	0.014	692	853	1.392	0.184	0.048	0.105
Secondary education or higher	0.370	0.030	692	853	1.643	0.082	0.309	0.430
Never married/in union	0.418	0.024	692	853	1.255	0.056	0.370	0.465
Currently married/in union	0.495	0.024	692	853	1.244	0.048	0.448	0.542
Had first sex before 18	0.309	0.022	562	691	1.104	0.070	0.266	0.352
Currently pregnant	0.070	0.010	692	853	1.072	0.149	0.049	0.090
Children ever born	1.516	0.066	692	853	0.941	0.044	1.383	1.649
Children living	1.402	0.061	692	853	0.946	0.043	1.280	1.523
Children ever born to women age 40-49	3.890	0.212	106	129	1.059	0.054	3.466	4.314
Knows any contraceptive method	0.996	0.004	337	422	1.100	0.004	0.989	1.004
Ever used contraceptive method	0.736	0.031	337	422	1.307	0.043	0.673	0.799
Currently using any contraceptive method	0.326	0.033	337	422	1.277	0.100	0.261	0.392
Currently using a modern method	0.222	0.028	337	422	1.235	0.126	0.166	0.278
Currently using pill	0.060	0.017	337	422	1.322	0.286	0.026	0.094
Currently using IUD	0.009	0.005	337	422	1.042	0.586	0.000	0.020
Currently using condom	0.061	0.014	337	422	1.086	0.233	0.033	0.089
Currently using female sterilisation	0.011	0.005	337	422	0.933	0.492	0.000	0.021
Currently using periodic abstinence	0.093	0.016	337	422	0.994	0.169	0.062	0.125
Using public sector source	0.254	0.048	111	140	1.159	0.190	0.158	0.350
Wants no more children	0.457	0.030	337	422	1.086	0.065	0.398	0.516
Wants to delay birth at least 2 years	0.264	0.026	337	422	1.073	0.098	0.213	0.316
Ideal number of children	3.371	0.058	684	843	1.312	0.017	3.255	3.488
Mother received 2+ tetanus injections	0.664	0.039	210	262	1.209	0.059	0.585	0.743
Births protected against neonatal tetanus	0.767	0.037	210	262	1.280	0.049	0.693	0.842
Mother received medical assistance at delivery	0.843	0.026	279	346	1.009	0.031	0.791	0.896
Child had diarrhoea in past 2 weeks	0.124	0.020	264	329	0.941	0.159	0.085	0.163
Child treated with oral rehydration salts (ORS)	0.243	0.073	34	41	0.965	0.302	0.096	0.389
Child taken to a health provider	0.146	0.063	34	41	1.023	0.434	0.019	0.273
Child vaccination card seen	0.777	0.067	48	61	1.092	0.087	0.642	0.911
Child received BCG	1.000	0.000	48	61	na	0.000	1.000	1.000
Child received DPT (3 doses)	0.886	0.046	48	61	0.927	0.051	0.795	0.977
Child received polio (3 doses)	0.831	0.063	48	61	1.115	0.075	0.706	0.957
Child received measles	0.924	0.050	48	61	1.330	0.054	0.824	1.024
Child fully immunised	0.799	0.069	48	61	1.160	0.086	0.661	0.937
Height-for-age (below -2SD)	0.142	0.024	234	277	0.964	0.169	0.094	0.190
Weight-for-height (below -2SD)	0.059	0.014	234	277	0.932	0.236	0.031	0.087
Weight-for-age (below -2SD)	0.065	0.019	234	277	1.005	0.284	0.028	0.102
BMI <18.5	0.045	0.008	622	766	1.010	0.187	0.028	0.062
Anemia in children	0.621	0.040	224	267	1.193	0.064	0.542	0.700
Anemia in women	0.507	0.025	675	833	1.298	0.049	0.457	0.557
Has heard of HIV/AIDS	0.992	0.004	692	853	1.084	0.004	0.985	0.999
Knows about condom to reduce HIV/AIDS	0.758	0.019	692	853	1.168	0.025	0.720	0.796
Knows about limiting partners to reduce HIV/AIDS	0.883	0.020	692	853	1.677	0.023	0.843	0.924
Has comprehensive knowledge of HIV/AIDS	0.361	0.027	692	853	1.485	0.075	0.307	0.415
Higher-risk sex in past 12 months among youth	0.600	0.053	124	151	1.205	0.089	0.493	0.706
Condom use at last higher-risk sex among youth	0.461	0.059	76	91	1.030	0.129	0.342	0.580
Total fertility rate (past 3 years)	2.534	0.217	na	2427	1.144	0.086	2.099	2.969
Neonatal mortality rate (past 10 years)	21.331	7.705	526	650	1.161	0.361	5.920	36.742
Post-neonatal mortality rate (past 10 years)	14.999	4.758	526	650	0.896	0.317	5.483	24.515
Infant mortality rate (past 10 years)	36.330	8.747	526	650	1.021	0.241	18.836	53.825
Child mortality rate (past 10 years)	14.284	5.184	528	652	0.950	0.363	3.915	24.653
Under-five mortality rate (past 10 years)	50.095	10.421	528	652	1.068	0.208	29.253	70.938
			MEN					
Urban residence	0.880	0.020	531	649	1.382	0.022	0.840	0.919
No education	0.035	0.011	531	649	1.339	0.304	0.014	0.057
Secondary education or higher	0.487	0.033	531	649	1.538	0.069	0.420	0.554
Never married/in union	0.493	0.028	531	649	1.270	0.056	0.438	0.548
Currently married/in union	0.465	0.025	531	649	1.162	0.054	0.415	0.515
Had first sex before18	0.273	0.019	442	544	0.887	0.069	0.235	0.310
Knows any contraceptive method	1.000	0.000	241	302	na	0.000	1.000	1.000
Knows any modern method	1.000	0.000	241	302	na	0.000	1.000	1.000
Ever used any method	0.886	0.024	241	302	1.150	0.027	0.839	0.933
Wants no more children	0.366	0.026	241	302	0.822	0.070	0.315	0.417
Wants to delay birth at least 2 years	0.308	0.031	241	302	1.036	0.100	0.247	0.370
Ideal number of children	3.283	0.054	529	646	1.049	0.017	3.175	3.392
Has heard of HIV/AIDS	0.999	0.001	531	649	0.750	0.001	0.997	1.001
Knows condom reduces HIV/AIDS	0.850	0.019	531	649	1.237	0.023	0.811	0.888
Knows limiting partners reduces HIV/AIDS	0.886	0.022	531	649	1.560	0.024	0.843	0.929
Has comprehensive knowledge of HIV/AIDS	0.474	0.026	531	649	1.215	0.056	0.421	0.526
Higher-risk sex in past 12 months among youth	0.906	0.036	65	77	1.000	0.040	0.833	0.979
Condom use at last higher-risk sex among youth	0.529	0.063	60	70	0.968	0.119	0.403	0.655

na = Not applicable

Table B.8 Sampling errors for Volta sample, Ghana 2008

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
			WOMEN					
Urban residence	0.264	0.038	433	431	1.789	0.144	0.188	0.340
No education	0.229	0.037	433	431	1.846	0.163	0.154	0.304
Secondary education or higher	0.142	0.023	433	431	1.398	0.165	0.095	0.189
Never married/in union	0.265	0.029	433	431	1.355	0.109	0.208	0.323
Currently married/in union	0.673	0.027	433	431	1.187	0.040	0.620	0.727
Had first sex before 18	0.488	0.046	344	340	1.690	0.094	0.397	0.579
Currently pregnant	0.067	0.015	433	431	1.277	0.229	0.036	0.098
Children ever born	2.467	0.130	433	431	1.140	0.053	2.208	2.727
Children living	2.264	0.109	433	431	1.067	0.048	2.045	2.483
Children ever born to women age 40-49	5.021	0.248	98	94	1.086	0.049	4.525	5.517
Knows any contraceptive method	0.997	0.003	293	290	0.888	0.003	0.992	1.003
Ever used contraceptive method	0.665	0.060	293	290	2.170	0.090	0.545	0.785
Currently using any contraceptive method	0.286	0.039	293	290	1.460	0.135	0.209	0.364
Currently using a modern method	0.205	0.028	293	290	1.179	0.136	0.149	0.261
Currently using pill	0.061	0.013	293	290	0.949	0.218	0.034	0.087
Currently using IUD	0.003	0.003	293	290	0.987	1.018	0.000	0.010
Currently using condom	0.033	0.014	293	290	1.316	0.419	0.005	0.060
Currently using female sterilisation	0.029	0.011	293	290	1.125	0.380	0.007	0.051
Currently using periodic abstinence	0.053	0.014	293	290	1.100	0.273	0.024	0.081
Using public sector source	0.537	0.085	59	58	1.293	0.158	0.368	0.706
Wants no more children	0.390	0.032	293	290	1.137	0.083	0.325	0.455
Wants to delay birth at least 2 years	0.381	0.029	293	290	1.017	0.076	0.323	0.439
Ideal number of children	4.177	0.079	429	426	1.033	0.019	4.020	4.334
Mother received 2+ tetanus injections	0.503	0.047	181	181	1.250	0.093	0.410	0.596
Births protected against neonatal tetanus	0.814	0.034	181	181	1.178	0.042	0.746	0.883
Mother received medical assistance at delivery	0.537	0.059	245	244	1.578	0.109	0.419	0.654
Child had diarrhoea in past 2 weeks	0.051	0.014	238	237	0.998	0.271	0.023	0.079
Child treated with oral rehydration salts (ORS)	0.325	0.131	13	12	0.979	0.404	0.062	0.587
Child taken to a health provider	0.331	0.158	13	12	1.175	0.479	0.014	0.647
Child vaccination card seen	0.817	0.058	45	44	0.997	0.072	0.700	0.934
Child received BCG	0.965	0.036	45	44	1.281	0.037	0.893	1.036
Child received DPT (3 doses)	0.895	0.055	45	44	1.185	0.061	0.785	1.005
Child received polio (3 doses)	0.814	0.063	45	44	1.073	0.078	0.687	0.940
Child received measles	0.920	0.045	45	44	1.090	0.048	0.831	1.009
Child fully immunised	0.793	0.070	45	44	1.134	0.088	0.653	0.932
Height-for-age (below -2SD)	0.268	0.039	232	228	1.223	0.144	0.191	0.345
Weight-for-height (below -2SD)	0.052	0.015	232	228	1.090	0.293	0.021	0.082
Weight-for-age (below -2SD)	0.136	0.026	232	228	1.064	0.189	0.085	0.188
BMI <18.5	0.110	0.020	381	381	1.274	0.186	0.069	0.151
Anaemia in children	0.787	0.028	201	198	0.922	0.035	0.732	0.842
Anaemia in women	0.581	0.031	419	418	1.286	0.053	0.519	0.643
Has heard of HIV/AIDS	0.994	0.004	433	431	0.997	0.004	0.986	1.001
Knows about condom to reduce HIV/AIDS	0.802	0.022	433	431	1.136	0.027	0.759	0.846
Knows about limiting partners to reduce HIV/AIDS	0.925	0.013	433	431	1.027	0.014	0.899	0.951
Has comprehensive knowledge of HIV/AIDS	0.305	0.040	433	431	1.798	0.131	0.225	0.385
Higher-risk sex in past 12 months among youth	0.390	0.062	68	69	1.038	0.158	0.266	0.514
Condom use at last higher-risk sex among youth	0.224	0.095	27	27	1.157	0.422	0.035	0.413
Total fertility rate (past 3 years)	3.821	0.352	na	1201	1.243	0.092	3.117	4.526
Neonatal mortality rate (past 10 years)	26.261	9.338	512	521	1.212	0.356	7.585	44.937
Post-neonatal mortality rate (past 10 years)	10.680	4.571	514	523	1.127	0.428	1.537	19.823
Infant mortality rate (past 10 years)	36.941	12.396	514	523	1.411	0.336	12.148	61.734
Child mortality rate (past 10 years)	13.372	5.264	514	522	0.932	0.394	2.843	23.901
Under-five mortality rate (past 10 years)	49.819	13.178	516	524	1.263	0.265	23.462	76.175
			MEN					
Urban residence	0.230	0.030	367	373	1.355	0.129	0.171	0.290
No education	0.084	0.028	367	373	1.946	0.337	0.027	0.140
Secondary education or higher	0.235	0.029	367	373	1.319	0.124	0.177	0.293
Never married/in union	0.507	0.030	367	373	1.146	0.059	0.447	0.567
Currently married/in union	0.446	0.028	367	373	1.088	0.063	0.389	0.502
Had first sex before18	0.240	0.035	258	259	1.298	0.144	0.170	0.309
Knows any contraceptive method	1.000	0.000	167	166	na	0.000	1.000	1.000
Knows any modern method	0.994	0.006	167	166	0.982	0.006	0.983	1.006
Ever used any method	0.774	0.047	167	166	1.441	0.060	0.680	0.867
Wants no more children	0.312	0.041	167	166	1.151	0.133	0.230	0.395
Wants to delay birth at least 2 years	0.382	0.040	167	166	1.067	0.105	0.301	0.462
Ideal number of children	4.585	0.186	367	373	1.595	0.040	4.213	4.956
Has heard of HIV/AIDS	0.995	0.004	367	373	1.011	0.004	0.987	1.002
Knows condom reduces HIV/AIDS	0.915	0.017	367	373	1.174	0.019	0.881	0.949
Knows limiting partners reduces HIV/AIDS	0.954	0.012	367	373	1.127	0.013	0.929	0.979
Has comprehensive knowledge of HIV/AIDS	0.433	0.025	367	373	0.961	0.058	0.383	0.483
Higher-risk sex in past 12 months among youth	0.831	0.066	44	42	1.151	0.079	0.700	0.963
Condom use at last higher-risk sex among youth	0.610	0.118	34	35	1.393	0.194	0.373	0.846

na = Not applicable

Table B.9 Sampling errors for Eastern sample, Ghana 2008

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
			WOMEN					
Urban residence	0.408	0.026	479	483	1.178	0.065	0.355	0.461
No education	0.107	0.017	479	483	1.192	0.158	0.073	0.141
Secondary education or higher	0.117	0.015	479	483	0.993	0.125	0.088	0.146
Never married/in union	0.380	0.024	479	483	1.073	0.063	0.332	0.427
Currently married/in union)	0.523	0.027	479	483	1.164	0.051	0.469	0.576
Had first sex before 18	0.514	0.040	375	377	1.543	0.077	0.435	0.594
Currently pregnant	0.053	0.013	479	483	1.248	0.242	0.027	0.078
Children ever born	2.240	0.100	479	483	0.969	0.045	2.039	2.440
Children living	1.998	0.084	479	483	0.909	0.042	1.829	2.167
Children ever born to women age 40-49	4.679	0.243	90	87	1.053	0.052	4.193	5.164
Knows any contraceptive method	0.997	0.003	256	252	0.859	0.003	0.991	1.003
Ever used contraceptive method	0.750	0.032	256	252	1.174	0.042	0.687	0.814
Currently using any contraceptive method	0.242	0.031	256	252	1.169	0.129	0.180	0.305
Currently using a modern method	0.170	0.029	256	252	1.253	0.173	0.111	0.229
Currently using pill	0.037	0.013	256	252	1.059	0.339	0.012	0.062
Currently using IUD	0.004	0.004	256	252	1.061	1.006	0.000	0.013
Currently using condom	0.038	0.012	256	252	1.014	0.320	0.014	0.062
Currently using female sterilisation	0.026	0.010	256	252	1.018	0.392	0.006	0.046
Currently using periodic abstinence	0.044	0.015	256	252	1.145	0.333	0.015	0.074
Using public sector source	0.320	0.054	67	71	0.936	0.168	0.213	0.428
Want no more children	0.467	0.039	256	252	1.260	0.084	0.388	0.546
Want to delay birth at least 2 years	0.289	0.032	256	252	1.145	0.113	0.224	0.353
Ideal number of children	3.888	0.084	476	479	1.332	0.022	3.720	4.056
Mother received 2+ tetanus injections	0.490	0.038	187	185	1.038	0.078	0.414	0.566
Births protected against neonatal tetanus	0.729	0.034	187	185	1.047	0.047	0.660	0.797
Mother received medical assistance at delivery	0.608	0.044	261	254	1.203	0.073	0.519	0.697
Child had diarrhoea in past 2 weeks	0.173	0.027	245	240	1.041	0.158	0.118	0.227
Child treated with oral rehydration salts (ORS)	0.476	0.080	46	41	0.996	0.169	0.315	0.637
Child taken to a health provider	0.402	0.086	46	41	1.094	0.214	0.230	0.574
Child vaccination card seen	0.852	0.055	58	55	1.148	0.065	0.742	0.963
Child received BCG	0.985	0.014	58	55	0.864	0.014	0.957	1.013
Child received DPT (3 doses)	0.915	0.031	58	55	0.830	0.034	0.852	0.978
Child received polio (3 doses)	0.874	0.040	58	55	0.893	0.046	0.794	0.954
Child received measles	0.868	0.037	58	55	0.805	0.043	0.794	0.942
Child fully immunised	0.763	0.059	58	55	1.020	0.077	0.645	0.880
Height-for-age (below -2SD)	0.379	0.051	222	216	1.437	0.134	0.277	0.480
Weight-for-height (below -2SD)	0.064	0.018	222	216	1.124	0.287	0.027	0.101
Weight-for-age (below -2SD)	0.087	0.017	222	216	0.805	0.199	0.053	0.122
BMI <18.5	0.071	0.014	446	448	1.130	0.194	0.044	0.099
Anaemia in children	0.731	0.032	217	211	1.055	0.044	0.667	0.796
Anaemia in women	0.583	0.038	466	468	1.639	0.064	0.508	0.658
Has heard of HIV/AIDS	1.000	0.000	479	483	na	0.000	1.000	1.000
Knows about condom to reduce HIV/AIDS	0.785	0.024	479	483	1.263	0.030	0.738	0.833
Knows about limiting partners to reduce HIV/AIDS	0.830	0.026	479	483	1.542	0.032	0.777	0.883
Has comprehensive knowledge of HIV/AIDS	0.235	0.025	479	483	1.293	0.107	0.184	0.285
Higher-risk sex in past 12 months among youth	0.686	0.066	99	98	1.405	0.096	0.554	0.818
Condom use at last higher-risk sex among youth	0.450	0.059	66	67	0.949	0.130	0.333	0.567
Total fertility rate (past 3 years)	3.647	0.317	na	1335	1.096	0.087	3.013	4.282
Neonatal mortality rate (past 10 years)	28.596	10.208	508	499	1.246	0.357	8.181	49.012
Post-neonatal mortality rate (past 10 years)	24.542	8.634	508	499	1.055	0.352	7.274	41.810
Infant mortality rate (past 10 years)	53.138	15.654	508	499	1.368	0.295	21.830	84.446
Child mortality rate (past 10 years)	29.891	7.318	509	500	0.949	0.245	15.255	44.526
Under-five mortality rate (past 10 years)	81.441	16.870	509	500	1.285	0.207	47.700	115.181
			MEN					
Urban residence	0.366	0.030	394	411	1.240	0.082	0.305	0.426
No education	0.025	0.010	394	411	1.264	0.400	0.005	0.045
Secondary education or higher	0.210	0.029	394	411	1.387	0.136	0.153	0.267
Never married/in union	0.504	0.027	394	411	1.054	0.053	0.451	0.557
Currently married/in union	0.460	0.027	394	411	1.065	0.058	0.407	0.514
Had first sex before18	0.291	0.027	308	319	1.028	0.092	0.237	0.344
Knows any contraceptive method	0.995	0.005	187	189	0.957	0.005	0.985	1.005
Knows any modern method	0.995	0.005	187	189	0.957	0.005	0.985	1.005
Ever used any method	0.779	0.033	187	189	1.081	0.042	0.713	0.845
Wants no more children	0.393	0.035	187	189	0.986	0.090	0.322	0.463
Wants to delay birth at least 2 years	0.328	0.040	187	189	1.165	0.122	0.247	0.408
Ideal number of children	4.311	0.120	394	411	1.282	0.028	4.072	4.551
Has heard of HIV/AIDS	0.998	0.002	394	411	0.852	0.002	0.995	1.002
Knows condom reduces HIV/AIDS	0.739	0.031	394	411	1.399	0.042	0.678	0.801
Knows limiting partners reduces HIV/AIDS	0.766	0.033	394	411	1.552	0.043	0.699	0.832
Has comprehensive knowledge of HIV/AIDS	0.263	0.033	394	411	1.483	0.125	0.197	0.329
Higher-risk sex in past 12 months among youth	0.915	0.035	64	68	1.001	0.038	0.844	0.985
Condom use at last higher-risk sex among youth	0.487	0.064	59	63	0.979	0.132	0.358	0.615

na = Not applicable

Table B.10 Sampling errors for Ashanti sample, Ghana 2008

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
			WOMEN					
Urban residence	0.555	0.025	815	1011	1.411	0.044	0.506	0.605
No education	0.099	0.016	815	1011	1.545	0.163	0.067	0.131
Secondary education or higher	0.156	0.015	815	1011	1.197	0.097	0.126	0.187
Never married/in union	0.348	0.019	815	1011	1.109	0.053	0.311	0.385
Currently married/in union	0.536	0.020	815	1011	1.137	0.037	0.497	0.576
Had first sex before 18	0.451	0.022	652	809	1.111	0.048	0.408	0.494
Currently pregnant	0.076	0.009	815	1011	1.003	0.123	0.057	0.094
Children ever born	2.178	0.087	815	1011	1.011	0.040	2.003	2.352
Children living	1.942	0.078	815	1011	1.034	0.040	1.787	2.098
Children ever born to women age 40-49	5.096	0.269	152	182	1.198	0.053	4.559	5.634
Knows any contraceptive method	0.995	0.004	438	542	1.066	0.004	0.987	1.002
Ever used contraceptive method	0.673	0.028	438	542	1.239	0.041	0.618	0.729
Currently using any contraceptive method	0.270	0.023	438	542	1.065	0.084	0.225	0.316
Currently using a modern method	0.157	0.018	438	542	1.025	0.114	0.121	0.193
Currently using pill	0.049	0.011	438	542	1.094	0.231	0.026	0.072
Currently using IUD	0.000	0.000	438	542	na	na	0.000	0.000
Currently using condom	0.007	0.004	438	542	0.880	0.495	0.000	0.014
Currently using female sterilisation	0.030	0.008	438	542	1.000	0.271	0.014	0.047
Currently using periodic abstinence	0.054	0.013	438	542	1.186	0.239	0.028	0.079
Using public sector source	0.364	0.054	83	103	1.015	0.148	0.256	0.472
Wants no more children	0.349	0.024	438	542	1.072	0.070	0.300	0.397
Wants to delay birth at least 2 years	0.332	0.026	438	542	1.161	0.079	0.280	0.384
Ideal number of children	4.231	0.091	801	995	1.469	0.022	4.049	4.413
Mother received 2+ tetanus injections	0.572	0.036	318	396	1.302	0.063	0.499	0.644
Births protected against neonatal tetanus	0.774	0.032	318	396	1.377	0.042	0.709	0.838
Mother received medical assistance at delivery	0.726	0.038	439	545	1.567	0.053	0.649	0.803
Child had diarrhoea in past 2 weeks	0.202	0.025	412	510	1.228	0.124	0.152	0.253
Child treated with oral rehydration salts (ORS)	0.445	0.067	79	103	1.222	0.151	0.310	0.580
Child taken to a health provider	0.406	0.058	79	103	1.040	0.143	0.290	0.522
Child vaccination card seen	0.863	0.037	89	114	1.045	0.043	0.788	0.938
Child received BCG	0.954	0.023	89	114	1.041	0.024	0.908	0.999
Child received DPT (3 doses)	0.914	0.032	89	114	1.103	0.035	0.849	0.978
Child received polio (3 doses)	0.909	0.033	89	114	1.096	0.036	0.843	0.974
Child received measles	0.930	0.027	89	114	1.000	0.029	0.877	0.983
Child fully immunised	0.846	0.040	89	114	1.077	0.048	0.766	0.927
Height-for-age (below -2SD)	0.265	0.022	413	507	0.974	0.082	0.221	0.308
Weight-for-height (below -2SD)	0.092	0.010	413	507	0.731	0.112	0.072	0.113
Weight-for-age (below -2SD)	0.121	0.013	413	507	0.787	0.108	0.095	0.147
BMI <18.5	0.095	0.011	734	912	1.062	0.121	0.072	0.118
Anaemia in children	0.779	0.030	362	453	1.342	0.039	0.719	0.840
Anaemia in women	0.599	0.020	781	971	1.164	0.034	0.558	0.640
Has heard of HIV/AIDS	0.996	0.003	815	1011	1.440	0.003	0.989	1.002
Knows about condom to reduce HIV/AIDS	0.766	0.015	815	1011	1.036	0.020	0.735	0.796
Knows about limiting partners to reduce HIV/AIDS	0.841	0.021	815	1011	1.604	0.024	0.800	0.883
Has comprehensive knowledge of HIV/AIDS	0.202	0.017	815	1011	1.227	0.086	0.167	0.236
Higher-risk sex in past 12 months among youth	0.601	0.048	180	227	1.305	0.079	0.505	0.696
Condom use at last higher-risk sex among youth	0.123	0.034	110	136	1.084	0.277	0.055	0.192
Total fertility rate (past 3 years)	3.603	0.253	na	2827	1.244	0.070	3.097	4.108
Neonatal mortality rate (past 10 years)	35.062	8.917	865	1078	1.107	0.254	17.229	52.896
Post-neonatal mortality rate (past 10 years)	19.060	4.253	866	1079	0.985	0.223	10.554	27.567
Infant mortality rate (past 10 years)	54.123	8.810	866	1079	1.008	0.163	36.503	71.742
Child mortality rate (past 10 years)	27.535	6.140	869	1082	1.072	0.223	15.256	39.814
Under-five mortality rate (past 10 years)	80.167	10.065	870	1083	1.026	0.126	60.037	100.298
			MEN					
Urban residence	0.546	0.023	621	785	1.136	0.042	0.501	0.592
No education	0.066	0.017	621	785	1.661	0.251	0.033	0.099
Secondary education or higher	0.301	0.019	621	785	1.050	0.064	0.263	0.340
Never married/in union	0.477	0.022	621	785	1.092	0.046	0.433	0.521
Currently married/in union	0.477	0.021	621	785	1.024	0.043	0.436	0.518
Had first sex before18	0.319	0.025	485	612	1.183	0.079	0.269	0.370
Knows any contraceptive method	0.996	0.004	297	374	1.026	0.004	0.989	1.004
Knows any modern method	0.996	0.004	297	374	1.026	0.004	0.989	1.004
Ever used any method	0.791	0.025	297	374	1.042	0.031	0.741	0.840
Wants no more children	0.317	0.032	297	374	1.195	0.102	0.252	0.382
Wants to delay birth at least 2 years	0.388	0.030	297	374	1.049	0.077	0.328	0.447
Ideal number of children	4.206	0.099	611	773	1.266	0.023	4.009	4.403
Had heard of HIV/AIDS	0.997	0.003	621	785	1.454	0.003	0.990	1.003
Knows condom reduces HIV/AIDS	0.841	0.020	621	785	1.332	0.023	0.801	0.880
Knows limiting partners reduces HIV/AIDS	0.914	0.015	621	785	1.345	0.017	0.884	0.945
Has comprehensive knowledge of HIV/AIDS	0.320	0.021	621	785	1.125	0.066	0.278	0.362
Higher-risk sex in past 12 months among youth	0.877	0.037	108	133	1.154	0.042	0.804	0.950
Condom use at last higher-risk sex among youth	0.418	0.051	95	116	0.994	0.121	0.317	0.519

na = Not applicable

Table B.11 Sampling errors for Brong Ahafo , Ghana 2008

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
			WOMEN					
Urban residence	0.422	0.037	403	425	1.503	0.088	0.348	0.496
No education	0.249	0.031	403	425	1.419	0.123	0.188	0.310
Secondary education or higher	0.111	0.017	403	425	1.115	0.158	0.076	0.146
Never married/in union	0.250	0.025	403	425	1.149	0.099	0.201	0.300
Currently married/in union	0.628	0.025	403	425	1.028	0.039	0.579	0.678
Had first sex before 18	0.463	0.040	327	345	1.452	0.087	0.382	0.543
Currently pregnant	0.048	0.011	403	425	1.046	0.233	0.026	0.070
Children ever born	2.412	0.126	403	425	1.024	0.052	2.159	2.664
Children living	2.183	0.113	403	425	1.014	0.052	1.957	2.409
Children ever born to women age 40-49	5.613	0.334	75	79	1.156	0.059	4.946	6.280
Knows any contraceptive method	0.980	0.012	260	267	1.350	0.012	0.956	1.003
Ever used contraceptive method	0.663	0.045	260	267	1.531	0.068	0.573	0.753
Currently using any contraceptive method	0.290	0.032	260	267	1.128	0.110	0.226	0.353
Currently using a modern method	0.216	0.027	260	267	1.061	0.126	0.162	0.270
Currently using pill	0.071	0.016	260	267	0.988	0.222	0.040	0.103
Currently using IUD	0.000	0.000	260	267	na	na	0.000	0.000
Currently using condom	0.051	0.017	260	267	1.267	0.340	0.016	0.085
Currently using female sterilisation	0.000	0.000	260	267	na	na	0.000	0.000
Currently using periodic abstinence	0.065	0.016	260	267	1.039	0.245	0.033	0.097
Using public sector source	0.392	0.075	59	67	1.168	0.191	0.243	0.542
Wants no more children	0.261	0.029	260	267	1.049	0.110	0.204	0.318
Wants to delay birth at least 2 years	0.318	0.033	260	267	1.126	0.103	0.253	0.383
Ideal number of children	4.182	0.099	402	424	1.248	0.024	3.985	4.380
Mother received 2+ tetanus injections	0.589	0.055	207	218	1.611	0.094	0.479	0.700
Births protected against neonatal tetanus	0.731	0.043	207	218	1.380	0.058	0.646	0.817
Mother received medical assistance at delivery	0.655	0.047	266	272	1.413	0.072	0.561	0.750
Child had diarrhoea in past 2 weeks	0.284	0.040	254	260	1.338	0.141	0.204	0.365
Child treated with oral rehydration salts (ORS)	0.385	0.092	66	74	1.487	0.238	0.202	0.568
Child taken to a health provider	0.333	0.062	66	74	1.067	0.186	0.209	0.457
Child vaccination card seen	0.963	0.028	49	49	0.990	0.029	0.908	1.018
Child received BCG	0.982	0.018	49	49	0.937	0.019	0.946	1.019
Child received DPT (3 doses)	0.957	0.030	49	49	1.023	0.032	0.896	1.018
Child received polio (3 doses)	0.957	0.030	49	49	1.023	0.032	0.896	1.018
Child received measles	0.957	0.030	49	49	1.023	0.032	0.896	1.018
Child fully immunised	0.939	0.035	49	49	1.002	0.037	0.869	1.010
Height-for-age (below -2SD)	0.252	0.030	272	274	1.063	0.118	0.192	0.311
Weight-for-height (below -2SD)	0.054	0.013	272	274	0.963	0.247	0.027	0.081
Weight-for-age (below -2SD)	0.135	0.020	272	274	0.938	0.148	0.095	0.175
BMI <18.5	0.075	0.013	371	394	0.969	0.176	0.049	0.102
Anaemia in children	0.783	0.032	250	249	1.121	0.041	0.719	0.847
Anaemia in women	0.578	0.039	400	423	1.586	0.068	0.500	0.657
Has heard of HIV/AIDS	0.994	0.003	403	425	0.860	0.003	0.988	1.001
Knows about condom to reduce HIV/AIDS	0.784	0.030	403	425	1.466	0.038	0.724	0.844
Knows about limiting partners to reduce HIV/AIDS	0.864	0.031	403	425	1.841	0.036	0.801	0.927
Has comprehensive knowledge of HIV/AIDS	0.242	0.058	403	425	2.738	0.242	0.125	0.359
Higher-risk sex in past 12 months among youth	0.394	0.048	92	100	0.934	0.121	0.298	0.490
Condom use at higher-risk sex among youth	0.225	0.066	35	39	0.917	0.292	0.094	0.356
Total fertility rate (past 3 years)	4.075	0.239	na	1208	0.911	0.059	3.598	4.553
Neonatal mortality rate (past 10 years)	27.083	8.147	502	504	1.014	0.301	10.790	43.376
Post-neonatal mortality rate (past 10 years)	10.184	5.284	502	504	0.853	0.519	0.000	20.753
Infant mortality rate (past 10 years)	37.267	9.917	502	504	0.999	0.266	17.434	57.100
Child mortality rate (past 10 years)	40.544	10.533	506	508	1.183	0.260	19.479	61.609
Under-five mortality rate (past 10 years)	76.299	13.158	506	508	1.070	0.172	49.982	102.616
			MEN					
Urban residence	0.444	0.036	324	347	1.295	0.081	0.372	0.515
No education	0.171	0.028	324	347	1.345	0.164	0.115	0.228
Secondary education or higher	0.266	0.037	324	347	1.487	0.137	0.193	0.339
Never married/in union	0.446	0.029	324	347	1.044	0.065	0.389	0.504
Currently married/in union	0.495	0.032	324	347	1.149	0.065	0.431	0.559
Had first sex before18	0.305	0.032	259	277	1.126	0.106	0.241	0.370
Knows any contraceptive method	1.000	0.000	165	172	na	0.000	1.000	1.000
Knows any modern method	1.000	0.000	165	172	na	0.000	1.000	1.000
Ever used any method	0.659	0.040	165	172	1.083	0.061	0.579	0.739
Wants no more children	0.295	0.042	165	172	1.178	0.142	0.211	0.379
Wants to delay birth at least 2 years	0.489	0.035	165	172	0.885	0.071	0.420	0.558
Ideal number of children	4.428	0.160	324	347	1.277	0.036	4.108	4.748
Has heard of HIV/AIDS	0.995	0.003	324	347	0.835	0.003	0.989	1.002
Knows condom reduces HIV/AIDS	0.862	0.025	324	347	1.291	0.029	0.813	0.912
Knows limiting partners reduces HIV/AIDS	0.936	0.017	324	347	1.234	0.018	0.902	0.969
Has comprehensive knowledge of HIV/AIDS	0.352	0.033	324	347	1.241	0.094	0.286	0.418
Higher-risk sex in past 12 months among youth	0.904	0.036	67	71	0.980	0.039	0.833	0.975
Condom use at last higher-risk sex among youth	0.371	0.076	61	64	1.225	0.206	0.218	0.524

na = Not applicable

Table B.12 Sampling errors for Northern sample, Ghana 2008

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
			WOMEN					
Urban residence	0.317	0.030	497	467	1.418	0.094	0.257	0.376
No education	0.657	0.039	497	467	1.824	0.059	0.580	0.735
Secondary education or higher	0.082	0.018	497	467	1.452	0.217	0.047	0.118
Never married/in union	0.243	0.030	497	467	1.548	0.123	0.184	0.303
Currently married/in union	0.723	0.034	497	467	1.688	0.047	0.655	0.791
Had first sex before 18	0.379	0.037	388	365	1.484	0.097	0.305	0.452
Currently pregnant	0.122	0.017	497	467	1.173	0.141	0.088	0.157
Children ever born	3.145	0.157	497	467	1.190	0.050	2.831	3.460
Children living	2.625	0.127	497	467	1.177	0.048	2.371	2.879
Children ever born to women age 40-49	6.921	0.346	84	78	1.232	0.050	6.229	7.613
Knows any contraceptive method	0.911	0.024	359	338	1.562	0.026	0.864	0.958
Ever used contraceptive method	0.205	0.034	359	338	1.610	0.168	0.136	0.274
Currently using any contraceptive method	0.059	0.016	359	338	1.243	0.262	0.028	0.090
Currently using a modern method	0.057	0.015	359	338	1.254	0.270	0.026	0.088
Currently using pill	0.018	0.008	359	338	1.127	0.436	0.002	0.034
Currently using IUD	0.000	0.000	359	338	na	na	0.000	0.000
Currently using condom	0.005	0.004	359	338	1.029	0.732	0.000	0.014
Currently using female sterilisation	0.000	0.000	359	338	na	na	0.000	0.000
Currently using periodic abstinence	0.002	0.002	359	338	0.935	1.011	0.000	0.007
Using public sector source	0.634	0.091	30	23	1.018	0.144	0.452	0.816
Wants no more children	0.200	0.022	359	338	1.058	0.112	0.155	0.245
Wants to delay birth at least 2 years	0.518	0.032	359	338	1.200	0.061	0.455	0.582
Ideal number of children	6.631	0.273	478	448	1.875	0.041	6.085	7.177
Mother received 2+ tetanus injections	0.535	0.041	306	291	1.446	0.077	0.453	0.618
Births protected against neonatal tetanus	0.625	0.040	306	291	1.448	0.064	0.545	0.705
Mother received medical assistance at delivery	0.272	0.031	479	456	1.240	0.114	0.210	0.334
Child had diarrhoea in past 2 weeks	0.325	0.025	432	413	1.001	0.076	0.276	0.374
Child treated with oral rehydration salts (ORS)	0.518	0.046	141	134	0.973	0.089	0.426	0.611
Child taken to a health provider	0.496	0.047	141	134	1.004	0.096	0.401	0.590
Child vaccination card seen	0.821	0.050	83	76	1.173	0.062	0.720	0.921
Child received BCG	0.843	0.039	83	76	0.950	0.046	0.765	0.920
Child received DPT (3 doses)	0.751	0.060	83	76	1.232	0.080	0.632	0.871
Child received polio (3 doses)	0.734	0.054	83	76	1.094	0.074	0.625	0.843
Child received measles	0.805	0.053	83	76	1.198	0.066	0.699	0.912
Child fully immunised	0.585	0.066	83	76	1.172	0.112	0.454	0.716
Height-for-age (below -2SD)	0.324	0.029	411	360	1.211	0.090	0.265	0.382
Weight-for-height (below -2SD)	0.129	0.015	411	360	0.933	0.120	0.098	0.160
Weight-for-age (below -2SD)	0.218	0.027	411	360	1.199	0.122	0.165	0.271
BMI <18.5	0.117	0.018	415	385	1.139	0.155	0.081	0.153
Anaemia in children	0.814	0.023	375	326	1.092	0.029	0.767	0.861
Anaemia in women	0.593	0.029	480	450	1.311	0.050	0.534	0.652
Has heard of HIV/AIDS	0.914	0.012	497	467	0.943	0.013	0.890	0.938
Knows about condom to reduce HIV/AIDS	0.582	0.029	497	467	1.306	0.050	0.524	0.640
Knows about limiting partners to reduce HIV/AIDS	0.787	0.024	497	467	1.321	0.031	0.738	0.835
Has comprehensive knowledge of HIV/AIDS	0.174	0.028	497	467	1.673	0.164	0.117	0.231
Higher-risk sex in past 12 months among youth	0.336	0.070	79	71	1.308	0.208	0.197	0.476
Condom use at higher-risk sex among youth	0.183	0.052	25	24	0.659	0.284	0.079	0.287
Total fertility rate (past 3 years)	6.758	0.489	na	1316	1.451	0.072	5.781	7.736
Neonatal mortality rate (past 10 years)	35.329	5.981	877	822	0.936	0.169	23.366	47.291
Post-neonatal mortality rate (past 10 years)	35.014	5.739	878	823	0.896	0.164	23.535	46.493
Infant mortality rate (past 10 years)	70.343	7.475	879	824	0.844	0.106	55.394	85.293
Child mortality rate (past 10 years)	71.997	8.994	889	833	0.924	0.125	54.010	89.984
Under-five mortality rate (past 10 years)	137.276	10.436	892	836	0.866	0.076	116.404	158.147
			MEN					
Urban residence	0.298	0.032	472	435	1.537	0.109	0.233	0.362
No education	0.484	0.042	472	435	1.806	0.086	0.400	0.567
Secondary education or higher	0.217	0.033	472	435	1.723	0.151	0.151	0.282
Never married/in union	0.439	0.032	472	435	1.421	0.074	0.374	0.504
Currently married/in union	0.545	0.032	472	435	1.412	0.060	0.480	0.609
Had first sex before18	0.142	0.027	375	348	1.504	0.191	0.087	0.196
Knows any contraceptive method	0.980	0.012	253	237	1.303	0.012	0.956	1.003
Knows any modern method	0.980	0.012	253	237	1.303	0.012	0.956	1.003
Ever used any method	0.402	0.046	253	237	1.481	0.114	0.310	0.493
Wants no more children	0.087	0.021	253	237	1.195	0.243	0.045	0.130
Wants to delay birth at least 2 years	0.535	0.029	253	237	0.935	0.055	0.476	0.594
Ideal number of children	7.438	0.388	461	423	1.544	0.052	6.663	8.213
Has heard of HIV/AIDS	0.955	0.014	472	435	1.429	0.014	0.928	0.983
Knows condom reduces HIV/AIDS	0.616	0.031	472	435	1.370	0.050	0.554	0.677
Knows limiting partners reduces HIV/AIDS	0.732	0.028	472	435	1.392	0.039	0.675	0.789
Has comprehensive knowledge of HIV/AIDS	0.228	0.024	472	435	1.246	0.106	0.180	0.276
Higher-risk sex past 12 months among youth	0.619	0.099	43	38	1.318	0.160	0.421	0.816
Condom use at last higher-risk sex among youth	0.282	0.084	28	23	0.965	0.296	0.115	0.449

na = Not applicable

Table B.13 Sampling errors for Upper East sample, Ghana 2008

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
			WOMEN					
Urban residence	0.155	0.034	373	253	1.788	0.217	0.088	0.222
No education	0.490	0.045	373	253	1.718	0.091	0.401	0.579
Secondary education or higher	0.110	0.040	373	253	2.487	0.367	0.029	0.191
Never married/in union	0.267	0.021	373	253	0.928	0.080	0.224	0.309
Currently married/in union	0.664	0.024	373	253	0.990	0.036	0.616	0.713
Had first sex before 18	0.517	0.046	293	197	1.587	0.090	0.424	0.609
Currently pregnant	0.069	0.017	373	253	1.275	0.244	0.035	0.102
Children ever born	2.800	0.159	373	253	1.243	0.057	2.482	3.119
Children living	2.452	0.139	373	253	1.255	0.057	2.174	2.730
Children ever born to women age 40-49	5.591	0.278	86	60	1.384	0.050	5.035	6.147
Knows any contraceptive method	0.969	0.013	248	168	1.152	0.013	0.943	0.994
Ever used contraceptive method	0.519	0.036	248	168	1.129	0.069	0.448	0.591
Currently using any contraceptive method	0.147	0.034	248	168	1.492	0.229	0.079	0.214
Currently using a modern method	0.143	0.032	248	168	1.451	0.226	0.078	0.207
Currently using pill	0.025	0.013	248	168	1.319	0.524	0.000	0.051
Currently using IUD	0.000	0.000	248	168	na	na	0.000	0.000
Currently using condom	0.000	0.000	248	168	na	na	0.000	0.000
Currently using female sterilisation	0.004	0.004	248	168	0.968	1.003	0.000	0.011
Currently using periodic abstinence	0.000	0.000	248	168	na	na	0.000	0.000
Using public sector source	0.741	0.085	43	28	1.253	0.114	0.572	0.911
Wants no more children	0.344	0.038	248	168	1.263	0.111	0.267	0.420
Wants to delay birth at least 2 years	0.444	0.032	248	168	1.009	0.072	0.380	0.508
Ideal number of children	4.911	0.202	344	235	1.822	0.041	4.506	5.316
Mother received 2+ tetanus injections	0.623	0.036	181	119	0.993	0.058	0.551	0.695
Births protected against neonatal tetanus	0.687	0.035	181	119	1.027	0.052	0.616	0.758
Mother received medical assistance at delivery	0.467	0.058	227	148	1.526	0.124	0.351	0.583
Child had diarrhoea in past 2 weeks	0.195	0.040	217	142	1.443	0.202	0.116	0.274
Child treated with oral rehydration salts (ORS)	0.377	0.069	38	28	0.893	0.182	0.240	0.515
Child taken to a health provider	0.720	0.097	38	28	1.365	0.134	0.527	0.914
Child vaccination card seen	0.986	0.015	40	28	0.802	0.015	0.956	1.015
Child received BCG	0.970	0.030	40	28	1.136	0.031	0.909	1.030
Child received DPT (3 doses)	0.958	0.030	40	28	0.958	0.031	0.898	1.018
Child received polio (3 doses)	0.926	0.037	40	28	0.910	0.040	0.852	1.000
Child received measles	0.965	0.035	40	28	1.215	0.036	0.895	1.034
Child fully immunised	0.878	0.053	40	28	1.052	0.061	0.771	0.984
Height-for-age (below -2SD)	0.360	0.034	182	116	0.845	0.094	0.292	0.428
Weight-for-height (below -2SD)	0.108	0.026	182	116	1.093	0.243	0.055	0.160
Weight-for-age (below -2SD)	0.270	0.038	182	116	0.989	0.139	0.194	0.345
BMI <18.5	0.148	0.022	315	215	1.092	0.147	0.104	0.191
Anaemia in children	0.885	0.027	170	109	1.034	0.031	0.831	0.939
Anaemia in women	0.484	0.038	346	235	1.413	0.078	0.408	0.560
Has heard of HIV/AIDS	0.995	0.003	373	253	0.961	0.003	0.988	1.002
Knows about condom to reduce HIV/AIDS	0.683	0.039	373	253	1.628	0.057	0.605	0.762
Knows about limiting partners to reduce HIV/AIDS	0.926	0.018	373	253	1.293	0.019	0.891	0.961
Has comprehensive knowledge of HIV/AIDS	0.310	0.048	373	253	1.993	0.154	0.214	0.405
Higher-risk sex in past 12 months among youth	0.412	0.046	62	39	0.736	0.113	0.320	0.505
Condom use at higher-risk sex among youth	0.377	0.118	24	16	1.172	0.314	0.140	0.614
Total fertility rate (past 3 years)	4.137	0.296	na	699	0.976	0.071	3.546	4.728
Neonatal mortality rate (past 10 years)	16.576	6.423	474	316	0.992	0.387	3.731	29.421
Post-neonatal mortality rate (past 10 years)	29.791	9.446	475	317	1.236	0.317	10.899	48.683
Infant mortality rate (past 10 years)	46.367	12.184	475	317	1.251	0.263	22.000	70.734
Child mortality rate (past 10 years)	33.261	7.955	477	318	1.005	0.239	17.352	49.170
Under-five mortality rate (past 10 years)	78.086	10.824	478	318	0.998	0.139	56.437	99.735
			MEN					
Urban residence	0.141	0.029	313	219	1.448	0.202	0.084	0.198
No education	0.344	0.040	313	219	1.471	0.115	0.265	0.423
Secondary education or higher	0.158	0.032	313	219	1.566	0.205	0.093	0.223
Never married/in union	0.481	0.027	313	219	0.964	0.057	0.427	0.536
Currently married/in union	0.499	0.026	313	219	0.911	0.052	0.448	0.551
Had first sex before18	0.169	0.045	229	159	1.806	0.266	0.079	0.258
Knows any contraceptive method	0.986	0.010	161	109	1.096	0.010	0.965	1.006
Knows any modern method	0.986	0.010	161	109	1.096	0.010	0.965	1.006
Ever used any method	0.487	0.045	161	109	1.149	0.093	0.397	0.578
Wants no more children	0.167	0.036	161	109	1.236	0.218	0.094	0.240
Wants to delay birth at least 2 years	0.581	0.045	161	109	1.151	0.077	0.491	0.670
Ideal number of children	5.308	0.175	302	210	1.074	0.033	4.958	5.657
Had heard of HIV/AIDS	0.996	0.004	313	219	1.116	0.004	0.988	1.004
Knows condom reduces HIV/AIDS	0.904	0.019	313	219	1.142	0.021	0.866	0.942
Knows limiting partners reduces HIV/AIDS	0.905	0.024	313	219	1.468	0.027	0.856	0.954
Has comprehensive knowledge of HIV/AIDS	0.369	0.038	313	219	1.385	0.103	0.293	0.445
Higher-risk sex in past 12 months among youth	0.834	0.069	42	32	1.189	0.083	0.696	0.972
Condom use at last higher-risk sex among youth	0.643	0.155	33	27	1.830	0.241	0.333	0.953

na = Not applicable

Table B.14 Sampling errors for Upper West sample, Ghana 2008

Variable	Value (R)	Standard error (SE)	Number of cases: Unweighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
			WOMEN					
Urban residence	0.209	0.033	452	122	1.711	0.157	0.143	0.274
No education	0.481	0.032	452	122	1.373	0.067	0.417	0.546
Secondary education or higher	0.067	0.024	452	122	2.030	0.356	0.019	0.115
Never married/in union	0.275	0.026	452	122	1.234	0.094	0.223	0.327
Currently married/in union	0.666	0.030	452	122	1.339	0.045	0.607	0.725
Had first sex before 18	0.573	0.032	338	92	1.191	0.056	0.509	0.638
Currently pregnant	0.071	0.015	452	122	1.275	0.217	0.040	0.102
Children ever born	2.776	0.148	452	122	1.118	0.053	2.479	3.073
Children living	2.288	0.112	452	122	1.047	0.049	2.064	2.511
Children ever born to women age 40-49	6.354	0.373	83	22	1.370	0.059	5.607	7.101
Knows any contraceptive method	0.956	0.013	296	82	1.074	0.013	0.930	0.982
Ever used contraceptive method	0.487	0.034	296	82	1.184	0.071	0.418	0.555
Currently using any contraceptive method	0.217	0.024	296	82	1.002	0.111	0.169	0.265
Currently using a modern method	0.205	0.021	296	82	0.911	0.105	0.162	0.248
Currently using pill	0.027	0.009	296	82	0.994	0.348	0.008	0.046
Currently using IUD	0.004	0.004	296	82	1.037	0.984	0.000	0.011
Currently using condom	0.007	0.005	296	82	1.050	0.725	0.000	0.017
Currently using female sterilisation	0.003	0.003	296	82	0.985	1.006	0.000	0.010
Currently using periodic abstinence	0.008	0.008	296	82	1.539	0.992	0.000	0.024
Using public sector source	0.751	0.068	77	21	1.369	0.090	0.616	0.887
Wants no more children	0.238	0.027	296	82	1.096	0.114	0.184	0.292
Wants to delay birth at least 2 years	0.475	0.040	296	82	1.368	0.084	0.395	0.554
Ideal number of children	5.669	0.161	451	122	1.386	0.028	5.346	5.991
Mother received 2+ tetanus injections	0.452	0.038	210	58	1.115	0.085	0.375	0.529
Births protected against neonatal tetanus	0.605	0.037	210	58	1.086	0.061	0.531	0.678
Mother received medical assistance at delivery	0.461	0.050	299	82	1.423	0.108	0.362	0.561
Child had diarrhoea in past 2 weeks	0.236	0.037	264	72	1.355	0.156	0.163	0.310
Child treated with oral rehydration salts (ORS)	0.496	0.099	59	17	1.462	0.199	0.299	0.694
Child taken to a health provider	0.402	0.063	59	17	1.008	0.156	0.277	0.528
Child vaccination card seen	0.931	0.032	65	18	1.026	0.035	0.866	0.995
Child received BCG	0.921	0.036	65	18	1.064	0.039	0.850	0.992
Child received DPT (3 doses)	0.948	0.030	65	18	1.087	0.031	0.889	1.008
Child received polio (3 doses)	0.948	0.030	65	18	1.087	0.031	0.889	1.008
Child received measles	0.967	0.023	65	18	1.051	0.024	0.921	1.014
Child fully immunised	0.888	0.039	65	18	0.995	0.044	0.810	0.966
Height-for-age (below -2SD)	0.246	0.026	247	66	0.907	0.108	0.193	0.299
Weight-for-height (below -2SD)	0.139	0.020	247	66	0.967	0.147	0.098	0.180
Weight-for-age (below -2SD)	0.131	0.019	247	66	0.885	0.149	0.092	0.170
BMI <18.5	0.098	0.018	404	108	1.242	0.189	0.061	0.135
Anaemia in children	0.882	0.021	234	62	0.942	0.024	0.841	0.924
Anaemia in women	0.669	0.023	443	120	1.013	0.034	0.624	0.715
Has heard of HIV/AIDS	0.931	0.015	452	122	1.214	0.016	0.902	0.960
Knows about condom to reduce HIV/AIDS	0.597	0.038	452	122	1.645	0.064	0.521	0.673
Knows about limiting partners to reduce HIV/AIDS	0.768	0.031	452	122	1.581	0.041	0.706	0.831
Has comprehensive knowledge of HIV/AIDS	0.171	0.027	452	122	1.542	0.160	0.116	0.225
Higher-risk sex in past 12 months among youth	0.448	0.081	91	25	1.539	0.180	0.287	0.610
Condom use at higher-risk sex among youth	0.303	0.078	44	11	1.111	0.257	0.147	0.458
Total fertility rate (past 3 years)	5.048	0.408	na	337	1.468	0.081	4.232	5.864
Neonatal mortality rate (past 10 years)	44.805	9.241	601	163	1.045	0.206	26.324	63.286
Post-neonatal mortality rate (past 10 years)	52.262	9.595	601	163	0.794	0.184	33.071	71.452
Infant mortality rate (past 10 years)	97.067	11.557	603	164	0.911	0.119	73.952	120.182
Child mortality rate (past 10 years)	49.681	8.993	603	163	1.005	0.181	31.696	67.667
Under-five mortality rate (past 10 years)	141.926	15.028	607	165	1.054	0.106	111.869	171.982
			MEN					
Urban residence	0.253	0.029	397	108	1.313	0.113	0.195	0.310
No education	0.302	0.029	397	108	1.260	0.096	0.244	0.361
Secondary education or higher	0.194	0.024	397	108	1.203	0.123	0.146	0.242
Never married/in union	0.549	0.029	397	108	1.164	0.053	0.490	0.607
Currently married/in union	0.434	0.029	397	108	1.167	0.067	0.376	0.492
Had first sex before18	0.163	0.024	270	75	1.065	0.147	0.115	0.211
Knows any contraceptive method	0.992	0.006	169	47	0.822	0.006	0.981	1.003
Knows any modern method	0.992	0.006	169	47	0.822	0.006	0.981	1.003
Ever used any method	0.519	0.042	169	47	1.096	0.081	0.435	0.604
Wants no more children	0.142	0.028	169	47	1.041	0.197	0.086	0.198
Wants to delay birth at least 2 years	0.519	0.039	169	47	1.010	0.075	0.442	0.597
Ideal number of children	5.870	0.293	397	108	1.306	0.050	5.283	6.457
Has heard of HIV/AIDS	0.992	0.004	397	108	0.975	0.004	0.983	1.001
Knows condom reduces HIV/AIDS	0.891	0.018	397	108	1.148	0.020	0.855	0.927
Knows limiting partners reduces HIV/AIDS	0.917	0.017	397	108	1.211	0.018	0.883	0.951
Has comprehensive knowledge of HIV/AIDS	0.346	0.035	397	108	1.455	0.101	0.276	0.415
Higher-risk sex in past 12 months among youth	0.818	0.073	45	13	1.249	0.089	0.673	0.963
Condom use at last higher-risk sex among youth	0.456	0.082	37	10	0.987	0.180	0.292	0.619

na = Not applicable

DATA QUALITY TABLES

Appendix C

Table C.1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Ghana 2008

	Female		Male	
Age	Number	Percent	Number	Percent
0	582	2.6	581	2.8
1	537	2.4	519	2.5
2	524	2.3	579	2.8
3	546	2.4	636	3.1
4	634	2.8	637	3.1
5	547	2.4	545	2.6
6	641	2.8	692	3.4
7	597	2.6	644	3.1
8	682	3.0	634	3.1
9	587	2.6	614	3.0
10	581	2.6	610	3.0
11	452	2.0	478	2.3
12	605	2.7	615	3.0
13	615	2.7	607	2.9
14	554	2.4	537	2.6
15	499	2.2	484	2.3
16	418	1.8	445	2.2
17	406	1.8	387	1.9
18	528	2.3	564	2.7
19	337	1.5	336	1.6
20	486	2.1	384	1.9
21	314	1.4	267	1.3
22	416	1.8	288	1.4
23	350	1.5	299	1.5
24	330	1.5	304	1.5
25	502	2.2	357	1.7
26	341	1.5	260	1.3
27	345	1.5	236	1.1
28	427	1.9	284	1.4
29	262	1.2	238	1.2
30	438	1.9	320	1.6
31	206	0.9	187	0.9
32	318	1.4	283	1.4
33	224	1.0	162	0.8
34	215	0.9	191	0.9
35	408	1.8	318	1.5
36	258	1.1	222	1.1
37	200	0.9	185	0.9
38	301	1.3	246	1.2
39	186	0.8	161	0.8
40	329	1.5	287	1.4
41	133	0.6	98	0.5
42	270	1.2	207	1.0
43	155	0.7	122	0.6
44	160	0.7	119	0.6
45	307	1.4	273	1.3
46	168	0.7	152	0.7
47	128	0.6	103	0.5
48	212	0.9	173	0.8
49	113	0.5	115	0.6
50	255	1.1	184	0.9
51	178	0.8	112	0.5
52	197	0.9	153	0.7
53	155	0.7	101	0.5
54	161	0.7	120	0.6
55	188	0.8	126	0.6
56	144	0.6	126	0.6
57	79	0.4	75	0.4
58	115	0.5	101	0.5
59	77	0.3	71	0.3
60	185	0.8	135	0.7
61	63	0.3	77	0.4
62	104	0.5	109	0.5
63	70	0.3	85	0.4
64	61	0.3	71	0.3
65	150	0.7	106	0.5
66	34	0.1	53	0.3
67	57	0.3	60	0.3
68	74	0.3	64	0.3
69	51	0.2	50	0.2
70+	867	3.8	652	3.2
Don't know/missing	17	0.1	10	0.0
Total	22,654	100.0	20,626	100.0

Table C.2.1 Age distribution of eligible and interviewed women

De facto household population of women age 10-54 and interviewed women age 15-49; and percent distribution and percentage of eligible women who were interviewed (weighted), by five-year age groups, Ghana 2008

Age group	Household population of women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
		Number	Percent	
10-14	1,400	na	na	na
15-19	1,030	996	20.7	96.7
20-24	884	859	17.9	97.2
25-29	875	842	17.5	96.2
30-34	649	628	13.1	96.7
35-39	640	619	12.9	96.7
40-44	465	452	9.4	97.3
45-49	428	411	8.5	95.9
50-54	515	na	na	na
15-49	4,971	4,806	100.0	96.7

Note: The de facto population includes all residents and non-residents who stayed in the household the night before the interview. Weights for both the household population of women and interviewed women are household weights. Age is based on the Household Questionnaire.
na = Not applicable

Table C.2.2 Age distribution of eligible and interviewed men

De facto household population of men age 10-64 and interviewed men age 15-59; and percent distribution and percentage of eligible men who were interviewed (weighted), by five-year age groups, Ghana 2008

Age group	Household population of men age 10-64	Interviewed men age 15-59		Percentage of eligible men interviewed
		Number	Percent	
10-14	1,416	na	na	na
15-19	930	877	20.0	94.3
20-24	703	673	15.3	95.8
25-29	635	602	13.7	94.8
30-34	532	513	11.7	96.4
35-39	540	512	11.7	94.7
40-44	392	379	8.6	96.9
45-49	366	347	7.9	94.9
50-54	300	284	6.5	94.7
55-59	215	202	4.6	93.7
60-64	264	na	na	na
15-59	4,614	4,389	100.0	95.1

Note: The de facto population includes all residents and non-residents who stayed in the household the night before the interview. Weights for both the household population of men and interviewed men are household weights. Age is based on the Household Questionnaire.
na = Not applicable

Table C.3 Completeness of reporting

Percentage of cases with information missing on selected demographic and health characterisitcs (weighted), Ghana 2008

Subject	Reference group	Percentage with information missing	Number of cases
Birth date	Births in the 15 years preceding the survey		
Month only		3.44	7,875
Month and year		0.05	7,875
Age at death	Deceased children born in the past 15 years	0.00	678
Age/date at first union[1]	Ever- married women age 15-49	0.32	3,323
	Ever- married men age 15-59	0.17	2,626
Respondent's education	All women age 15-49	0.49	4,916
	All men age 15-59	0.59	4,568
Diarrhoea in past 2 weeks	Living children age 0-59 months	1.05	2,731
Anthropometry	Living children age 0-59 months (from Household Questionnaire)		
Height		5.81	2,912
Weight		4.94	2,912
Height or weight		5.84	2,912
Anaemia			
Children	Living children age 6-59 months (from Household Questionnaire)	11.51	2,602
Women	All women (from Household Questionnaire)	6.41	4,971

[1] Both year and age missing

Table C.4 Births by calendar years

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by calendar year, according to living (L), dead (D), and total (T) children (weighted), Ghana 2008

Calendar year	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar year ratio[3]		
	L	D	T	L	D	T	L	D	T	L	D	T
2008	507	19	526	100.0	94.7	99.8	108.7	130.4	109.4	na	na	na
2007	574	33	608	100.0	100.0	100.0	96.1	154.8	98.6	na	na	na
2006	515	40	555	100.0	100.0	100.0	102.2	127.5	103.8	96.8	126.5	98.4
2005	490	30	520	100.0	100.0	100.0	113.2	104.3	112.6	89.6	66.5	87.9
2004	580	50	630	100.0	100.0	100.0	116.8	116.1	116.7	125.9	141.4	127.0
2003	430	41	471	100.0	100.0	100.0	103.3	138.4	105.9	74.2	75.8	74.4
2002	579	57	637	96.3	90.6	95.8	108.0	207.2	114.2	127.5	134.5	128.1
2001	479	45	523	94.2	93.6	94.2	100.0	65.4	96.5	87.1	74.1	85.8
2000	521	63	584	94.5	85.9	93.6	90.0	119.8	92.8	111.6	152.3	114.9
1999	455	38	493	95.0	83.1	94.1	104.8	227.7	111.0	90.2	62.9	87.2
2004-2008	2,667	172	2,839	100.0	99.4	100.0	107.0	124.6	108.0	na	na	na
1999-2003	2,464	244	2,708	95.9	90.3	95.4	101.0	136.7	103.8	na	na	na
1994-1998	2,016	255	2,271	94.4	86.0	93.4	97.0	147.7	101.6	na	na	na
1989-1993	1,477	241	1,718	95.9	86.7	94.6	94.3	120.7	97.6	na	na	na
<1988	1,537	357	1,895	93.4	86.8	92.2	91.6	110.8	95.0	na	na	na
All	10,161	1,270	11,431	96.3	89.0	95.5	99.2	126.2	101.9	na	na	na

na = Not applicable

[1] Both year and month of birth given

[2] (Bm/Bf)x100, where Bm and Bf are the numbers of male and female births, respectively.

[3] [2Bx/(Bx-1+Bx+1)]x100, where Bx is the number of births in calendar year x

Table C.5 Reporting of age at death in days

Distribution of reported deaths under one month of age by age at death in days and the percentage of neonatal deaths reported as occurring at ages 0-6 days, for five-year periods preceding the survey (weighted), Ghana 2008

Age at death (days)	Number of years preceding the survey 0-4	5-9	10-14	15-19	Total 0-19
<1	16	22	15	17	71
1	35	28	27	28	118
2	4	2	8	4	18
3	11	14	6	12	43
4	4	5	2	1	11
5	2	3	2	4	11
6	4	0	2	2	9
7	6	6	8	9	29
8	1	1	0	0	2
9	0	1	0	0	1
10	1	0	1	0	2
11	0	0	1	0	1
13	0	0	2	0	2
14	1	7	3	2	12
20	1	0	0	0	1
21	3	0	1	2	7
23	0	2	0	0	2
26	0	1	0	0	1
Total 0-30	88	91	79	82	339
Percent early neonatal[1]	85.4	81.5	80.5	83.5	82.7

[1] ≤6 days/≤30 days

Table C.6 Reporting of age at death in months

Distribution of reported deaths under two years of age by age at death in months and the percentage of infant deaths reported as occurring at less than one month of age, for five-year periods preceding the survey, Ghana 2008

Age at death (months)	Number of years preceding the survey 0-4	5-9	10-14	15-19	Total 0-19
<1[a]	88	91	79	82	339
1	7	10	10	4	31
2	7	3	7	2	18
3	7	7	8	13	35
4	4	7	5	2	19
5	4	6	1	1	13
6	4	6	1	5	17
7	4	3	4	3	14
8	5	3	5	4	17
9	7	4	9	6	26
10	2	3	2	2	8
11	1	5	4	4	15
12	9	10	6	7	32
13	1	3	5	0	9
14	0	1	1	0	2
15	1	1	2	1	5
16	0	0	0	0	0
17	2	0	0	0	2
18	0	3	2	0	5
22	0	0	1	0	1
24+	0	0	0	0	0
1 year	9	14	11	19	53
Total 0-11	141	149	134	128	552
Percent neonatal[1]	62.2	61.5	58.5	63.7	61.5

[1] Under one month/under one year
[a] Includes deaths under one month reported in days

Table C.7 Nutritional status of children by NCHS/CDC/WHO International Reference Population

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, based on the NCHS/CDC/WHO International Reference Population, Ghana 2008

Background characteristic	Height-for-age			Weight-for-height				Weight-for-age				Number of children
	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Percentage above +2 SD	Mean Z-score (SD)	
Age in months												
<6	0.0	0.8	0.5	1.9	8.1	5.2	-0.2	0.0	3.1	8.6	0.3	203
6-8	1.7	5.7	0.0	2.5	19.6	4.3	-0.9	3.3	14.2	1.1	-0.7	122
9-11	4.2	11.9	-0.3	2.7	20.9	5.5	-0.8	8.3	21.8	5.0	-1.0	145
12-17	5.9	21.2	-0.8	3.8	17.4	6.0	-0.6	3.2	24.1	3.8	-1.1	284
18-23	10.3	38.3	-1.4	2.4	12.8	2.1	-0.7	7.8	28.9	2.9	-1.3	221
24-35	8.6	22.4	-1.1	0.6	3.6	2.1	-0.3	3.2	18.0	2.4	-1.0	490
36-47	11.8	29.5	-1.2	0.4	3.9	4.1	-0.3	1.6	18.4	2.3	-1.0	514
48-59	8.5	28.7	-1.2	0.5	2.8	2.6	-0.3	1.4	12.7	1.7	-1.0	557
Sex												
Male	8.1	24.1	-1.0	1.3	8.2	3.2	-0.4	3.2	17.7	2.4	-0.9	1,294
Female	7.4	22.5	-0.8	1.4	7.7	3.9	-0.4	2.6	17.0	3.6	-0.8	1,243
Birth interval in months[2]												
First birth[3]	7.7	24.6	-1.0	1.3	7.5	3.7	-0.4	3.1	16.9	3.6	-0.9	519
<24	10.9	28.3	-1.0	1.5	8.5	6.2	-0.3	4.0	21.0	2.3	-0.9	238
24-47	7.8	24.1	-1.0	1.2	9.0	3.0	-0.4	3.0	18.3	1.8	-0.9	912
48+	5.0	16.6	-0.7	2.0	7.9	3.7	-0.5	1.9	14.5	4.0	-0.8	606
Size at birth[2]												
Very small	8.5	30.4	-1.4	3.6	10.3	3.2	-0.8	6.8	36.6	0.0	-1.5	89
Small	7.4	30.1	-1.1	1.3	13.7	4.4	-0.6	4.7	26.7	1.8	-1.2	213
Average or larger	7.3	21.5	-0.9	1.4	7.6	3.6	-0.4	2.5	15.3	3.1	-0.8	1,950
Mother's interview status												
Interviewed	7.4	22.6	-0.9	1.5	8.3	3.7	-0.4	2.9	17.3	2.9	-0.9	2,274
Not interviewed but in household	8.9	29.7	-0.9	0.0	9.8	6.0	-0.2	3.5	17.6	6.5	-0.8	43
Not interviewed, and not in the household[4]	11.9	29.3	-0.9	0.5	3.8	2.0	-0.3	3.5	18.8	3.8	-0.9	219
Mother's nutritional status[5]												
Thin (BMI<18.5)	6.3	28.2	-1.0	2.4	16.4	4.7	-0.7	3.4	28.4	2.9	-1.2	158
Normal (BMI 18.5-24.9)	8.4	25.5	-1.1	1.4	8.9	2.8	-0.5	3.2	18.9	2.1	-1.0	1,480
Overweight/obese (BMI ≥25)	5.1	14.7	-0.5	1.4	5.0	5.2	-0.2	1.9	10.6	4.4	-0.5	643
Residence												
Urban	5.5	17.3	-0.7	1.3	6.2	4.7	-0.3	1.5	14.0	3.9	-0.7	980
Rural	9.2	27.1	-1.1	1.4	9.0	2.9	-0.5	3.8	19.5	2.5	-1.0	1,557
Region												
Western	7.6	21.7	-1.0	1.2	6.0	2.7	-0.3	2.5	13.5	2.0	-0.8	235
Central	12.9	27.9	-1.2	2.1	12.2	7.7	-0.3	7.3	24.1	3.8	-1.0	251
Greater Accra	2.4	12.8	-0.4	1.0	4.5	4.1	-0.3	1.2	9.6	3.7	-0.5	281
Volta	6.4	21.3	-0.9	1.4	3.5	5.2	-0.3	2.7	16.4	5.1	-0.9	227
Eastern	8.2	28.9	-1.1	1.9	5.4	7.9	-0.0	0.9	11.7	4.5	-0.7	214
Ashanti	6.8	22.1	-0.8	1.1	9.2	3.1	-0.4	3.3	15.4	3.5	-0.9	510
Brong Ahafo	6.1	23.4	-0.9	0.2	3.7	1.2	-0.5	1.1	16.7	1.0	-1.0	273
Northern	11.2	27.3	-1.0	2.2	12.5	0.9	-0.7	3.1	24.1	2.0	-1.2	363
Upper East	10.9	29.4	-1.2	1.1	12.3	1.1	-0.7	5.2	29.9	2.2	-1.2	117
Upper West	6.1	22.2	-0.9	2.1	12.4	1.3	-0.8	2.2	20.2	0.3	-1.2	65
Mother's education[6]												
No education	9.4	25.3	-1.0	2.3	11.9	2.6	-0.6	3.9	21.0	2.4	-1.1	742
Primary	8.5	26.3	-1.0	0.8	7.2	3.5	-0.4	2.5	17.0	2.5	-0.9	545
Middle/JSS	5.5	20.3	-0.8	1.2	7.1	4.5	-0.4	2.7	16.5	3.2	-0.8	790
Secondary+	4.0	13.2	-0.4	1.1	3.0	5.8	-0.1	0.6	7.3	4.9	-0.4	216
Wealth quintile												
Lowest	10.9	29.3	-1.1	1.7	9.7	1.5	-0.6	3.7	23.7	1.5	-1.1	626
Second	9.7	29.7	-1.1	1.1	9.8	3.4	-0.5	4.0	20.3	2.5	-1.0	572
Middle	7.2	22.5	-1.0	1.8	7.2	4.0	-0.4	3.6	15.6	2.3	-0.9	471
Fourth	5.1	17.2	-0.7	1.1	5.3	5.0	-0.3	1.6	11.7	4.8	-0.7	510
Highest	3.9	12.5	-0.4	1.1	6.5	4.9	-0.3	0.8	12.2	4.8	-0.5	357
Total	7.8	23.3	-0.9	1.4	7.9	3.6	-0.4	2.9	17.4	3.0	-0.9	2,536

Note: Table is based on children who slept in the household the night before the interview. Each of the indices is expressed in standard deviation units (SD) from the median of the NCHS/CDC/WHO International Reference Population. Total includes cases missing information on size at birth, mother's nutritional status and mother's education. Table is based on children with valid dates of birth (month and year) and valid measurement of both height and weight.

[1] Includes children who are below –3 standard deviations (SD) from the International Reference Population median

[2] Excludes children whose mothers were not interviewed

[3] First born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval

[4] Includes children whose mothers are deceased

[5] Excludes children whose mothers were not weighed and measured. Mother's nutritional status in terms of BMI (Body Mass Index) is presented in Table 11.9.

[6] For women who were not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers were not listed in the Household Questionnaire

PERSONS INVOLVED IN THE 2008 GHANA DEMOGRAPHIC AND HEALTH SURVEY

Appendix D

Survey Personnel

Dr. Grace Bediako, Project Director (GSS)
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Dr. Gloria J. Quansah Asare, Deputy Project Director (GHS)
Rev. Mrs. Emma Sepah, Project Coordinator (GSS)
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Mariam Ibrahim, Assistant Storekeeper
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Sybil Sory, Project Secretary (GHS/HRU)
Priscilla Annan, Project Secretary (GSS)
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Emmanuel Larbi, Transport Officer (GSS)
Prosper Tagoe, Assistant Transport Officer (GSS)
Kofi Ayensu, Project Driver (GSS)
Ophelia Agyemang, Office Editor

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Anthony Appoh Gershon Doe Tekpli
Jacob Oswald Andoh Charles Boateng
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Mustapha Haruna
Justice Marfu
Amatus Nobabumah

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Eric Gyampoh
Ernest Owusu Nyarko
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Helena Frempong
Edward Kofi Eshun
Dorcas Manu-Larbi
Naa Deidei Nyanyi
Henry Mills Lamptey
Joseph N.A. Quaye
Sarah Adoma Dwemoh
Abraham Aryeetey
Lawrence Chino Ankomah
Faustine Adzroe
Edmund Fiadzo
Emmanuel Sackey
Sylvia Oforiwaa
William Adu Gyamfi
Edward Keteku
Victor Owusu Boateng
Isaac Yao Nornyibey
Elvis Nii Ayerh Mensah
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Francis Boye
Isaac Frank Arhin
Adeasare Warye Mensah
Clarisa Kakra Nyan
Augustine Agyepong
Priscilla Opoku
Michael Agyekum Takyi
James K. Mahama
Mark Morgan
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Lazarus Amobire
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Evans Nana Kwame Agyekum
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D.L. Mahama
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Mavis Teye
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Franklyna F. Mante
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Michael Yaw Amoah
Mabel Odoom
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Wilhemina Maclean
Raymond Kumi-Ansah
Ernest Owusu Nyarko
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Brenda Cobbinah
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Ellis Bonsu Gyamerah
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Ayorkor Odamten
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Mark Odjawo
Judith Ampomah Amo
Mary Naa Adaku Aryee
Joshua Agbernorhevi
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Tanko Mahamadu
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Sylvia Oforiwaa
Nanbigne Iso Sebastian
Abubarkari Mustapha
Sulemana Saada
Lardy Palazar
Dahamani Bukari
Jacob Kofi Laarie
Amadu Atu
Deborah Kebo
Dombo Mohammed
Thomas Seidu Iddi
Harriet Gyamena
Asibi Mumuni
Foroko Ibrahim
James Sobebe Chireh

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George Sarpong
Twum Barima
Richmond Twum
Kofi Opoku
Joseph Larbi
Andrews Konuah
George Ansah
Samuel Koranteng
Atsu Pontianus
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QUESTIONNAIRES

Appendix ***E***

Questionnaire serial no._____ SEPTEMBER 2008

GHANA DEMOGRAPHIC AND HEALTH SURVEY
HOUSEHOLD QUESTIONNAIRE

MINISTRY OF HEALTH, GHANA GHANA STATISTICAL SERVICE

IDENTIFICATION

LOCALITY NAME _____

NAME OF HOUSEHOLD HEAD _____

EA NUMBER . . . . . | | | |

STRUCTURE NUMBER . . . . . | | | |

HOUSEHOLD NUMBER . . . . . | | | |

REGION . . . . . | | |

DISTRICT . . . . . | | |

URBAN/RURAL (URBAN = 1; RURAL = 2) . . . . . |_|

CITY/LARGE TOWN/SMALL TOWN/VILLAGE (CITY=1, LARGE TOWN=2, SMALL TOWN=3, VILLAGE=4) |_|

HOUSEHOLD SELECTED FOR INDIVIDUAL INTERVIEW(S) (YES = 1, NO = 2) . . . . . |_|

PERSON TO BE INTERVIEWED WITH THE DV MODULE IN THIS HOUSEHOLD . . . . . |_|
(WOMAN = 1, MAN = 2, NO ONE = 3)

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE				DAY
				MONTH
				YEAR 2008
INTERVIEWER'S NAME				INT. NUMBER
RESULT*				RESULT
NEXT VISIT: DATE				TOTAL NUMBER OF VISITS
TIME				

*RESULT CODES:
1 COMPLETED
2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4 POSTPONED
5 REFUSED
6 DWELLING VACANT OR ADDRESS NOT A DWELLING
7 DWELLING DESTROYED
8 DWELLING NOT FOUND
9 OTHER _____ (SPECIFY)

TOTAL PERSONS IN HOUSEHOLD |_|

TOTAL ELIGIBLE WOMEN |_|

TOTAL ELIGIBLE MEN |_|

TOTAL ELIGIBLE DEATHS FOR VERBAL AUTOPSY |_|

LANGUAGE OF QUESTIONNAIRE: 1 LANGUAGE OF INTERVIEW: |_|

LANGUAGE OF RESPONDENT |_| TRANSLATOR USED: (YES = 1, NO = 2) |_|

LINE NO. OF RESPONDENT TO HOUSEHOLD QUESTIONNAIRE |_|

LANGUAGE CODES: ENGLISH = 1, AKAN = 2, GA = 3, EWE = 4, NZEMA = 5, DAGBANI = 6, OTHER = 7 (SPECIFY) _____

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

Introduction and Consent

Hello. My name is _____ and
I am working for Ghana Statistical Service and Ministry of Health.
We are conducting a national survey about various health issues.
We would very much appreciate your participation in this survey. The survey usually takes between 10 and 20 minutes to complete.

As part of the survey we would first like to ask some questions about your household. All of the answers you give will be confidential and will not be seen by anyone other than members of our survey team.
Participation in the survey is completely voluntary.
If we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time.
However, we hope you will participate in the survey since your views are important.

At this time, do you want to ask me anything about the survey?
May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED ... 1	RESPONDENT DOES NOT AGREE TO BE INTERVIEWED ..... 2 → END

HOUSEHOLD SCHEDULE

							IF AGE 15 OR OLDER			
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	MARITAL STATUS	ELIGIBILITY		
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-32 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)?	What is (NAME'S) current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER-MARRIED AND NEVER LIVED TOGETHER	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF ALL MEN AGE 15-59	CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
01			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS		01	01	01
02			1 2	1 2	1 2			02	02	02
03			1 2	1 2	1 2			03	03	03
04			1 2	1 2	1 2			04	04	04
05			1 2	1 2	1 2			05	05	05
06			1 2	1 2	1 2			06	06	06
07			1 2	1 2	1 2			07	07	07
08			1 2	1 2	1 2			08	08	08
09			1 2	1 2	1 2			09	09	09
10			1 2	1 2	1 2			10	10	10

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD

01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = NIECE/NEPHEW BY BLOOD
10 = NIECE/NEPHEW BY MARRIAGE
11 = OTHER RELATIVE
12 = ADOPTED/FOSTER/ STEPCHILD
13 = NOT RELATED
98 = DON'T KNOW

	IF AGE 0-17 YEARS				IF AGE 3 YEARS OR OLDER		IF AGE 3-24 YEARS				IF AGE 0-4 YEARS
LINE NO.	SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS				EVER ATTENDED SCHOOL		CURRENT/RECENT SCHOOL ATTENDANCE				BIRTH REGIS-TRATION
	Is (NAME)'s biological mother alive?	Does (NAME)'s biological mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO, RECORD '00'.	Is (NAME)'s biological father alive?	Does (NAME)'s biological father usually live in this household or was he a guest last night? IF YES: What is his name? RECORD FATHER'S LINE NUMBER. IF NO, RECORD '00'.	Has (NAME) ever attended school?	What is the highest level of school (NAME) has attended? SEE CODES BELOW. What is the highest grade (NAME) completed at that level? SEE CODES BELOW.	Did (NAME) attend school at any time during the current school year, that is, 2008 - 2009?	During this school year, what level and grade is (NAME) attending? SEE CODES BELOW.	Did (NAME) attend school at any time during the previous school year, that is, 2007 - 2008?	During that school year, what level and grade did (NAME) attend? SEE CODES BELOW.	Does (NAME) have a birth certificate? IF NO, PROBE: Has (NAME)'s birth ever been registered with the civil authority? 1 = HAS CERTIFICATE 2 = REGISTERED 3 = NEITHER 8 = DON'T KNOW
	(13)	(14)	(16)	(17)	(23)	(24)	(25)	(26)	(27)	(28)	(32)
01	Y N DK 1 2 8 GO TO 16		Y N DK 1 2 8 GO TO 23		Y N 1 2 GO TO 32	LEVEL GRADE	Y N 1 2 GO TO 27	LEVEL GRADE	Y N 1 2 GO TO 32	LEVEL GRADE	
02	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
03	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
04	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
05	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
06	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
07	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
08	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
09	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
10	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		

CODES FOR Qs. 24, 26, AND 28: EDUCATION

LEVEL
0 = PRE-SCHOOL
1 = PRIMARY
2 = MIDDLE/JSS/JHS
3 = SECONDARY/SSS/SHS/TECH/VOC
4 = HIGHER
8 = DON'T KNOW

GRADE
00 = LESS THAN 1 YEAR COMPLETED (USE '00' FOR Q. 24 ONLY. THIS CODE IS NOT ALLOWED FOR QS. 26 AND 28)
98 = DON'T KNOW

							IF AGE 15 OR OLDER			
LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD	SEX	RESIDENCE		AGE	MARITAL STATUS	ELIGIBILITY		
	Please give me the names of the persons who usually live in your household and guests of the household who stayed here last night, starting with the head of the household. AFTER LISTING THE NAMES AND RECORDING THE RELATIONSHIP AND SEX FOR EACH PERSON, ASK QUESTIONS 2A-2C TO BE SURE THAT THE LISTING IS COMPLETE. THEN ASK APPROPRIATE QUESTIONS IN COLUMNS 5-32 FOR EACH PERSON.	What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	Is (NAME) male or female?	Does (NAME) usually live here?	Did (NAME) stay here last night?	How old is (NAME)?	What is (NAME'S) current marital status? 1 = MARRIED OR LIVING TOGETHER 2 = DIVORCED/ SEPARATED 3 = WIDOWED 4 = NEVER-MARRIED AND NEVER LIVED TOGETHER	CIRCLE LINE NUMBER OF ALL WOMEN AGE 15-49	CIRCLE LINE NUMBER OF ALL MEN AGE 15-59	CIRCLE LINE NUMBER OF ALL CHILDREN AGE 0-5
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
11			M F 1 2	Y N 1 2	Y N 1 2	IN YEARS		11	11	11
12			1 2	1 2	1 2			12	12	12
13			1 2	1 2	1 2			13	13	13
14			1 2	1 2	1 2			14	14	14
15			1 2	1 2	1 2			15	15	15
16			1 2	1 2	1 2			16	16	16
17			1 2	1 2	1 2			17	17	17
18			1 2	1 2	1 2			18	18	18
19			1 2	1 2	1 2			19	19	19
20			1 2	1 2	1 2			20	20	20

TICK HERE IF CONTINUATION SHEET USED ☐

2A) Just to make sure that I have a complete listing. Are there any other persons such as small children or infants that we have not listed? YES ☐ → ADD TO TABLE NO ☐

2B) Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who usually live here? YES ☐ → ADD TO TABLE NO ☐

2C) Are there any guests or temporary visitors staying here, or anyone else who stayed here last night, who have not been listed? YES ☐ → ADD TO TABLE NO ☐

CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD

01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = NIECE/NEPHEW BY BLOOD
10 = NIECE/NEPHEW BY MARRIAGE
11 = OTHER RELATIVE
12 = ADOPTED/FOSTER/ STEPCHILD
13 = NOT RELATED
98 = DON'T KNOW

	IF AGE 0-17 YEARS				IF AGE 3 YEARS OR OLDER		IF AGE 3-24 YEARS				IF AGE 0-4 YEARS
LINE NO.	SURVIVORSHIP AND RESIDENCE OF BIOLOGICAL PARENTS				EVER ATTENDED SCHOOL		CURRENT/RECENT SCHOOL ATTENDANCE				BIRTH REGIS-TRATION
	Is (NAME)'s biological mother alive?	Does (NAME)'s biological mother usually live in this household or was she a guest last night? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER. IF NO, RECORD '00'.	Is (NAME)'s biological father alive?	Does (NAME)'s biological father usually live in this household or was he a guest last night? IF YES: What is his name? RECORD FATHER'S LINE NUMBER. IF NO, RECORD '00'.	Has (NAME) ever attended school?	What is the highest level of school (NAME) has attended? SEE CODES BELOW. What is the highest grade (NAME) completed at that level? SEE CODES BELOW.	Did (NAME) attend school at any time during the current school year, that is, 2008 - 2009?	During this school year, what level and grade is (NAME) attending? SEE CODES BELOW.	Did (NAME) attend school at any time during the previous school year, that is, 2007 - 2008?	During that school year, what level and grade did (NAME) attend? SEE CODES BELOW.	Does (NAME) have a birth certificate? IF NO, PROBE: Has (NAME)'s birth ever been registered with the civil authority? 1 = HAS CERTIFICATE 2 = REGISTERED 3 = NEITHER 8 = DON'T KNOW
	(13)	(14)	(16)	(17)	(23)	(24)	(25)	(26)	(27)	(28)	(32)
11	Y N DK 1 2 8 GO TO 16		Y N DK 1 2 8 GO TO 23		Y N 1 2 GO TO 32	LEVEL GRADE	Y N 1 2 GO TO 27	LEVEL GRADE	Y N 1 2 GO TO 32	LEVEL GRADE	
12	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
13	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
14	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
15	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
16	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
17	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
18	1 2 8 GO TO 16		1 2 8 GO TO 19		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
19	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		
20	1 2 8 GO TO 16		1 2 8 GO TO 23		1 2 GO TO 32		1 2 GO TO 27		1 2 GO TO 32		

CODES FOR Qs. 24, 26, AND 28: EDUCATION

LEVEL

0 = PRE-SCHOOL
1 = PRIMARY
2 = MIDDLE/JSS/JHS
3 = SECONDARY/SSS/SHS/TECH/VOC
4 = HIGHER
8 = DON'T KNOW

GRADE

00 = LESS THAN 1 YEAR COMPLETED (USE '00' FOR Q. 24 ONLY.
THIS CODE IS NOT ALLOWED FOR QS. 26 AND 28)
98 = DON'T KNOW

INFORMATION ABOUT DEATHS IN THE HOUSEHOLD IN THE PREVIOUS 5 YEARS

32A Now I would like to ask you about any deaths that occurred in this household in **the last 5 years**.
Since January 2003 has any usual member of this household died?

YES 1
NO . . . . . 2 → 101

32B How many deaths occurred to usual residents in this household in the last 5 years? ☐

NO.	What were the names of the people who died in the last 5 years?	Was (NAME) male or female?	In what month and year did (NAME) die? **IF MONTH DON'T KNOW RECORD '98'**	How old was (NAME) when he/she died? RECORD IN DAYS IF LESS THAN 1 MONTH; RECORD IN MONTHS IF LESS THAN 6 YEARS; OTHERWISE, RECORD IN YEARS.
32C	32D	32E	32F	32G
01	_____	MALE 1 FEMALE 2	MONTH ☐☐ YR 2 0 0 ☐	DAYS . 1 ☐☐ MONTHS . 2 ☐☐ YEARS . 3 ☐☐
02	_____	MALE 1 FEMALE 2	MONTH ☐☐ YR 2 0 0 ☐	DAYS . 1 ☐☐ MONTHS . 2 ☐☐ YEARS . 3 ☐☐
03	_____	MALE 1 FEMALE 2	MONTH ☐☐ YR 2 0 0 ☐	DAYS . 1 ☐☐ MONTHS . 2 ☐☐ YEARS . 3 ☐☐
04	_____	MALE 1 FEMALE 2	MONTH ☐☐ YR 2 0 0 ☐	DAYS . 1 ☐☐ MONTHS . 2 ☐☐ YEARS . 3 ☐☐
05	_____	MALE 1 FEMALE 2	MONTH ☐☐ YR 2 0 0 ☐	DAYS . 1 ☐☐ MONTHS . 2 ☐☐ YEARS . 3 ☐☐

We would like to get more information on the circumstances surrounding the deaths of children under the age of 5 years so that the government can provide health services to help reduce these deaths. If you don't mind, another member of our team will be coming later to interview members of the household about the death(s) you have just told me about.

CHECK HERE IF RESPONDENT DOES **NOT** AGREE TO THE VERBAL AUTOPSY VISIT. ☐
GO TO Q.101 IF THE RESPONDENT DOES NOT AGREE TO THE VISIT.
OTHERWISE PROCEED WITH Q.33.

33 CHECK COLS. 32F AND 32G : RECORD NUMBER OF DEATHS TO CHILDREN ☐☐
UNDER 6 YEARS (AGE 0 to 71 MONTHS) SINCE JANUARY 2005.

RECORD THIS NUMBER ON THE COVER PAGE AND ON THE INTERVIEWER'S ASSIGNMENT SHEET

FOR TOTAL DEATHS ELIGIBLE FOR VERBAL AUTOPSY

HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	What is the main source of drinking water for members of your household?	PIPED WATER PIPED INTO DWELLING/INDOOR . . . . . 11 PIPED TO YARD/PLOT . . . . . 12 PUBLIC TAP/STANDPIPE . . . . . 13 TUBE WELL OR BOREHOLE . . . . . 21 DUG WELL PROTECTED WELL . . . . . 31 UNPROTECTED WELL . . . . . 32 WATER FROM SPRING PROTECTED SPRING . . . . . 41 UNPROTECTED SPRING . . . . . 42 RAINWATER . . . . . 51 TANKER TRUCK . . . . . 61 CART WITH SMALL TANK . . . . . 71 SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/ IRRIGATION CHANNEL) . . . . . 81 BOTTLED WATER . . . . . 91 SACHET WATER . . . . . 92 OTHER _____ 96 (SPECIFY)	→106 →103 →106 →103 →103
102	What is the main source of water used by your household for other purposes such as cooking and handwashing?	PIPED WATER PIPED INTO DWELLING/INDOOR . . . . . 11 PIPED TO YARD/PLOT . . . . . 12 PUBLIC TAP/STANDPIPE . . . . . 13 TUBE WELL OR BOREHOLE . . . . . 21 DUG WELL PROTECTED WELL . . . . . 31 UNPROTECTED WELL . . . . . 32 WATER FROM SPRING PROTECTED SPRING . . . . . 41 UNPROTECTED SPRING . . . . . 42 RAINWATER . . . . . 51 TANKER TRUCK . . . . . 61 CART WITH SMALL TANK . . . . . 71 SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/ IRRIGATION CHANNEL) . . . . . 81 BOTTLED WATER . . . . . 91 SACHET WATER . . . . . 92 OTHER _____ 96 (SPECIFY)	→106 →106
103	Where is that water source located?	IN OWN DWELLING . . . . . 1 IN OWN YARD/PLOT . . . . . 2 ELSEWHERE 3	→106
104	How long does it take to go there, get water, and come back?	MINUTES . . . . . [ ][ ][ ] DON'T KNOW 998	
105	Who usually goes to this source to fetch the water for your household?	ADULT WOMAN . . . . . 01 ADULT MAN . . . . . 02 FEMALE CHILD UNDER 15 YEARS OLD . . . . . 03 MALE CHILD UNDER 15 YEARS OLD . . . . . 04 FEMALE AGE 15-17 YEARS OLD . . . . . 05 MALE AGE 15-17 YEARS OLD . . . . . 06 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
106	Do you do anything to the water to make it safer to drink?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 108
107	What do you usually do to make the water safer to drink? Anything else? RECORD ALL MENTIONED.	BOIL . . . . . A ADD BLEACH/CHLORINE/ALLOY . . . . . B STRAIN THROUGH A CLOTH . . . . . C USE WATER FILTER (CERAMIC/ SAND/COMPOSITE/ETC.) . . . . . D SOLAR DISINFECTION . . . . . E LET IT STAND AND SETTLE . . . . . F OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
108	What kind of toilet facility do members of your household usually use?	FLUSH OR POUR FLUSH TOILET FLUSH TO PIPED SEWER SYSTEM . . . . . 11 FLUSH TO SEPTIC TANK . . . . . 12 FLUSH TO PIT LATRINE . . . . . 13 FLUSH TO SOMEWHERE ELSE . . . . . 14 FLUSH, DON'T KNOW WHERE . . . . . 15 PIT LATRINE VENTILATED IMPROVED PIT LATRINE . . . . . 21 PIT LATRINE WITH SLAB . . . . . 22 PIT LATRINE WITHOUT SLAB/ OPEN PIT . . . . . 23 BUCKET/PAN . . . . . 31 COMPOSTING TOILET . . . . . 41 NO FACILITY/BUSH/FIELD . . . . . 61 OTHER _____ 96 (SPECIFY)	→ 111
109	Do you share this toilet facility with other households?	YES . . . . . 1 NO 2	→ 111
110	How many households use this toilet facility?	NO. OF HOUSEHOLDS IF LESS THAN 10 . . . . . 0 ☐ 10 OR MORE HOUSEHOLDS . . . . . 95 DON'T KNOW 98	
111	Does your household have:		

		YES	NO
Electricity?	ELECTRICITY	1	2
A wall clock?	CLOCK	1	2
A radio?	RADIO	1	2
A black/white television?	BLACK/WHITE TELEVISION	1	2
A color television?	COLOR TELEVISION	1	2
A mobile telephone?	MOBILE TELEPHONE	1	2
A land-line telephone?	LAND-LINE TELEPHONE	1	2
A refrigerator?	REFRIGERATOR	1	2
A freezer?	FREEZER	1	2
Electric generator/Invertor(s)?	GENERATOR/INVERTOR	1	2
Washing machine?	WASHING MACHINE	1	2
Computer?	COMPUTER	1	2
Digital photo-camera?	DIGITAL CAMERA	1	2
Non-digital photo-camera?	NON-DIGITAL CAMERA	1	2
Video deck?	VIDEO DECK	1	2
DVD/VCD?	DVD/VCD	1	2
Sewing machine?	SEWING MACHINE	1	2
Bed?	BED	1	2
Table?	TABLE	1	2
Cabinet/Cupboard?	CABINET/ CUPBOARD	1	2

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
112	What type of fuel does your household mainly use for cooking?	ELECTRICITY . . . . . 01 LPG . . . . . 02 NATURAL GAS . . . . . 03 BIOGAS . . . . . 04 KEROSENE . . . . . 05 CHARCOAL . . . . . 06 WOOD/FIREWOOD . . . . . 07 STRAW/SHRUBS/GRASS . . . . . 08 AGRICULTURAL CROP RESIDUE . . . . . 09 ANIMAL DUNG . . . . . 10 NO FOOD COOKED IN HOUSEHOLD . . . . . 95 OTHER _____ 96 (SPECIFY)	→ 113A → 117
113	In this household, is food cooked on an open fire, an open stove or a closed stove?	OPEN FIRE . . . . . 1 COAL POT . . . . . 2 OPEN STOVE . . . . . 3 CLOSED STOVE/COAL POT WITH CHIMNEY . . . . . 4 OTHER _____ 6 (SPECIFY)	
113A	What type of oil does your household mainly use for cooking?	PALM OIL . . . . . 01 FRYTOL/FORTIFIED VEGETABLE OIL . . . . . 02 OTHER VEGETABLE OIL . . . . . 03 LARD OR SUET . . . . . 04 BUTTER OR MARGARINE . . . . . 05 SHEA BUTTER . . . . . 06 OTHER _____ 96 (SPECIFY)	
115	Is the cooking usually done in the house, in a separate building, or outdoors?	IN THE HOUSE . . . . . 1 IN A SEPARATE BUILDING . . . . . 2 OUTDOORS . . . . . 3 OTHER _____ 6 (SPECIFY)	→ 117
116	Do you have a separate room which is used as a kitchen?	YES . . . . . 1 NO 2	
117	MAIN MATERIAL OF THE FLOOR IN THE DWELLING. RECORD OBSERVATION.	NATURAL FLOOR EARTH/SAND . . . . . 11 DUNG . . . . . 12 RUDIMENTARY FLOOR WOOD PLANKS . . . . . 21 PALM/BAMBOO . . . . . 22 FINISHED FLOOR PARQUET OR POLISHED WOOD . . . . . 31 VINYL OR ASPHALT STRIPS . . . . . 32 CERAMIC TILES/TERRAZO . . . . . 33 CEMENT . . . . . 34 WOOLEN CARPET/SYNTHETIC CARPET . . . 35 LINOLEUM/RUBBER CARPET . . . . . 36 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
118	MAIN MATERIAL OF THE ROOF IN THE DWELLING RECORD OBSERVATION.	NATURAL ROOFING NO ROOF . . . . . 11 THATCH/PALM LEAF/SOD . . . . . 12 RUDIMENTARY ROOFING RUSTIC MAT . . . . . 21 PALM/BAMBOO . . . . . 22 WOOD PLANKS . . . . . 23 CARDBOARD . . . . . 24 FINISHED ROOFING METAL . . . . . 31 WOOD . . . . . 32 CALAMINE/CEMENT FIBER . . . . . 33 CERAMIC TILES/BRICK TILES . . . . . 34 CEMENT . . . . . 35 ROOFING SHINGLES . . . . . 36 ASBESTOS/SLATE ROOFING SHEETS . . . 37 OTHER _____ 96 (SPECIFY)	
119	MAIN MATERIAL OF THE EXTERIOR WALLS. RECORD OBSERVATION.	NATURAL WALLS NO WALLS . . . . . 11 CANE/PALM/TRUNKS . . . . . 12 DIRT . . . . . 13 RUDIMENTARY WALLS BAMBOO WITH MUD . . . . . 21 STONE WITH MUD . . . . . 22 UNCOVERED ADOBE . . . . . 23 PLYWOOD . . . . . 24 CARDBOARD . . . . . 25 REUSED WOOD . . . . . 26 FINISHED WALLS CEMENT . . . . . 31 STONE WITH LIME/CEMENT . . . . . 32 BRICKS . . . . . 33 CEMENT BLOCKS . . . . . 34 COVERED ADOBE . . . . . 35 WOOD PLANKS/SHINGLES . . . . . 36 OTHER _____ 96 (SPECIFY)	
120	How many rooms in this household are used for sleeping?	ROOMS . . . . . ☐☐	
121	Does any member of this household own: A bicycle? A motorcycle or motor scooter? An animal-drawn cart? A car or truck? A boat with a motor? A boat without a motor?	YES NO BICYCLE . . . . . 1 2 MOTORCYCLE/SCOOTER . . . . . 1 2 ANIMAL-DRAWN CART . . . . . 1 2 CAR/TRUCK . . . . . 1 2 BOAT WITH MOTOR . . . . . 1 2 BOAT WITHOUT MOTOR 1 2	
122	Does any member of this household own any agricultural land?	YES . . . . . 1 NO 2	→ 124

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
123	How many hectares, acres or poles of agricultural land do members of this household own?	HECTARES . . . . . 1 ☐☐ ACRES . . . . . 2 ☐☐ POLES . . . . . 3 ☐☐ 95 OR MORE . . . . . 995 DON'T KNOW 998	
124	Does this household own any livestock, herds, other farm animals, or poultry?	YES . . . . . 1 NO 2	→ 126
125	How many of the following animals does this household own? IF NONE, ENTER '00'. IF MORE THAN 95, ENTER '95'. IF UNKNOWN, ENTER '98'.		
	Cattle?	CATTLE . . . . . ☐☐	
	Milk cows or bulls?	COWS/BULLS . . . . . ☐☐	
	Horses, donkeys, or mules?	HORSES/DONKEYS/MULES . . . . . ☐☐	
	Goats?	GOATS . . . . . ☐☐	
	Sheep?	SHEEP . . . . . ☐☐	
	Pigs?	PIGS . . . . . ☐☐	
	Rabbits?	RABBITS . . . . . ☐☐	
	Grasscutter?	GRASSCUTTER . . . . . ☐☐	
	Chickens?	CHICKENS . . . . . ☐☐	
	Other poultry? _____ (SPECIFY)	OTHER POULTRY . . . . . ☐☐	
	Other? _____ (SPECIFY)	OTHER . . . . . ☐☐	
126	Does any member of this household have a bank account?	YES . . . . . 1 NO 2	
126A	How many household members are covered by health insurance? IF NONE, RECORD '00'.	PERSONS . . . . . ☐☐ DON'T KNOW/NOT SURE 98	
127	Does your household have any mosquito nets that can be used while sleeping?	YES . . . . . 1 NO 2	→ 137A
128	How many mosquito nets does your household have? IF 7 OR MORE NETS, RECORD '7'.	NUMBER OF NETS . . . . . ☐	

		NET #1	NET #2	NET #3
129	ASK THE RESPONDENT TO SHOW YOU THE NETS IN THE HOUSEHOLD. IF MORE THAN 3 NETS, USE ADDITIONAL QUESTIONNAIRE(S).	OBSERVED ... 1 NOT OBSERVED ... 2	OBSERVED ... 1 NOT OBSERVED ... 2	OBSERVED ... 1 NOT OBSERVED ... 2
130	How many months ago did your household obtain the mosquito net? IF LESS THAN ONE MONTH, RECORD '00'.	MONTHS AGO ... [ ][ ] 37 OR MORE MONTHS AGO ... 95 NOT SURE ... 98	MONTHS AGO ... [ ][ ] 37 OR MORE MONTHS AGO ... 95 NOT SURE ... 98	MONTHS AGO ... [ ][ ] 37 OR MORE MONTHS AGO ... 95 NOT SURE ... 98
131	OBSERVE OR ASK THE BRAND/ TYPE OF MOSQUITO NET.	LONG LASTING NET OLYSET ... 10 PERMANET ... 11 INTERCEPTOR ... 12 NETPROTECT ... 13 DURANET ... 14 ICON LIFE ... 15 OTHER/ DK BRAND ... 16 (SKIP TO 135) 'PRETREATED' NET DAWA PLUS ... 21 OTHER/ DK BRAND ... 26 (SKIP TO 133) LOCALLY SEWN NETS ... 31 OTHER ... 41 DK BRAND ... 98	LONG LASTING NET OLYSET ... 10 PERMANET ... 11 INTERCEPTOR ... 12 NETPROTECT ... 13 DURANET ... 14 ICON LIFE ... 15 OTHER/ DK BRAND ... 16 (SKIP TO 135) 'PRETREATED' NET DAWA PLUS ... 21 OTHER/ DK BRAND ... 26 (SKIP TO 133) LOCALLY SEWN NETS ... 31 OTHER ... 41 DK BRAND ... 98	LONG LASTING NET OLYSET ... 10 PERMANET ... 11 INTERCEPTOR ... 12 NETPROTECT ... 13 DURANET ... 14 ICON LIFE ... 15 OTHER/ DK BRAND ... 16 (SKIP TO 135) 'PRETREATED' NET DAWA PLUS ... 21 OTHER/ DK BRAND ... 26 (SKIP TO 133) LOCALLY SEWN NETS ... 31 OTHER ... 41 DK BRAND ... 98
131A	Where did you get this net?	PUBLIC SECTOR GOVT. HOSPITAL/ POLYCLINIC ... 11 GOVT. HEALTH CENTER ... 12 GOVT. HEALTH POST/CHPS ... 13 FIELDWORKER/OUTREACH/ PEER EDUCATOR ... 14 CAMPAIGN ... 15 OTHER PUBLIC ______ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ... 21 PHARMACY/CHEMICAL/ DRUG STORE ... 22 OTHER PRIVATE MEDICAL ______ 26 (SPECIFY) OTHER SOURCE NGO ... 31 SHOP/MARKET ... 32 STREET VENDOR ... 33 PETROL STATION/ MOBILE MART ... 34 OTHER ______ 36 (SPECIFY) DON'T KNOW ... 98	PUBLIC SECTOR GOVT. HOSPITAL/ POLYCLINIC ... 11 GOVT. HEALTH CENTER ... 12 GOVT. HEALTH POST/CHPS ... 13 FIELDWORKER/OUTREACH/ PEER EDUCATOR ... 14 CAMPAIGN ... 15 OTHER PUBLIC ______ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ... 21 PHARMACY/CHEMICAL/ DRUG STORE ... 22 OTHER PRIVATE MEDICAL ______ 26 (SPECIFY) OTHER SOURCE NGO ... 31 SHOP/MARKET ... 32 STREET VENDOR ... 33 PETROL STATION/ MOBILE MAR ... 34 OTHER ______ 36 (SPECIFY) DON'T KNOW ... 98	PUBLIC SECTOR GOVT. HOSPITAL/ POLYCLINIC ... 11 GOVT. HEALTH CENTER ... 12 GOVT. HEALTH POST/CHPS ... 13 FIELDWORKER/OUTREACH/ PEER EDUCATOR ... 14 CAMPAIGN ... 15 OTHER PUBLIC ______ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ... 21 PHARMACY/CHEMICAL/ DRUG STORE ... 22 OTHER PRIVATE MEDICAL ______ 26 (SPECIFY) OTHER SOURCE NGO ... 31 SHOP/MARKET ... 32 STREET VENDOR ... 33 PETROL STATION/ MOBILE MART ... 34 OTHER ______ 36 (SPECIFY) DON'T KNOW ... 98
131B	Was a voucher used to purchase this net?	YES ... 1 NO ... 2 DON'T KNOW ... 8	YES ... 1 NO ... 2 DON'T KNOW ... 8	YES ... 1 NO ... 2 DON'T KNOW ... 8

		NET #1	NET #2	NET #3
132	When you got the net, was it treated with an insecticide to kill or repel mosquitos?	YES . . . 1 NO . . . 2 NOT SURE . . . 8	YES . . . 1 NO . . . 2 NOT SURE . . . 8	YES . . . 1 NO . . . 2 NOT SURE . . . 8
133	Since you got the mosquito net, was it ever soaked or dipped in a liquid to kill or repel mosquitos?	YES . . . 1 NO . . . 2 (SKIP TO 135) NOT SURE . . . 8	YES . . . 1 NO . . . 2 (SKIP TO 135) NOT SURE . . . 8	YES . . . 1 NO . . . 2 (SKIP TO 135) NOT SURE . . . 8
134	How many months ago was the net last soaked or dipped? IF LESS THAN ONE MONTH, RECORD '00'.	MONTHS AGO . . . [ ][ ] 25 OR MORE MONTHS AGO . . . 95 NOT SURE . . . 98	MONTHS AGO . . . [ ][ ] 25 OR MORE MONTHS AGO . . . 95 NOT SURE . . . 98	MONTHS AGO . . . [ ][ ] 25 OR MORE MONTHS AGO . . . 95 NOT SURE . . . 98
135	Did anyone sleep under this mosquito net last night?	YES . . . 1 NO . . . 2 (SKIP TO 137) NOT SURE . . . 8	YES . . . 1 NO . . . 2 (SKIP TO 137) NOT SURE . . . 8	YES . . . 1 NO . . . 2 (SKIP TO 137) NOT SURE . . . 8
136	Who slept under this mosquito net last night? RECORD THE PERSON'S LINE NUMBER FROM THE HOUSEHOLD SCHEDULE.	NAME____________ LINE NO. . . . [ ][ ] NAME____________ LINE NO. . . . [ ][ ] NAME____________ LINE NO. . . . [ ][ ] NAME____________ LINE NO. . . . [ ][ ]	NAME____________ LINE NO. . . . [ ][ ] NAME____________ LINE NO. . . . [ ][ ] NAME____________ LINE NO. . . . [ ][ ] NAME____________ LINE NO. . . . [ ][ ]	NAME____________ LINE NO. . . . [ ][ ] NAME____________ LINE NO. . . . [ ][ ] NAME____________ LINE NO. . . . [ ][ ] NAME____________ LINE NO. . . . [ ][ ]
137		GO BACK TO 129 FOR NEXT NET; OR, IF NO MORE NETS, CONTINUE TO Q. 137A	GO BACK TO 129 FOR NEXT NET; OR, IF NO MORE NETS, CONTINUE TO Q. 137A	GO TO 129 IN FIRST COLUMN OF A NEW QUESTIONNAIRE; OR, IF NO MORE NETS, CONTINUE TO Q. 137A

			YES	NO	
137A	In the past 12 months, have you seen or heard any messages telling you that:		YES	NO	
	a) The Ghana Health Service recommends Artesunate and Amodiaquine as a drug for malaria?	GHS RECOMMENDATION . . .	1	2	
	b) Treatment should be sought from health facility within 24hrs of onset of fever, especially for a child under 5 years?	SEEKING URGENT CARE . . .	1	2	
	c) The full course of the malaria drug Artesunate and Amodiaquine should be completed?	COMPLETING FULL COURSE . . .	1	2	
	d) Pregnant women should attend ANC and take 3 doses of SP/Fansidar during pregnancy to prevent malaria?	ATTENDING ANC . . .	1	2	
	e) Families should sleep under an insecticide treated mosquito net to protect them from mosquito bites that lead to malaria, especially pregnant women and children uder 5 years?	SLEEPING UNDER NETS . . .	1	2	
137B	In the past 12 months, have you seen or heard any of the messages about malaria:		YES	NO	
	a) On the television?	TELEVISION . . .	1	2	
	b) On the radio?	RADIO . . .	1	2	
	c) In a newspaper or magazine?	NEWSPAPER/MAGAZINE . . .	1	2	
	d) From a poster?	POSTER . . .	1	2	
	e) From leaflets or brochures?	LEAFLET/BROCHURE . . .	1	2	
	f) From a health worker?	HEALTH WORKER . . .	1	2	
	g) From a Community volunteer?	VOLUNTEER . . .	1	2	
137C	Have you ever listened to the radio program "He Ha Ho"?	YES . . . 1 NO . . . 2			

SELECTION OF RESPONDENTS FOR SECTION ON DOMESTIC VIOLENCE

138 ONLY ONE PERSON PER HOUSEHOLD SHOULD BE SELECTED FOR DV MODULE

LOOK AT THE IDENTIFICATION PANEL ON THE COVER OF THE HOUSEHOLD QUESTIONNAIRE,CHECK WHETHER A WOMAN OR A MAN IS TO BE INTERVIEWED WITH THE DOMESTIC VIOLENCE MODULE IN THIS HOUSEHOLD:

WOMAN ☐

USE THE TABLE BELOW TO SELECT ONE WOMAN TO BE INTERVIEWED WITH DV MODULE IN THIS HH

NAME OF SELECTED WOMAN_____

HH LINE NUMBER ☐☐

GO TO COL. 9 IN THE HH SCHEDULE AND WRITE 'DV' NEXT TO THE LINE NUMBER OF THE WOMAN SELECTED

MAN ☐

USE THE TABLE BELOW TO SELECT ONE MAN TO BE INTERVIEWED WITH DV MODULE IN THIS HH

NAME OF SELECTED MAN_____

HH LINE NUMBER ☐☐

GO TO COL. 10 IN THE HH SCHEDULE AND WRITE 'DV' NEXT TO THE LINE NUMBER OF THE MAN SELECTED

HOW TO USE THE TABLE FOR SELECTION OF RESPONDENTS FOR DV

LOOK AT THE LAST DIGIT OF THE HOUSEHOLD QUESTIONNAIRE SERIAL NUMBER ON THE COVER PAGE. THIS IS THE ROW NUMBER YOU SHOULD GO TO. CHECK THE TOTAL NUMBER OF ELIGIBLE FEMALES (COLUMN 9) OR MALES (COLUMN 10) IN THE HOUSEHOLD SCHEDULE. THIS IS THE COLUMN YOU SHOULD GO TO. THE CELL WHERE THE ROW AND THE COLUMN MEET IS THE NUMBER OF THE SELECTED WOMAN OR MAN FOR THE DOMESTIC VIOLENCE MODULE IN THE HOUSEHOLD SCHEDULE.

FOR EXAMPLE, THE HOUSEHOLD WAS SELECTED TO INTERVIEW A WOMAN WITH THE DV MODULE AND THERE ARE THREE ELIGIBLE WOMEN AGE 15-49 (LINE NUMBERS 02, 04, AND 05). IF THE HOUSEHOLD QUESTIONNAIRE SERIAL NUMBER IS '216', THE LAST DIGIT IS "6", THEREFORE GO TO ROW '6'. THERE ARE THREE ELIGIBLE WOMEN AGE 15-49 IN THE HOUSEHOLD, THEREFORE GO TO COLUMN '3'. FOLLOW THE ROW AND COLUMN AND FIND THE NUMBER WHERE THE ROW AND COLUMN MEET ('2') AND CIRCLE THE BOX. NOW GO TO THE HOUSEHOLD SCHEDULE AND FIND THE SECOND WOMAN WHO IS ELIGIBLE FOR THE WOMAN'S INTERVIEW (LINE NUMBER "04" IN OUR EXAMPLE). WRITE HER LINE NUMBER ABOVE IN THE BOXES INDICATED.

TABLE FOR SELECTION OF RESPONDENTS FOR SECTION ON DOMESTIC VIOLENCE

LAST DIGIT OF THE HOUSEHOLD Q-RE SERIAL NUMBER	TOTAL NUMBER OF ELIGIBLE WOMEN 15-49 / MEN 15-59 IN THE HOUSEHOLD							
	1	2	3	4	5	6	7	8
0	1	2	2	4	3	6	5	4
1	1	1	3	1	4	1	6	5
2	1	2	1	2	5	2	7	6
3	1	1	2	3	1	3	1	7
4	1	2	3	4	2	4	2	8
5	1	1	1	1	3	5	3	1
6	1	2	2	2	4	6	4	2
7	1	1	3	3	5	1	5	3
8	1	2	1	4	1	2	6	4
9	1	1	2	1	2	3	7	5

WEIGHT, HEIGHT AND HEMOGLOBIN MEASUREMENT FOR CHILDREN AGE 0-5

		CHILD 1	CHILD 2	CHILD 3
501	CHECK COLUMN 11. RECORD THE LINE NUMBER AND AGE FOR ALL ELIGIBLE CHILDREN 0-5 YEARS IN QUESTION 502. IF MORE THAN SIX CHILDREN, USE ADDITIONAL QUESTIONNAIRE(S). A FINAL OUTCOME MUST BE RECORDED FOR THE WEIGHT AND HEIGHT MEASUREMENT IN 508 AND FOR THE ANEMIA PROCEDURE IN 513			
502	LINE NUMBER FROM COLUMN 11 NAME FROM COLUMN 2	LINE NUMBER . . . . [ ][ ] NAME _____	LINE NUMBER . . . . [ ][ ] NAME _____	LINE NUMBER . . . [ ][ ] NAME _____
503	IF MOTHER INTERVIEWED, COPY MONTH AND YEAR FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME'S) birth date?	DAY . . . . . [ ][ ] MONTH . . . . . [ ][ ] YEAR [ ][ ][ ][ ]	DAY . . . . . [ ][ ] MONTH . . . . . [ ][ ] YEAR [ ][ ][ ][ ]	DAY . . . . . [ ][ ] MONTH . . . . . [ ][ ] YEAR [ ][ ][ ][ ]
504	CHECK 503: CHILD BORN IN JANUARY 2003 OR LATER?	YES . . . . . 1 NO . . . . . 2 (GO TO 503 FOR NEXT CHILD OR, IF NO MORE, GO TO 515)	YES . . . . . 1 NO . . . . . 2 (GO TO 503 FOR NEXT CHILD OR, IF NO MORE, GO TO 515)	YES . . . . . 1 NO . . . . . 2 (GO TO 503 FOR NEXT CHILD OR, IF NO MORE, GO TO 515)
505	WEIGHT IN KILOGRAMS	KG [ ][ ].[ ][ ]	KG [ ][ ].[ ][ ]	KG [ ][ ].[ ][ ]
506	HEIGHT IN CENTIMETERS	CM [ ][ ][ ].[ ]	CM [ ][ ][ ].[ ]	CM [ ][ ][ ].[ ]
507	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . . . 1 STANDING UP 2	LYING DOWN . . . . . 1 STANDING UP 2	LYING DOWN . . . . . 1 STANDING UP 2
508	RESULT OF WEIGHT AND HEIGHT MEASUREMENT	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
509	CHECK 503: IS CHILD AGE 0-5 MONTHS, I.E., WAS CHILD BORN IN MONTH OF INTERVIEW OR FIVE PREVIOUS MONTHS?	0-5 MONTHS . . . . . 1 (GO TO 503 FOR NEXT CHILD OR, IF NO MORE, GO TO 515) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 503 FOR NEXT CHILD OR, IF NO MORE, GO TO 515) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 503 FOR NEXT CHILD OR, IF NO MORE, GO TO 515) OLDER 2
510	LINE NUMBER OF PARENT/OTHER ADULT RESPONSIBLE FOR THE CHILD (COLUMN 1) RECORD '00' IF NOT LISTED.	LINE NUMBER . . . . [ ][ ]	LINE NUMBER . . . . [ ][ ]	LINE NUMBER . . . [ ][ ]
511	READ CONSENT STATEMENT TO PARENT/OTHER ADULT RESPONSIBLE FOR CHILD. CIRCLE CODE AND SIGN.	GRANTED 1 _____ (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 513)	GRANTED 1 _____ (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 513)	GRANTED 1 _____ (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 513)
512	RECORD HEMOGLOBIN LEVEL HERE AND IN THE ANEMIA PAMPHLET	G/DL . [ ][ ].[ ]	G/DL . [ ][ ].[ ]	G/DL . [ ][ ].[ ]
513	RECORD RESULT CODE OF HEMOGLOBIN MEASUREMENT	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
514		GO BACK TO 503 IN NEXT COLUMN IN THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF THE ADDITIONAL QUESTIONNAIRE(S); IF NO MORE CHILDREN, GO TO 515.		

CONSENT STATEMENT FOR ANEMIA FOR CHILDREN

As part of this survey, we are asking people all over the country to take an anemia test. Anemia is a serious health problem that usually results from poor nutrition, infection, or chronic disease. This survey will assist the government to develop programs to prevent and treat anemia.

We request that all children born in 2003 or later participate in the anemia testing part of this survey and give a few drops of blood from a finger. The equipment used in taking the blood is clean and completely safe. It has never been used before and will be thrown away after each test.

The blood will be tested for anemia immediately, and the result told to you right away. The result will be kept confidential and will not be seen by anyone other than members of our survey team.

Do you have any questions?

You can say yes to the test, or you can say no. It is up to you to decide.
Will you allow (NAME(S) OF CHILD(REN) to participate in the anemia test?

WEIGHT, HEIGHT AND HEMOGLOBIN MEASUREMENT FOR CHILDREN AGE 0-5

		CHILD 4	CHILD 5	CHILD 6
502	LINE NUMBER FROM COLUMN 11 NAME FROM COLUMN 2	LINE NUMBER . . . . NAME _____	LINE NUMBER . . . . NAME _____	LINE NUMBER . . . NAME _____
503	IF MOTHER INTERVIEWED, COPY MONTH AND YEAR FROM BIRTH HISTORY AND ASK DAY; IF MOTHER NOT INTERVIEWED, ASK: What is (NAME'S) birth date?	DAY . . . . . . MONTH . . . . . . YEAR	DAY . . . . . . MONTH . . . . . . YEAR	DAY . . . . . . MONTH . . . . . . YEAR
504	CHECK 503: CHILD BORN IN JANUARY 2003 OR LATER	YES . . . . . 1 NO . . . . . 2 (GO TO 503 FOR NEXT CHILD OR, IF NO MORE, GO TO 515)	YES . . . . . 1 NO . . . . . 2 (GO TO 503 FOR NEXT CHILD OR, IF NO MORE, GO TO 515)	YES . . . . . 1 NO . . . . . 2 (GO TO 503 FOR NEXT CHILD OR, IF NO MORE, GO TO 515)
505	WEIGHT IN KILOGRAMS	KG .	KG .	KG .
506	HEIGHT IN CENTIMETERS	CM .	CM .	CM .
507	MEASURED LYING DOWN OR STANDING UP?	LYING DOWN . . . . . 1 STANDING UP 2	LYING DOWN . . . . . 1 STANDING UP 2	LYING DOWN . . . . . 1 STANDING UP 2
508	RESULT OF WEIGHT AND HEIGHT MEASUREMENT	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
509	CHECK 503: IS CHILD AGE 0-5 MONTHS, I.E., WAS CHILD BORN IN MONTH OF INTERVIEW OR FIVE PREVIOUS MONTHS?	0-5 MONTHS . . . . . 1 (GO TO 503 FOR NEXT CHILD OR, IF NO MORE, GO TO 515) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 503 FOR NEXT CHILD OR, IF NO MORE, GO TO 515) OLDER 2	0-5 MONTHS . . . . . 1 (GO TO 503 FOR NEXT CHILD OR, IF NO MORE, GO TO 515) OLDER 2
510	LINE NUMBER OF PARENT/OTHER ADULT RESPONSIBLE FOR THE CHILD (COLUMN 1) RECORD '00' IF NOT LISTED.	LINE NUMBER	LINE NUMBER	LINE NUMBER . . .
511	READ CONSENT STATEMENT TO PARENT/OTHER ADULT RESPONSIBLE FOR CHILD. CIRCLE CODE AND SIGN.	GRANTED . . . . . 1 (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 513)	GRANTED . . . . . 1 (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 513)	GRANTED . . . . . 1 (SIGN) REFUSED . . . . . 2 (IF REFUSED, GO TO 513)
512	RECORD HEMOGLOBIN LEVEL HERE AND IN THE ANEMIA PAMPHLET	G/DL . .	G/DL . .	G/DL . .
513	RECORD RESULT CODE OF HEMOGLOBIN MEASUREMENT.	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
514		GO BACK TO 503 IN NEXT COLUMN IN THIS QUESTIONNAIRE OR IN THE FIRST COLUMN OF ADDITIONAL QUESTIONNAIRE(S); IF NO MORE CHILDREN, GO TO 515.		

WEIGHT, HEIGHT, AND HEMOGLOBIN MEASUREMENT FOR WOMEN AGE 15-49

515	CHECK COLUMN 9. RECORD THE LINE NUMBER AND NAME FOR ALL ELIGIBLE WOMEN IN 516. IF THERE ARE MORE THAN THREE WOMEN, USE ADDITIONAL QUESTIONNAIRE(S). A FINAL OUTCOME MUST BE RECORDED FOR THE WEIGHT AND HEIGHT MEASUREMENT IN 519 AND FOR THE ANEMIA TEST PROCEDURE IN 528.			
		WOMAN 1	WOMAN 2	WOMAN 3
516	LINE NUMBER (COLUMN 9) NAME (COLUMN 2)	LINE NUMBER . . . . ☐☐ NAME ________	LINE NUMBER . . . . ☐☐ NAME ________	LINE NUMBER . . . . ☐☐ NAME ________
517	WEIGHT IN KILOGRAMS	KG. ☐☐☐.☐☐	KG. ☐☐☐.☐☐	KG. ☐☐☐.☐☐
518	HEIGHT IN CENTIMETERS	CM. . . . . ☐☐☐.☐	CM. . . . . . ☐☐☐.☐	CM. . . . . . ☐☐☐.☐
519	RESULT OF WEIGHT AND HEIGHT MEASUREMENT	MEASURED . . . . 1 NOT PRESENT . . . . 2 REFUSED . . . . 3 OTHER 6	MEASURED . . . . 1 NOT PRESENT . . . . 2 REFUSED . . . . 3 OTHER 6	MEASURED . . . . 1 NOT PRESENT . . . . 2 REFUSED . . . . 3 OTHER 6
520	AGE: CHECK COLUMN 7.	15-17 YEARS . . . . 1 18-49 YEARS . . . . 2 (GO TO 523)	15-17 YEARS . . . . 1 18-49 YEARS . . . . 2 (GO TO 523)	15-17 YEARS . . . . 1 18-49 YEARS . . . . 2 (GO TO 523)
521	MARITAL STATUS: CHECK COLUMN 8.	CODE 4 (NEVER IN UNION . . . . . 1 OTHER . . . . 2 (GO TO 523)	CODE 4 (NEVER IN UNION . . . . . 1 OTHER . . . . 2 (GO TO 523)	CODE 4 (NEVER IN UNION . . . . 1 OTHER . . . . 2 (GO TO 523)
522	RECORD LINE NUMBER OF PARENT/OTHER ADULT RESPON-SIBLE FOR ADOLESCENT. RECORD '00' IF NOT LISTED.	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT . ☐☐	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT . ☐☐	LINE NUMBER OF PARENT OR OTHER RESPONSIBLE ADULT . ☐☐
523	READ ANEMIA TEST CONSENT STATEMENT. FOR NEVER-IN-UNION WOMEN AGE 15-17, ASK CONSENT FROM PARENT/OTHER ADULT IDENTIFIED IN 522 BEFORE ASKING RESPON-DENT'S CONSENT.	GRANTED . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . 2 RESPONDENT REFUSED . . . . 3 ________ (SIGN) (IF REFUSED, GO TO 528).	GRANTED . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . 2 RESPONDENT REFUSED . . . . 3 ________ (SIGN) (IF REFUSED, GO TO 528).	GRANTED . . . . 1 PARENT/OTHER RESPONSIBLE ADULT REFUSED . . . . 2 RESPONDENT REFUSED . . . . 3 ________ (SIGN) (IF REFUSED, GO TO 528).

CONSENT STATEMENT FOR ANEMIA TEST

READ CONSENT STATEMENT TO EACH RESPONDENT. CIRCLE CODE '1' IN 523 IF RESPONDENT CONSENTS TO THE ANEMIA TEST AND CODE '3' IF SHE REFUSES.

FOR NEVER-IN-UNION WOMEN AGE 15-17, ASK CONSENT FROM THE PARENT OR OTHER ADULT IDENTIFIED AS RESPONSIBLE FOR THE ADOLESCENT (SEE QUESTION 522) BEFORE ASKING THE ADOLESCENT FOR HER CONSENT. CIRCLE CODE '2' IN 523 IF THE PARENT (OTHER ADULT) REFUSES. CONDUCT THE TEST ONLY IF BOTH THE PARENT (OTHER ADULT) AND THE ADOLESCENT CONSENT.

As part of this survey, we are asking people all over the country to take an anemia test. Anemia is a serious health problem that usually results from poor nutrition, infection, or chronic disease. This survey will assist the government to develop programs to prevent and treat anemia.

For the anemia testing, we will need a few drops of blood from a finger. The equipment used in taking the blood is clean and completely safe. It has never been used before and will be thrown away after each test.

The blood will be tested for anemia immediately, and the result told to you right away. The result will be kept confidential and will not be seen by anyone other than members of our survey team.

Do you have any questions?

You can say yes to the test, or you can say no. It is up to you to decide.
Will you (allow NAME OF ADOLESCENT to) take the anemia test?

		WOMAN 1	WOMAN 2	WOMAN 3
	LINE NUMBER (COLUMN 9) NAME (COLUMN 2)	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____	LINE NUMBER . . . . . ☐☐ NAME _____
524	PREGNANCY STATUS: CHECK 226 IN WOMAN'S QUESTIONNAIRE OR ASK: Are you pregnant?	YES . . . . . 1 NO . . . . . 2 DK 8	YES . . . . . 1 NO . . . . . 2 DK 8	YES . . . . . 1 NO . . . . . 2 DK 8 2
526	CHECK 523 AND PREPARE EQUIPMENT AND SUPPLIES FOR THE TEST(S) FOR WHICH CONSENT HAS BEEN OBTAINED AND PROCEED WITH THE TEST(S). A FINAL OUTCOME FOR THE THE ANEMIA TEST PROCEDURE MUST BE RECORDED IN 528 FOR EACH ELIGIBLE WOMAN EVEN IF SHE WAS NOT PRESENT, REFUSED, OR COULD NOT BE TESTED FOR SOME OTHER REASON.			
527	RECORD HEMO-GLOBIN LEVEL HERE AND IN ANEMIA PAMPHLET	G/DL . . . . . ☐☐.☐	G/DL . . . . . ☐☐.☐	G/DL . . . . . ☐☐.☐
528	RECORD RESULT CODE OF HEMO-GLOBIN MEASURE-MENT.	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6	MEASURED . . . . . 1 NOT PRESENT . . . . . 2 REFUSED . . . . . 3 OTHER 6
530D	GO BACK TO 517 IN NEXT COLUMN IN THIS QUESTIONNAIRE OR IN THE FIRST COLUMNS OF ADDITIONAL QUESTIONNAIRE(S); IF NO MORE END			

SEPTEMBER 2008

GHANA DEMOGRAPHIC AND HEALTH SURVEY
WOMAN'S QUESTIONNAIRE

MINISTRY OF HEALTH, GHANA | GHANA STATISTICAL SERVICE

IDENTIFICATION

LOCALITY NAME _____

NAME OF HOUSEHOLD HEAD _____

EA NUMBER . . . . . [ ][ ][ ]

STRUCTURE NUMBER . . . . . [ ][ ][ ]

HOUSEHOLD NUMBER . . . . . [ ][ ][ ]

REGION . . . . . [ ][ ]

DISTRICT . . . . . [ ][ ]

URBAN/RURAL (URBAN = 1; RURAL = 2) . . . . . [ ]

CITY/LARGE TOWN/SMALL TOWN/VILLAGE(CITY=1, LARGE TOWN=2, SMALL TOWN=3, VILLAGE=4) [ ]

NAME AND LINE NUMBER OF WOMAN _____ [ ][ ]

WOMAN SELECTED FOR DV INTERVIEW (YES = 1; NO = 2) . . . . . [ ]

CHECK COLUMN 9 IN HOUSEHOLD QUESTIONNAIRE. IF BOX IS MARKED 'DV' RECORD 1.
MAKE SURE LINE NUMBER CORRESPONDS TO THE WOMAN'S LINE NUMBER SELECTED FOR DV.

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY [ ][ ] MONTH [ ][ ] YEAR 2008
INTERVIEWER'S NAME	_____	_____	_____	INT. NUMBER [ ][ ][ ]
RESULT*	_____	_____	_____	RESULT [ ]
NEXT VISIT: DATE	_____	_____		TOTAL NUMBER OF VISITS [ ]
TIME	_____	_____		

*RESULT CODES:

1	COMPLETED	4	REFUSED		
2	NOT AT HOME	5	PARTLY COMPLETED	7	OTHER _____ (SPECIFY)
3	POSTPONED	6	INCAPACITATED		

LANGUAGE OF QUESTIONNAIRE: [1] LANGUAGE OF INTERVIEW: [ ] LANGUAGE OF RESPONDENT [ ]

LANGUAGE CODES: ENGLISH = 1, AKAN = 2, GA = 3, EWE = 4, NZEMA = 5, DAGBANI = 6, OTHER = 7 (SPECIFY) _____

TRANSLATOR USED: (YES = 1, NO = 2) [ ]

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____ [ ][ ][ ]	DATE _____ [ ][ ][ ]	[ ][ ][ ]	[ ][ ][ ]

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION AND CONSENT

INFORMED CONSENT

Hello. My name is _____ and I am working for Ghana Statistical Service and Ministry of Health.
We are conducting a national survey that asks women and men about various health issues. We would very much appreciate your participation in this survey. This informaiton will help the government to plan health services.
The survey usually takes between 45 and 60 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to anyone other than members of our survey team.

Participation in this survey is voluntary, and if we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, we hope that you will participate in this survey since your views are important.
At this time, do you want to ask me anything about the survey? May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED . . . . . 1 ↓ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . 2 → END

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR . . . . . ☐☐ MINUTES . . . . . ☐☐	
102	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS . . . . . ☐☐ ALWAYS . . . . . 95 VISITOR 96	→ 104
103	Just before you moved here, did you live in a city, in a town, or in the countryside?	CITY . . . . . 1 TOWN . . . . . 2 COUNTRYSIDE 3	
104	In the last 12 months, on how many separate occasions have you traveled away from your home community and slept away?	NUMBER OF TRIPS . . . . . ☐☐ NONE 00	→ 106
105	In the last 12 months, have you been away from your home community for more than one month at a time?	YES . . . . . 1 NO 2	
106	In what month and year were you born?	MONTH . . . . . ☐☐ DON'T KNOW MONTH . . . . . 98 YEAR . . . . . ☐☐☐☐ DON'T KNOW YEAR 9998	
107	How old were you at your last birthday? COMPARE AND CORRECT 106 AND/OR 107 IF INCONSISTENT.	AGE IN COMPLETED YEARS ☐☐	
108	Have you ever attended school?	YES . . . . . 1 NO 2	→ 112
109	What is the highest level of school you attended: primary, middle/JSS, secondary/SSS, or higher?	PRIMARY . . . . . 1 MIDDLE/JSS . . . . . 2 SECONDARY/SSS . . . . . 3 HIGHER 4	
110	What is the highest grade you completed at that level?	GRADE . . . . . ☐☐	
111	CHECK 109: PRIMARY OR MIDDLE/JSS ☐ ↓ SECONDARY/SSS OR HIGHER ☐ →		→ 115

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
112	Now I would like you to read this sentence to me. SHOW LITERACY CARD TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CANNOT READ AT ALL . . . . . 1 ABLE TO READ ONLY PARTS OF SENTENCE . . . . . 2 ABLE TO READ WHOLE SENTENCE. . 3 NO CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED 5	
113	Have you ever participated in a literacy program or any other program that involves learning to read or write (not including primary school)?	YES . . . . . 1 NO 2	
114	CHECK 112: CODE '2', '3', OR '4' CIRCLED ☐ ↓ CODE '1' OR '5' CIRCLED ☐ →		116
115	Do you read a newspaper or magazine almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
116	Do you listen to the radio almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
117	Do you watch television almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
118	What is your religion?	CATHOLIC . . . . . 01 ANGLICAN . . . . . 02 METHODIST . . . . . 03 PRESBYTERIAN . . . . . 04 PENTECOSTAL/CHARISMATIC . . . . . 05 OTHER CHRISTIAN . . . . . 06 MOSLEM . . . . . 07 TRADITIONAL/SPIRITUALIST . . . . . 08 NO RELIGION . . . . . 09 OTHER _____ 96 (SPECIFY)	
119	To which ethnic group do you belong?	AKAN . . . . . 01 GA/DANGME . . . . . 02 EWE . . . . . 03 GUAN . . . . . 04 MOLE-DAGBANI . . . . . 05 GRUSSI . . . . . 06 GRUMA . . . . . 07 MANDE . . . . . 08 OTHER _____ 96 (SPECIFY)	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES . . . . . 1 NO 2	→ 206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES . . . . . 1 NO 2	→ 204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME . . . . . [ ][ ] DAUGHTERS AT HOME . . . . . [ ][ ]	
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES . . . . . 1 NO 2	→ 206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE . . . . . [ ][ ] DAUGHTERS ELSEWHERE . [ ][ ]	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES . . . . . 1 NO 2	→ 208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD . . . . . [ ][ ] GIRLS DEAD . . . . . [ ][ ]	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL . . . . . [ ][ ]	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL _____ births during your life. Is that correct? YES ☐ NO ☐ → PROBE AND CORRECT 201-208 AS NECESSARY.	\	
210	CHECK 208: ONE OR MORE BIRTHS ☐ NO BIRTHS ☐		→ 226

211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.
RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.
(IF THERE ARE MORE THAN 12 BIRTHS, USE AN ADDITIONAL QUESTIONNAIRE, STARTING WITH THE SECOND ROW).

212 What name was given to your (first/next) baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSE-HOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSE-HOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
01	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (NEXT BIRTH)	DAYS . . . 1 MONTHS 2 YEARS . . 3	
02	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
03	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
04	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
05	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
06	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
07	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH

212 What name was given to your next baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COM-PLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF ALIVE: RECORD HOUSE-HOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSE-HOLD).	220 IF DEAD: How old was (NAME) when he/she died? IF '1 YR', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	221 Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?
08	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
09	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
10	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
11	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH
12	SING 1 MULT 2	BOY 1 GIRL 2	MONTH YEAR	YES . . 1 NO . . . 2 → 220	AGE IN YEARS	YES . . . 1 NO 2	LINE NUMBER (GO TO 221)	DAYS . . . 1 MONTHS 2 YEARS . . 3	YES . . . . 1 ADD BIRTH NO . . . . . 2 NEXT BIRTH

222	Have you had any live births since the birth of (NAME OF LAST BIRTH)? IF YES, RECORD BIRTH(S) IN TABLE.	YES . . . . . 1 NO 2

223 COMPARE 208 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND MARK:

NUMBERS ARE SAME → ☐ NUMBERS ARE DIFFERENT → ☐ (PROBE AND RECONCILE)

CHECK:
- FOR EACH BIRTH: YEAR OF BIRTH IS RECORDED. ☐
- FOR EACH BIRTH SINCE JANUARY 2003: MONTH AND YEAR OF BIRTH ARE RECORDED. ☐
- FOR EACH LIVING CHILD: CURRENT AGE IS RECORDED. ☐
- FOR EACH DEAD CHILD: AGE AT DEATH IS RECORDED. ☐
- FOR AGE AT DEATH 12 MONTHS OR 1 YEAR: PROBE TO DETERMINE EXACT NUMBER OF MONTHS. ☐

224 CHECK 215 AND ENTER THE NUMBER OF BIRTHS IN 2003 OR LATER. IF NONE, RECORD '0' AND SKIP TO 226. ☐

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
225	FOR EACH BIRTH SINCE JANUARY 2003, ENTER 'B' IN THE MONTH OF BIRTH IN THE CALENDAR (PAGE W-63). WRITE THE NAME OF THE CHILD TO THE LEFT OF THE 'B' CODE. FOR EACH BIRTH, ASK THE NUMBER OF MONTHS THE PREGNANCY LASTED AND RECORD 'P' IN EACH OF THE PRECEDING MONTHS ACCORDING TO THE DURATION OF PREGNANCY. (NOTE: THE NUMBER OF 'P's MUST BE ONE LESS THAN THE NUMBER OF MONTHS THAT THE PREGNANCY LASTED.)		
226	Are you pregnant now?	YES . . . . . 1 NO . . . . . 2 UNSURE 8	→ 229
227	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'P's IN THE CALENDAR (PAGE W-63), BEGINNING WITH THE MONTH OF INTERVIEW AND FOR THE TOTAL NUMBER OF COMPLETED MONTHS.	MONTHS . . . . . ☐☐	
228	At the time you became pregnant, did you want to become pregnant <u>then</u>, did you want to wait until <u>later</u>, or did you <u>not want</u> to have any (more) children at all?	THEN . . . . . 1 LATER . . . . . 2 NOT AT ALL 3	
229	Have you ever had a pregnancy that miscarried, was aborted, or ended in a stillbirth?	YES . . . . . 1 NO 2	→ 237
230	When did the last such pregnancy end?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	
231	CHECK 230: LAST PREGNANCY ENDED IN JAN. 2003 OR LATER ↓ LAST PREGNANCY ENDED BEFORE JAN. 2003 →		→ 237
232	How many months pregnant were you when the last such pregnancy ended? RECORD NUMBER OF COMPLETED MONTHS. ENTER 'T' IN THE CALENDAR (PAGE W-63) IN THE MONTH THAT THE PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.	MONTHS . . . . . ☐☐	
233	Since January 2003, have you had any other pregnancies that did not result in a live birth?	YES . . . . . 1 NO 2	→ 235
234	ASK THE DATE AND THE DURATION OF PREGNANCY FOR EACH EARLIER NON-LIVE BIRTH PREGNANCY BACK TO JANUARY 2003 ENTER 'T' IN THE CALENDAR (PAGE W-63) IN THE MONTH THAT EACH PREGNANCY TERMINATED AND 'P' FOR THE REMAINING NUMBER OF COMPLETED MONTHS.		
235	Did you have any miscarriages, abortions or stillbirths that ended before 2003?	YES . . . . . 1 NO 2	→ 237
236	When did the last such pregnancy that terminated before 2003 end?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
237	When did your last menstrual period start? _____ (DATE, IF GIVEN)	DAYS AGO . . . . . 1 [ ][ ] WEEKS AGO . . . . . 2 [ ][ ] MONTHS AGO . . . . . 3 [ ][ ] YEARS AGO . . . . . 4 [ ][ ] IN MENOPAUSE/ HAS HAD HYSTERECTOMY . . . 994 BEFORE LAST BIRTH . . . . . 995 NEVER MENSTRUATED 996	
238	From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant if she has sexual relations?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 301
239	Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?	JUST BEFORE HER PERIOD BEGINS . . . . . 1 DURING HER PERIOD . . . . . 2 RIGHT AFTER HER PERIOD HAS ENDED . . . . . 3 HALFWAY BETWEEN TWO PERIODS . . . . . 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	

SECTION 3. CONTRACEPTION

301	Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)? CIRCLE CODE 1 IN 301 FOR EACH METHOD MENTIONED SPONTANEOUSLY. THEN PROCEED DOWN COLUMN 301, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 1 IF METHOD IS RECOGNIZED, AND CODE 2 IF NOT RECOGNIZED. THEN, FOR EACH METHOD WITH CODE 1 CIRCLED IN 301, ASK 302.		302 Have you ever used (METHOD)?
01	FEMALE STERILIZATION Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	Have you ever had an operation to avoid having any more children? YES . . . . . 1 NO 2
02	MALE STERILIZATION Men can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	Have you ever had a partner who had an operation to avoid having any more children? YES . . . . . 1 NO 2
03	PILL Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
04	IUD Women can have a loop or coil placed inside them by a doctor or a nurse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
05	INJECTABLES Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
06	IMPLANTS Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
07	CONDOM Men can put a rubber sheath on their penis before sexual intercourse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
08	FEMALE CONDOM Women can place a sheath in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
09	DIAPHRAGM Women can place a thin flexible disk in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
10	FOAM OR JELLY Women can place a suppository, jelly, or cream in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
11	RHYTHM (CALENDAR) METHOD Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
12	WITHDRAWAL Men can be careful and pull out before climax.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
13	LACTATIONAL AMENORRHEA METHOD (LAM)	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
14	EMERGENCY CONTRACEPTION As an emergency measure after unprotected sexual intercourse, women can take special pills at any time within five days to prevent pregnancy.	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
15	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES . . . . . 1 _____ (SPECIFY) _____ (SPECIFY) NO 2	YES . . . . . 1 NO . . . . . 2 YES . . . . . 1 NO 2
303	CHECK 302: NOT A SINGLE "YES" (NEVER USED) →	AT LEAST ONE "YES" (EVER USED) → 307	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
304	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 306
305	ENTER '0' IN THE CALENDAR (PAGE W-63) IN EACH BLANK MONTH.		→ 333
306	What have you used or done? CORRECT 302 AND 303 (AND 301 IF NECESSARY).		
307	Now I would like to ask you about the first time that you did something or used a method to avoid getting pregnant. How many living children did you have at that time, if any? IF NONE, RECORD '00'.	NUMBER OF CHILDREN . . . . . ☐☐	
308	CHECK 302 (01): WOMAN NOT STERILIZED ☐ ↓ WOMAN STERILIZED ☐		→ 311A
309	CHECK 226: NOT PREGNANT OR UNSURE ☐ ↓ PREGNANT ☐		→ 322
310	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES . . . . . 1 NO 2	→ 322
311 311A	Which method are you using? CIRCLE ALL MENTIONED. IF MORE THAN ONE METHOD MENTIONED, FOLLOW SKIP INSTRUCTION FOR HIGHEST METHOD IN LIST. CIRCLE 'A' FOR FEMALE STERILIZATION.	FEMALE STERILIZATION . . . . . A MALE STERILIZATION . . . . . B PILL . . . . . C IUD . . . . . D INJECTABLES . . . . . E IMPLANTS . . . . . F MALE CONDOM . . . . . G FEMALE CONDOM . . . . . H DIAPHRAGM . . . . . I FOAM/JELLY . . . . . J LACTATIONAL AMEN. METHOD . . . . . K RHYTHM METHOD . . . . . L WITHDRAWAL . . . . . M OTHER _____ X (SPECIFY)	→ 319 → 315 → 315 → 319A
312	RECORD IF CODE 'C' FOR PILL IS CIRCLED IN 311. YES (USING PILL) ☐ ↓ May I see the package of pills you are using? NO (USING CONDOM BUT NOT PILL) ☐ ↓ May I see the package of condoms you are using? RECORD NAME OF BRAND IF PACKAGE SEEN.	PACKAGE SEEN . . . . . 1 BRAND NAME _____ ☐☐ (SPECIFY) PACKAGE NOT SEEN 2	→ 314
313	Do you know the brand name of the (pills/condoms) you are using? RECORD NAME OF BRAND.	BRAND NAME _____ ☐☐ (SPECIFY) DON'T KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
314	How many (pill cycles/condoms) did you get the last time?	NUMBER OF PILL CYCLES/CONDOMS . . ☐☐☐ DON'T KNOW 998	
315	The last time you obtained (HIGHEST METHOD ON LIST IN 311), how much did you pay in total, including the cost of the method and any consultation you may have had?	COST . . . . . ☐☐.☐☐ FREE . . . . . 99.95 DON'T KNOW 99.98	→ 319A
319	In what month and year was the sterilization performed?	MONTH . . . . . ☐☐ YEAR . . . . . ☐☐☐☐	
319A	Since what month and year have you been using (CURRENT METHOD) without stopping? PROBE: For how long have you been using (CURRENT METHOD) now without stopping?		
320	CHECK 319/319A, 215 AND 230: ANY BIRTH OR PREGNANCY TERMINATION AFTER MONTH AND YEAR OF START OF USE OF CONTRACEPTION IN 319/319A — YES ↓ / NO ↓ GO BACK TO 319/319A, PROBE AND RECORD MONTH AND YEAR AT START OF CONTINUOUS USE OF CURRENT METHOD (MUST BE AFTER LAST BIRTH OR PREGNANCY TERMINATION).		
321	CHECK 319/319A: YEAR IS 2003 OR LATER ↓ ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN THE CALENDAR (PAGE W-63) AND IN EACH MONTH UP TO THE DATE STARTED USING. YEAR IS 2002 OR EARLIER ↓ ENTER CODE FOR METHOD USED IN MONTH OF INTERVIEW IN THE CALENDAR (PAGE W-63) AND IN EACH MONTH UP TO JANUARY 2003.	THEN SKIP TO → 331	
322	I would like to ask you some questions about the times you or your partner may have used a method to avoid getting pregnant during the last few years. USE CALENDAR (PAGE W-63) TO PROBE FOR EARLIER PERIODS OF USE AND NONUSE, STARTING WITH MOST RECENT USE, BACK TO JANUARY 2003 USE NAMES OF CHILDREN, DATES OF BIRTH, AND PERIODS OF PREGNANCY AS REFERENCE POINTS. ENTER METHOD USE CODE OR '0' FOR NONUSE IN EACH BLANK MONTH. ILLUSTRATIVE QUESTIONS: * When was the last time you used a method? Which method was that? * When did you start using that method? How long after the birth of (NAME)? * How long did you use the method then?		
323	CHECK 311/311A: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	NO CODE CIRCLED . . . . . 00 → 333 FEMALE STERILIZATION . . . . . 01 → 326 MALE STERILIZATION . . . . . 02 → 335 PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 MALE CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 DIAPHRAGM . . . . . 09 FOAM/JELLY . . . . . 10 LACTATIONAL AMEN. METHOD . . . 11 → 324A RHYTHM METHOD . . . . . 12 → 324A WITHDRAWAL . . . . . 13 → 335 OTHER METHOD . . . . . 96 → 335	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
324	Where did you obtain (CURRENT METHOD) when you started using it?	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. HEALTH POST/CHPS . . . . . 13 FAMILY PLANNING CLINIC . . . . . 14 MOBILE CLINIC . . . . . 15 FIELDWORKER/OUTREACH/ PEER EDUCATOR . . . . . 16 OTHER PUBLIC _____ 17 (SPECIFY)	
324A	Where did you learn how to use the rhythm/lactational amenorhea method? IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . 21 PRIVATE DOCTOR . . . . . 22 PHARMACY . . . . . 23 CHEMICAL/DRUG STORE . . . . . 24 FP/PPAG CLINIC . . . . . 25 MATERNITY HOME . . . . . 26 OTHER PRIVATE MEDICAL_____ 27 (SPECIFY) OTHER SOURCE SHOP/MARKET . . . . . 31 CHURCH . . . . . 32 COMMUNITY VOLUNTEER . . . . . 33 FRIEND/RELATIVE . . . . . 34 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
325	CHECK 311/311A: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 MALE CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 DIAPHRAGM . . . . . 09 FOAM/JELLY . . . . . 10 LACTATIONAL AMEN. METHOD . . . 11 RHYTHM METHOD 12	→ 332 → 329 → 329 → 329 → 335 → 335
326	You obtained (CURRENT METHOD FROM 323) from (SOURCE OF METHOD FROM 324) in (DATE FROM 319/319A). At that time, were you told about side effects or problems you might have with the method?	YES . . . . . 1 NO 2	→ 328
327	Were you ever told by a health or family planning worker about side effects or problems you might have with the method?	YES . . . . . 1 NO 2	→ 329
328	Were you told what to do if you experienced side effects or problems?	YES . . . . . 1 NO 2	
329	CHECK 326: CODE '1' CIRCLED → At that time, were you told about other methods of family planning that you could use? CODE '1' NOT CIRCLED → When you obtained (CURRENT METHOD FROM 323) from (SOURCE OF METHOD FROM 324) were you told about other methods of family planning that you could use?	YES . . . . . 1 NO 2	→ 331
330	Were you ever told by a health or family planning worker about other methods of family planning that you could use?	YES . . . . . 1 NO 2	
331	CHECK 311/311A: CIRCLE METHOD CODE: IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST.	FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 MALE CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 DIAPHRAGM . . . . . 09 FOAM/JELLY . . . . . 10 LACTATIONAL AMEN. METHOD . . . 11 RHYTHM METHOD . . . . . 12 WITHDRAWAL . . . . . 13 OTHER METHOD 96	→ 335 → 335

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
332	Where did you obtain (CURRENT METHOD) the last time? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. HEALTH POST/CHPS . . . . . 13 FAMILY PLANNING CLINIC . . . . . 14 MOBILE CLINIC . . . . . 15 FIELDWORKER/OUTREACH/ PEER EDUCATOR . . . . . 16 OTHER PUBLIC _____ 17 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . 21 PRIVATE DOCTOR . . . . . 22 PHARMACY . . . . . 23 CHEMICAL/DRUG STORE . . . . . 24 FP/PPAG CLINIC . . . . . 25 MATERNITY HOME . . . . . 26 OTHER PRIVATE MEDICAL_____ 27 (SPECIFY) OTHER SOURCE SHOP/MARKET . . . . . 31 CHURCH . . . . . 32 COMMUNITY VOLUNTEER . . . . . 33 FRIEND/RELATIVE . . . . . 34 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→ 335
333	Do you know of a place where you can obtain a method of family planning?	YES . . . . . 1 NO 2	→ 335
334	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC . . . A GOVT. HEALTH CENTER . . . . . B GOVT. HEALTH POST/CHPS . . . . . C FAMILY PLANNING CLINIC . . . . . D MOBILE CLINIC . . . . . E FIELDWORKER/OUTREACH/ PEER EDUCATOR . . . . . F OTHER PUBLIC _____ G (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . H PRIVATE DOCTOR . . . . . I PHARMACY . . . . . J CHEMICAL/DRUG STORE K FP/PPAG CLINIC . . . . . L MATERNITY HOME . . . . . M OTHER PRIVATE MEDICAL_____ N (SPECIFY) OTHER SOURCE SHOP/MARKET . . . . . O CHURCH . . . . . P COMMUNITY VOLUNTEER . . . . . Q FRIEND/RELATIVE . . . . . R OTHER _____ X (SPECIFY)	
335	In the last 12 months, were you visited by a fieldworker who talked to you about family planning?	YES . . . . . 1 NO 2	
336	In the last 12 months, have you visited a health facility for care for yourself (or your children)?	YES . . . . . 1 NO 2	→ 401
337	Did any staff member at the health facility speak to you about family planning methods?	YES . . . . . 1 NO 2	

SECTION 4. PREGNANCY AND POSTNATAL CARE

401	CHECK 224: ONE OR MORE BIRTHS IN 2003 OR LATER ☐ ↓ NO BIRTHS IN 2003 OR LATER ☐ → 576			
402	CHECK 215: ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2003 OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES). Now I would like to ask you some questions about the health of all your children born in the last five years. (We will talk about each separately.)			
403	LINE NUMBER FROM 212	LAST BIRTH LINE NO. ☐☐	NEXT-TO-LAST BIRTH LINE NO. ☐☐	SECOND-FROM-LAST BIRTH LINE NO. ☐☐
404	FROM 212 AND 216	NAME _____ LIVING ☐ DEAD ☐ ↓	NAME _____ LIVING ☐ DEAD ☐ ↓	NAME _____ LIVING ☐ DEAD ☐ ↓
405	At the time you became pregnant with (NAME), did you want to become pregnant <u>then</u>, did you want to wait until <u>later</u>, or did you <u>not want</u> to have any (more) children at all?	THEN . . . . . 1 (SKIP TO 407) ↵ LATER . . . . . 2 NOT AT ALL . . . . . 3 (SKIP TO 407) ↵	THEN . . . . . 1 (SKIP TO 432) ↵ LATER . . . . . 2 NOT AT ALL . . . . . 3 (SKIP TO 432) ↵	THEN . . . . . 1 (SKIP TO 432) ↵ LATER . . . . . 2 NOT AT ALL . . . . . 3 (SKIP TO 432) ↵
406	How much longer would you have liked to wait?	MONTHS . .1 ☐☐ YEARS . .2 ☐☐ DON'T KNOW 998	MONTHS . .1 ☐☐ YEARS . .2 ☐☐ DON'T KNOW . . . 998	MONTHS . .1 ☐☐ YEARS . .2 ☐☐ DON'T KNOW . . . 998
407	Did you see anyone for antenatal care for this pregnancy? IF YES: Whom did you see? Anyone else? PROBE TO IDENTIFY EACH TYPE OF PERSON AND RECORD ALL MENTIONED.	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . B AUXILIARY MIDWIFE . . . . . C COMMUNITY HEALTH OFFICER/NURSE D OTHER PERSON TRAINED TRADITIONAL BIRTH ATTENDANT . . . F UNTRAINED TRADITIONAL BIRTH ATTENDANT . . . G COMMUNITY/VILLAGE HEALTH VOLUNTEER . . . . H TRADITIONAL PRACTICIONER... I OTHER_____ X (SPECIFY) NO ONE . . . . . Y (SKIP TO 414) ↵		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
408	Where did you receive antenatal care for this pregnancy? Anywhere else? PROBE TO IDENTIFY TYPE(S) OF SOURCE(S) AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	HOME YOUR HOME . . . . A OTHER HOME . . . . B PUBLIC SECTOR GOVT. HOSPITAL/ POLYCLINIC . C GOVT. HEALTH CENTER . . . . . D GOVT. HEALTH POST/CHPS . E MOBILE CLINIC F OTHER PUBLIC _____ G (SPECIFY) PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . H FP/PPAG CLINIC . I MOBILE CLINIC J MATERNITY HOME K OTHER PRIVATE MED. _____ L (SPECIFY) OTHER _____ X (SPECIFY)		
409	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS . . . ☐☐ DON'T KNOW 98		
410	How many times did you receive antenatal care during this pregnancy?	NUMBER OF TIMES . ☐☐ DON'T KNOW 98		
411	As part of your antenatal care during this pregnancy, were any of the following done at least once? Were you weighed? Was your blood pressure measured? Did you give a urine sample? Did you give a blood sample?	YES NO WEIGHT . . . 1 2 BP . . . . . 1 2 URINE . . . . . 1 2 BLOOD . . . 1 2		
412	During (any of) your antenatal care visit(s), were you told about the signs of pregnancy complications?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 414) ← DON'T KNOW 8		
413	Were you told where to go if you had any of these complications?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
414	During this pregnancy, were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 417) ← DON'T KNOW 8		
415	During this pregnancy, how many times did you get this tetanus injection?	TIMES . . . . . ☐ DON'T KNOW 8		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
416	CHECK 415:	2 OR MORE TIMES ☐ → (SKIP TO 421) OTHER ☐ →		
417	At any time before this pregnancy, did you receive any tetanus injections, either to protect yourself or another baby?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 421) ← DON'T KNOW 8		
418	Before this pregnancy, how many other times did you receive a tetanus injection? IF 7 OR MORE TIMES, RECORD '7'.	TIMES . . . . . ☐☐ DON'T KNOW 8		
419	In what month and year did you receive the last tetanus injection before this pregnancy?	MONTH . . . ☐☐ DK MONTH . . . . . 98 YEAR ☐☐☐☐ (SKIP TO 421) ← DK YEAR 9998		
420	How many years ago did you receive that tetanus injection?	YEARS AGO . . . . . ☐☐		
421	During this pregnancy, were you given or did you buy any iron tablets or iron syrup? SHOW TABLETS/SYRUP.	YES . . . . . 1 NO . . . . . 2 (SKIP TO 423) ← DON'T KNOW 8		
422	During the whole pregnancy, for how many days did you take the tablets or syrup? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS.	DAYS . ☐☐☐ DON'T KNOW 998		
423	During this pregnancy, did you take any drug for intestinal worms?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
424	During this pregnancy, did you have difficulty with your vision during daylight?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
425	During this pregnancy, did you suffer from night blindness?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		
426	During this pregnancy, did you take any drugs to keep you from getting malaria?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 432) ← DON'T KNOW 8		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME ________	NEXT-TO-LAST BIRTH NAME ________	SECOND-FROM-LAST BIRTH NAME ________
427	What drugs did you take? RECORD ALL MENTIONED. IF TYPE OF DRUG IS NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	SP/FANSIDAR/ MALAFAN .... A CHLOROQUINE .... B PROGUANIL .... C DARAPRIM ...... D OTHER ________ X (SPECIFY) DON'T KNOW .... Z		
428	CHECK 427: DRUGS TAKEN FOR MALARIA PREVENTION.	CODE 'A' CIRCLED ☐ CODE 'A' NOT CIRCLED ☐ (SKIP TO 432)		
429	How many times did you take (SP/Fansidar/Malafan) during this pregnancy?	TIMES ..... ☐☐		
430	CHECK 407: ANTENATAL CARE FROM HEALTH PERSONNEL DURING THIS PREGNANCY	CODE 'A', B', 'C' OR 'D' CIRCLED ☐ OTHER ☐ (SKIP TO 432)		
431	Did you get the (SP/Fansidar/Malafan) during any antenatal care visit, during another visit to a health facility or from another source?	ANTENATAL VISIT .. 1 ANOTHER FACILITY VISIT .... 2 OTHER SOURCE 6		
432	When (NAME) was born, was he/she very large, larger than average, average, smaller than average, or very small?	VERY LARGE .... 1 LARGER THAN AVERAGE .... 2 AVERAGE .... 3 SMALLER THAN AVERAGE .... 4 VERY SMALL .... 5 DON'T KNOW 8	VERY LARGE ..... 1 LARGER THAN AVERAGE ..... 2 AVERAGE .... 3 SMALLER THAN AVERAGE ..... 4 VERY SMALL ..... 5 DON'T KNOW 8	VERY LARGE ..... 1 LARGER THAN AVERAGE ..... 2 AVERAGE .... 3 SMALLER THAN AVERAGE ..... 4 VERY SMALL ..... 5 DON'T KNOW 8
433	Was (NAME) weighed at birth?	YES .... 1 NO .... 2 (SKIP TO 435) DON'T KNOW 8	YES .... 1 NO .... 2 (SKIP TO 435) DON'T KNOW 8	YES .... 1 NO .... 2 (SKIP TO 435) DON'T KNOW 8
434	How much did (NAME) weigh? RECORD WEIGHT IN KILOGRAMS FROM HEALTH CARD, IF AVAILABLE.	KG FROM CARD 1 ☐.☐☐☐ KG FROM RECALL 2 ☐.☐☐☐ DON'T KNOW .. 99.998	KG FROM CARD 1 ☐.☐☐☐ KG FROM RECALL 2 ☐.☐☐☐ DON'T KNOW . 99.998	KG FROM CARD 1 ☐.☐☐☐ KG FROM RECALL 2 ☐.☐☐☐ DON'T KNOW . 99.998

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
435	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE . B AUXILIARY MIDWIFE . . . . . C COMMUNITY HEALTH OFFICER/NURSE D OTHER PERSON TRAINED TRADITIONAL BIRTH ATTENDANT . . . E UNTRAINED TRADITIONAL BIRTH ATTENDANT . . . F COMMUNITY/VILLAGE HEALTH VOLUNTEER . . . . G TRADITIONAL PRACTICIONER... H OTHER X _____ (SPECIFY) NO ONE . . . . . Y	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE B AUXILIARY MIDWIFE . . . . . C COMMUNITY HEALTH OFFICER/NURSE D OTHER PERSON TRAINED TRADITIONAL BIRTH ATTENDANT . E UNTRAINED TRADITIONAL BIRTH ATTENDANT . F COMMUNITY/VILLAGE HEALTH VOLUNTEER . . G TRADITIONAL PRACTICIONER. G OTHER X _____ (SPECIFY) NO ONE . . . . . Y	HEALTH PERSONNEL DOCTOR . . . . . A NURSE/MIDWIFE B AUXILIARY MIDWIFE . . . . . C COMMUNITY HEALTH OFFICER/NURSE D OTHER PERSON TRAINED TRADITIONAL BIRTH ATTENDANT . E UNTRAINED TRADITIONAL BIRTH ATTENDANT . F COMMUNITY/VILLAGE HEALTH VOLUNTEER . . G TRADITIONAL PRACTICIONER. G OTHER X _____ (SPECIFY) NO ONE . . . . . Y
436	Where did you give birth to (NAME)? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . . 11 OTHER HOME . . . . 12 (SKIP TO 443) PUBLIC SECTOR GOVT. HOSPITAL/ POLYCLINIC . . . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. HEALTH POST/CHPS . . . 23 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 31 FP/PPAG CLINIC 32 MATERNITY HOME 33 OTHER PRIVATE MED. _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 443)	HOME YOUR HOME . . . 11 OTHER HOME . . . 12 (SKIP TO 444) PUBLIC SECTOR GOVT. HOSPITAL/ POLYCLINIC . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. HEALTH POST/CHPS . 23 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 31 FP/PPAG CLINIC 32 MATERNITY HOME 33 OTHER PRIVATE MED. _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 444)	HOME YOUR HOME . . . 11 OTHER HOME . . . 12 (SKIP TO 444) PUBLIC SECTOR GOVT. HOSPITAL/ POLYCLINIC . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. HEALTH POST/CHPS . 23 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 31 FP/PPAG CLINIC 32 MATERNITY HOME 33 OTHER PRIVATE MED. _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY) (SKIP TO 444)
437	How long after (NAME) was delivered did you stay there? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 ☐☐ DAYS 2 ☐☐ WEEKS 3 ☐☐ DON'T KNOW . 998	HOURS 1 ☐☐ DAYS 2 ☐☐ WEEKS 3 ☐☐ DON'T KNOW . . . 998	HOURS 1 ☐☐ DAYS 2 ☐☐ WEEKS 3 ☐☐ DON'T KNOW . . . 998
438	Was (NAME) delivered by caesarean section?	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
439	Before you were discharged after (NAME) was born, did any health care provider check on your health?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 442)	YES . . . . . 1 (SKIP TO 455) NO 2	YES . . . . . 1 (SKIP TO 455) NO 2
440	How long after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 ☐☐ DAYS 2 ☐☐ WEEKS 3 ☐☐ DON'T KNOW 998		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
441	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR . . . . . 11 NURSE/MIDWIFE 12 AUXILIARY MIDWIFE . . . . . 13 COMMUNITY HEALTH OFFICER/NURSE 14 OTHER PERSON TRAINED TRADITIONAL BIRTH ATTENDANT . . . 21 UNTRAINED TRADITIONAL BIRTH ATTENDANT . . . 22 COMMUNITY/ VILLAGE HEALTH VOLUNTEER . . . . 23 TRADITIONAL PRACTICIONER... 24 RELATIVE/FRIEND 25 OTHER _____ 96 (SPECIFY) (SKIP TO 453)		
442	After you were discharged, did any health care provider or a traditional birth attendant check on your health?	YES . . . . . 1 (SKIP TO 445) NO . . . . . 2 (SKIP TO 453)	YES . . . . . 1 (SKIP TO 455) NO 2	YES . . . . . 1 (SKIP TO 455) NO 2
443	Why didn't you deliver in a health facility? PROBE: Any other reason? RECORD ALL MENTIONED.	COSTS TOO MUCH . . . A FACILITY NOT OPEN . . B TOO FAR/ NO TRANSPORTATION . C DON'T TRUST FACILITY/POOR QUALITY SERVICE . D NO FEMALE PROVIDER AT FACILITY . . . E NOT THE FIRST CHILD. . F NOT NECESSARY . . . G FATHER DIDN'T THINK IT WAS NECESSARY . H FAMILY DIDN'T THINK IT WAS NECESSARY . I HUSBAND/FAMILY DID NOT ALLOW . . . . J NOT CUSTOMARY . . . . K DID NOT KNOW WHERE TO GO . . . . . L NO ONE TO ACCOMPANY M INCONVENIENT SERVICE HOUR . . . . . N AFRAID TO GO . . . . . O LONG WAITING TIME . P OTHER _____ X (SPECIFY)		
444	After (NAME) was born, did any health care provider or a traditional birth attendant check on your health?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 449)	YES . . . . . 1 NO 2	YES . . . . . 1 NO 2
445	How long after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 DAYS 2 WEEKS 3 DON'T KNOW 998		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
446	Who checked on your health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR . . . . . 11 NURSE/MIDWIFE 12 AUXILIARY MIDWIFE . . . . . 13 COMMUNITY HEALTH OFFICER/NURSE 14 OTHER PERSON TRAINED TRADITIONAL BIRTH ATTENDANT . . . . 21 UNTRAINED TRADITIONAL BIRTH ATTENDANT . . . . 22 COMMUNITY/ VILLAGE HEALTH VOLUNTEER . . . . 23 TRADITIONAL PRACTICIONER... 24 RELATIVE/FRIEND 25 OTHER_____ 96 (SPECIFY)		
447	Where did this first check take place? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . . 11 OTHER HOME . . . . 12 PUBLIC SECTOR GOVT. HOSPITAL/ POLYCLINIC .... . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. HEALTH POST/CHPS .... . 23 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 31 MOBILE CLINIC . . 32 FP/PPAG CLNIC . . 33 MATERNITY HOME 34 OTHER PRIVATE MED._____ 36 (SPECIFY) OTHER_____ 96 (SPECIFY)		
448	CHECK 442:	YES ☐ NOT ASKED ☐ (SKIP TO 453)		
449	In the two months after (NAME) was born, did any health care provider or a traditional birth attendant check on his/her health?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 453) DON'T KNOW 8		
450	How many hours, days or weeks after the birth of (NAME) did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HRS AFTER BIRTH . . 1 DAYS AFTER BIRTH . . 2 WKS AFTER BIRTH . . 3 DON'T KNOW 998		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
451	Who checked on (NAME)'s health at that time? PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR . . . . . 11 NURSE/MIDWIFE 12 AUXILIARY MIDWIFE . . . . . 13 COMMUNITY HEALTH OFFICER/NURSE 14 OTHER PERSON TRAINED TRADITIONAL BIRTH ATTENDANT . . . . 21 UNTRAINED TRADITIONAL BIRTH ATTENDANT . . . . 22 COMMUNITY/ VILLAGE HEALTH WORKER . . . . . 23 TRADITIONAL PRACTICIONER... 24 RELATIVE/FRIEND 25 OTHER_____ 96 (SPECIFY)		
452	Where did this first check of (NAME) take place? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	HOME YOUR HOME . . . . 11 OTHER HOME . . . . 12 PUBLIC SECTOR GOVT. HOSPITAL/ POLYCLINIC .... . 21 GOVT. HEALTH CENTER . . . . . 22 GOVT. HEALTH POST/CHPS . . . . 23 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC . . . . . 31 MOBILE CLINIC . . . . 32 FP/PPAG CLNIC . . 33 MATERNITY HOME 34 OTHER PRIVATE MED._____ 36 (SPECIFY) OTHER_____ 96 (SPECIFY)		
453	In the first two months after delivery, did you receive a vitamin A dose (like this/any of these)? SHOW COMMON TYPES OF AMPULES/CAPSULES/SYRUPS.	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
454	Has your menstrual period returned since the birth of (NAME)?	YES . . . . . 1 (SKIP TO 456) ← NO . . . . . 2 (SKIP TO 457) ←		
455	Did your period return between the birth of (NAME) and your next pregnancy?		YES . . . . . 1 NO . . . . . 2 (SKIP TO 459) ←	YES . . . . . 1 NO . . . . . 2 (SKIP TO 459) ←
456	For how many months after the birth of (NAME) did you not have a period?	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98
457	CHECK 226: IS RESPONDENT PREGNANT?	NOT PREGNANT ☐ → (SKIP TO 459) PREGNANT OR UNSURE ☐ → (SKIP TO 459)		
458	Have you begun to have sexual intercourse again since the birth of (NAME)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 460) ←		
459	For how many months after the birth of (NAME) did you not have sexual intercourse?	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98	MONTHS . . . ☐☐ DON'T KNOW 98
460	Did you ever breastfeed (NAME)?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 467) ←	YES . . . . . 1 NO . . . . . 2 (SKIP TO 467) ←	YES . . . . . 1 NO . . . . . 2 (SKIP TO 467) ←
461	How long after birth did you first put (NAME) to the breast? IF LESS THAN 1 HOUR, RECORD '00' HOURS. IF LESS THAN 24 HOURS, RECORD HOURS. OTHERWISE, RECORD DAYS.	IMMEDIATELY . . . . . 000 HOURS 1 ☐☐ DAYS 2 ☐☐		
462	In the first three days after delivery, was (NAME) given anything to drink other than breast milk?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 464) ←		
463	What was (NAME) given to drink? Anything else? RECORD ALL LIQUIDS MENTIONED.	MILK (OTHER THAN BREAST MILK) . . . A PLAIN WATER . . . . B SUGAR OR GLUCOSE WATER . . . . C GRIPE WATER . . . . D SUGAR-SALT-WATER SOLUTION . . . . . E FRUIT JUICE . . . . . F INFANT FORMULA . G TEA/INFUSIONS . . . . H HONEY . . . . . I OTHER _____ X (SPECIFY)		

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
464	CHECK 404: IS CHILD LIVING?	LIVING DEAD (SKIP TO 466)		
465	Are you still breastfeeding (NAME)?	YES . . . . . 1 (SKIP TO 468) NO 2		
466	For how many months did you breastfeed (NAME)?	MONTHS . . . DON'T KNOW 98	MONTHS . . . STILL BF . . . . . 95 DON'T KNOW . . . 98	MONTHS . . . STILL BF . . . . . 95 DON'T KNOW . . . 98
467	CHECK 404: IS CHILD LIVING?	LIVING DEAD (GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501) (SKIP TO 470)	LIVING DEAD (GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501) (SKIP TO 470)	LIVING DEAD (GO BACK TO 405 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 501) (SKIP TO 470)
468	How many times did you breastfeed last night between sunset and sunrise? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF NIGHTTIME FEEDINGS .		
469	How many times did you breastfeed yesterday during the daylight hours? IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.	NUMBER OF DAYLIGHT FEEDINGS .		
470	Did (NAME) drink anything from a bottle with a nipple yesterday or last night?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
471		GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501.	GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501.	GO BACK TO 405 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 501.

SECTION 5. CHILD IMMUNIZATION AND HEALTH AND CHILD'S AND WOMAN'S NUTRITION

501	ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2003OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES).			
502	LINE NUMBER FROM 212	LAST BIRTH LINE NUMBER	NEXT-TO-LAST BIRTH LINE NUMBER	SECOND-FROM-LAST BIRTH LINE NUMBER . . . . .
503	FROM 212 AND 216	NAME_____ LIVING / DEAD (GO TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 573)	NAME_____ LIVING / DEAD (GO TO 503 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 573)	NAME_____ LIVING / DEAD (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE, OR IF NO MORE BIRTHS, GO TO 573)
504	Do you have a card where (NAME'S) vaccinations are written down? IF YES: May I see it please?	YES, SEEN . . . . . 1 (SKIP TO 506) YES, NOT SEEN . . . . . 2 (SKIP TO 508) NO CARD 3	YES, SEEN . . . . . 1 (SKIP TO 506) YES, NOT SEEN . . . . . 2 (SKIP TO 508) NO CARD 3	YES, SEEN . . . . . 1 (SKIP TO 506) YES, NOT SEEN . . . . . 2 (SKIP TO 508) NO CARD 3
505	Did you ever have a vaccination card for (NAME)?	YES . . . . . 1 (SKIP TO 508) NO 2	YES . . . . . 1 (SKIP TO 508) NO 2	YES . . . . . 1 (SKIP TO 508) NO 2

506 (1) COPY VACCINATION DATE FOR EACH VACCINE FROM THE CARD.
(2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A VACCINATION WAS GIVEN, BUT NO DATE IS RECORDED.
(3) IF MORE THAN TWO VITAMIN 'A' DOSES, RECORD DATES FOR MOST RECENT AND SECOND MOST RECENT DOSES.

	LAST BIRTH DAY	LAST BIRTH MONTH	LAST BIRTH YEAR	NEXT-TO-LAST BIRTH DAY	NEXT-TO-LAST BIRTH MONTH	NEXT-TO-LAST BIRTH YEAR	SECOND-FROM-LAST BIRTH DAY	SECOND-FROM-LAST BIRTH MONTH	SECOND-FROM-LAST BIRTH YEAR
BCG				BCG			BCG		
POLIO 0 (POLIO GIVEN AT BIRTH)				P0			P0		
POLIO 1				P1			P1		
POLIO 2				P2			P2		
POLIO 3				P3			P3		
DPT/HEP.B/INFL 1				DPTH1			DPTH1		
DPT/HEP.B/INFL 2				DPTH2			DPTH2		
DPT/HEP.B/INFL 3				DPTH3			DPTH3		
MEASLES				MEA/			MEA/		
YELLOW FEVER				YF			YF		
VITAMIN A (MOST RECENT)				VIT A1			VIT A1		
VITAMIN A (2nd MOST RECENT)				VIT A2			VIT A2		

506A	CHECK 506:	BCG TO YELLOW FEVER ALL RECORDED / OTHER (GO TO 510)	BCG TO YELLOW FEVER ALL RECORDED / OTHER (GO TO 510)	BCG TO YELLOW FEVER ALL RECORDED / OTHER (GO TO 510)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME ________	NEXT-TO-LAST BIRTH NAME ________	SECOND-FROM-LAST BIRTH NAME ________
507	Has (NAME) received any vaccinations that are not recorded on this card, including vaccinations received in a national immunization day campaign? RECORD 'YES' ONLY IF RESPONDENT MENTIONS BCG, POLIO 0-3, DPT/Hep/Infl.B, YELLOW FEVER AND/OR MEASLES VACCINES.	YES . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 506) (SKIP TO 510) NO . . . . 2 (SKIP TO 510) DON'T KNOW 8	YES . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 506) (SKIP TO 510) NO . . . . 2 (SKIP TO 510) DON'T KNOW 8	YES . . . . 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 506) (SKIP TO 510) NO . . . . 2 (SKIP TO 510) DON'T KNOW 8
508	Did (NAME) ever receive any vaccinations to prevent him/her from getting diseases, including vaccinations received in a national immunization campaign?	YES . . . . 1 NO . . . . 2 (SKIP TO 512) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 512) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 512) DON'T KNOW 8
509	Please tell me if (NAME) received any of the following vaccinations:			
509A	A BCG vaccination against tuberculosis, that is, an injection in the arm that usually causes a scar?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8
509B	Polio vaccine, that is, drops in the mouth?	YES . . . . 1 NO . . . . 2 (SKIP TO 509E) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 509E) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 509E) DON'T KNOW 8
509C	Was the first polio vaccine received in the first two weeks after birth or later?	FIRST 2 WEEKS . . . 1 LATER 2	FIRST 2 WEEKS . . . 1 LATER 2	FIRST 2 WEEKS . . . 1 LATER 2
509D	How many times was the polio vaccine received?	NUMBER OF TIMES . . . . . ☐	NUMBER OF TIMES . . . . . ☐	NUMBER OF TIMES . . . . . ☐
509E	A DPT/Hep B/Influenza vaccination, that is, an injection given in the thigh, to prevent him/her from getting tetanus, whooping cough, diphtheria, sometimes given at the same time as polio?	YES . . . . 1 NO . . . . 2 (SKIP TO 509G) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 509G) DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 509G) DON'T KNOW 8
509F	How many times was a DPT/ HepB/Influenza vaccination received?	NUMBER OF TIMES . . . . . ☐	NUMBER OF TIMES . . . . . ☐	NUMBER OF TIMES . . . . . ☐
509G	A measles injection - that is, a shot in the arm at the age of 9 months or older - to prevent him/her from getting measles?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8
509H	An injection to prevent yellow fever- a shot in the arm at the age of 9 months or older (sometimes given at the same time as measles)?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8
510	Were any of the vaccinations (NAME) received during the last two years given as part of a national immunization day campaign?	YES . . . . 1 NO . . . . 2 NO VACCINATION IN THE LAST 2 YRS. 3 DON'T KNOW . . . . . 8 (SKIP TO 512)	YES . . . . 1 NO . . . . 2 NO VACCINATION IN THE LAST 2 YRS. 3 DON'T KNOW . . . . . 8 (SKIP TO 512)	YES . . . . 1 NO . . . . 2 NO VACCINATION IN THE LAST 2 YRS. 3 DON'T KNOW . . . . . 8 (SKIP TO 512)

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NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
511	At which national immunization day campaigns did (NAME) receive vaccinations? RECORD ALL CAMPAIGNS MENTIONED.	INTEGRATED MEASLES/ POLIO (NOVEMBER 2006) . . . . . A IMCI/CHILD HEALTH CAMPAIGN (NOV. 2007) . . . . . B	INTEGRATED MEASLES/ POLIO (NOVEMBER 2006) . . . . . A IMCI/CHILD HEALTH CAMPAIGN (NOV. 2007) . . . . . B	INTEGRATED MEASLES/ POLIO (NOVEMBER 2006) . . . . . A IMCI/CHILD HEALTH CAMPAIGN (NOV. 2007) . . . . . B
512	CHECK 506: DATE SHOWN FOR VITAMIN A DOSE	DATE FOR MOST RECENT VITAMIN A DOSE OTHER (SKIP TO 514)	DATE FOR MOST RECENT VITAMIN A DOSE OTHER (SKIP TO 514)	DATE FOR MOST RECENT VITAMIN A DOSE OTHER (SKIP TO 514)
513	According to (NAME)'s health card, he/she received a vitamin A dose (like this/any of these) in (MONTH AND YEAR OF MOST RECENT DOSE FROM CARD). Has (NAME) received another vitamin A dose since then? SHOW COMMON TYPES OF AMPULES/CAPSULES.	YES . . . . . 1 (SKIP TO 515) NO . . . . . 2 (SKIP TO 516) DON'T KNOW 8	YES . . . . . 1 (SKIP TO 515) NO . . . . . 2 (SKIP TO 516) DON'T KNOW 8	YES . . . . . 1 (SKIP TO 515) NO . . . . . 2 (SKIP TO 516) DON'T KNOW 8
514	HAS (NAME) ever received a vitamin A dose (like this/ any of these)? SHOW COMMON TYPES OF AMPULES/CAPSULES.	YES . . . . . 1 NO . . . . . 2 (SKIP TO 516) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 516) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 516) DON'T KNOW 8
515	Did (NAME) receive a vitamin A dose within the last six months?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
516	In the last seven days, did (NAME) take iron pills, sprinkles with iron, or iron syrup (like this/any of these)? SHOW COMMON TYPES OF PILLS/SPRINKLES/SYRUPS.	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
517	Has (NAME) taken any drug for intestinal worms in the last six months?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8
518	Has (NAME) had diarrhea in the last 2 weeks?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 533) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 533) DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 (SKIP TO 533) DON'T KNOW 8
519	Was there any blood in the stools?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME ______	NEXT-TO-LAST BIRTH NAME ______	SECOND-FROM-LAST BIRTH NAME ______
520	Now I would like to know how much (NAME) was given to drink during the diarrhea (including breastmilk). Was he/she given less than usual to drink, about the same amount, or more than usual to drink? IF LESS, PROBE: Was he/she given much less than usual to drink or somewhat less?	MUCH LESS ..... 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE .... 4 NOTHING TO DRINK 5 DON'T KNOW 8	MUCH LESS ..... 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE .... 4 NOTHING TO DRINK 5 DON'T KNOW 8	MUCH LESS ..... 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE .... 4 NOTHING TO DRINK 5 DON'T KNOW 8
521	When (NAME) had diarrhea, was he/she given less than usual to eat, about the same amount, more than usual, or nothing to eat? IF LESS, PROBE: Was he/she given much less than usual to eat or somewhat less?	MUCH LESS ..... 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE .... 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8	MUCH LESS ..... 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE .... 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8	MUCH LESS ..... 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE .... 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8
522	Did you seek advice or treatment for the diarrhea from any source?	YES .... 1 NO .... 2 (SKIP TO 527)	YES .... 1 NO .... 2 (SKIP TO 527)	YES .... 1 NO .... 2 (SKIP TO 527)
523	Where did you seek advice or treatment? Anywhere else? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. ______ (NAME OF PLACE(S))	PUBLIC SECTOR GOVT HOSPITAL/ POLYCLINIC . A GOVT HEALTH CENTER ..... B GOVT HEALTH POST/CHPS . C MOBILE CLINIC . D FIELDWORKER . E OTHER PUBLIC ______ F (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC .... G PHARMACY ... H PVT DOCTOR ... I MOBILE CLINIC . J FIELDWORKER . K FPG/PPAG CLINIC L MATERNITY HOME M OTHER PRIVATE MED. ______ N (SPECIFY) OTHER SOURCE SHOP/MARKET .. O TRADITIONAL PRACTITIONER P DRUG PEDDLER Q OTHER ______ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL/ POLYCLINIC . A GOVT HEALTH CENTER ..... B GOVT HEALTH POST/CHPS . C MOBILE CLINIC . D FIELDWORKER . E OTHER PUBLIC ______ F (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC .... G PHARMACY ... H PVT DOCTOR ... I MOBILE CLINIC . J FIELDWORKER . K FPG/PPAG CLINIC L MATERNITY HOME M OTHER PRIVATE MED. ______ N (SPECIFY) OTHER SOURCE SHOP/MARKET .. O TRADITIONAL PRACTITIONER P DRUG PEDDLER Q OTHER ______ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL/ POLYCLINIC . A GOVT HEALTH CENTER ..... B GOVT HEALTH POST/CHPS . C MOBILE CLINIC . D FIELDWORKER . E OTHER PUBLIC ______ F (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC .... G PHARMACY ... H PVT DOCTOR ... I MOBILE CLINIC . J FIELDWORKER . K FPG/PPAG CLINIC L MATERNITY HOME M OTHER PRIVATE MED. ______ N (SPECIFY) OTHER SOURCE SHOP/MARKET .. O TRADITIONAL PRACTITIONER P DRUG PEDDLER Q OTHER ______ X (SPECIFY)
524	CHECK 523:	TWO OR MORE CODES CIRCLED ☐ / ONLY ONE CODE CIRCLED ☐ (SKIP TO 526)	TWO OR MORE CODES CIRCLED ☐ / ONLY ONE CODE CIRCLED ☐ (SKIP TO 526)	TWO OR MORE CODES CIRCLED ☐ / ONLY ONE CODE CIRCLED ☐ (SKIP TO 526)

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NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME ________	NEXT-TO-LAST BIRTH NAME ________	SECOND-FROM-LAST BIRTH NAME ________
525	Where did you first seek advice or treatment? USE LETTER CODE FROM 523.	FIRST PLACE . . . [ ]	FIRST PLACE . . . [ ]	FIRST PLACE . . . [ ]
526	How many days after the diarrhea began did you first seek advice or treatment for (NAME)? IF THE SAME DAY, RECORD '00'.	DAYS . . . . . [ ][ ]	DAYS . . . . . [ ][ ]	DAYS . . . . . [ ][ ]
527	Does (NAME) still have diarrhea?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8
528	Was he/she given any of the following to drink at any time since he/she started having the diarrhea:	YES NO DK	YES NO DK	YES NO DK
	a) A fluid made from a special ORS sachet?	FLUID FROM ORS SACH 1 2 8	FLUID FROM ORS SACH 1 2 8	FLUID FROM ORS SACH 1 2 8
	b) A government-recommended homemade fluid?	HOMEMADE FLUID . . . 1 2 8	HOMEMADE FLUID . . . 1 2 8	HOMEMADE FLUID . . . 1 2 8
529	Was anything (else) given to treat the diarrhea?	YES . . . . 1 NO . . . . 2 (SKIP TO 533)← DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 533)← DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 533)← DON'T KNOW 8
530	What (else) was given to treat the diarrhea? Anything else? RECORD ALL TREATMENTS GIVEN.	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY . B ZINC . . . . C OTHER (NOT ANTI-BIOTIC, ANTI-MOTILITY, OR ZINC) . . . . D UNKNOWN PILL OR SYRUP . . . E INJECTION ANTIBIOTIC . . . . . F NON-ANTIBIOTIC . G UNKNOWN INJECTION . . . H (IV) INTRAVENOUS . I HOME REMEDY/ HERBAL MED-ICINE . . . . J OTHER ________ X (SPECIFY)	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY . B ZINC . . . . C OTHER (NOT ANTI-BIOTIC, ANTI-MOTILITY, OR ZINC) . . . . D UNKNOWN PILL OR SYRUP . . . E INJECTION ANTIBIOTIC . . . . . F NON-ANTIBIOTIC . G UNKNOWN INJECTION . . . H (IV) INTRAVENOUS . I HOME REMEDY/ HERBAL MED-ICINE . . . . J OTHER ________ X (SPECIFY)	PILL OR SYRUP ANTIBIOTIC . . . . . A ANTIMOTILITY . B ZINC . . . . C OTHER (NOT ANTI-BIOTIC, ANTI-MOTILITY, OR ZINC) . . . . D UNKNOWN PILL OR SYRUP . . . E INJECTION ANTIBIOTIC . . . . . F NON-ANTIBIOTIC . G UNKNOWN INJECTION . . . H (IV) INTRAVENOUS . I HOME REMEDY/ HERBAL MED-ICINE . . . . J OTHER ________ X (SPECIFY)
533	Has (NAME) been ill with a fever at any time in the last 2 weeks?	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8	YES . . . . 1 NO . . . . 2 DON'T KNOW 8
534	Has (NAME) had an illness with a cough at any time in the last 2 weeks?	YES . . . . 1 NO . . . . 2 (SKIP TO 537)← DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 537)← DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 537)← DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME ________	NEXT-TO-LAST BIRTH NAME ________	SECOND-FROM-LAST BIRTH NAME ________
535	When (NAME) had an illness with a cough, did he/she breathe faster than usual with short, rapid breaths or have difficulty breathing?	YES . . . . 1 NO . . . . 2 (SKIP TO 538)← DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 538)← DON'T KNOW 8	YES . . . . 1 NO . . . . 2 (SKIP TO 538)← DON'T KNOW 8
536	Was the fast or difficult breathing due to a problem in the chest or to a blocked or runny nose?	CHEST ONLY . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . 3 OTHER ________ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 538)←	CHEST ONLY . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . 3 OTHER ________ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 538)←	CHEST ONLY . . . 1 NOSE ONLY . . . . . 2 BOTH . . . . 3 OTHER ________ 6 (SPECIFY) DON'T KNOW . . . . . 8 (SKIP TO 538)←
537	CHECK 533: HAD FEVER?	YES ☐ ↓ NO OR DK ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	YES ☐ ↓ NO OR DK ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	YES ☐ ↓ NO OR DK ☐ (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 573)
538	Now I would like to know how much (NAME) was given to drink (including breastmilk) during the illness with a (fever/cough). Was he/she given less than usual to drink, about the same amount, or more than usual to drink? IF LESS, PROBE: Was he/she given much less than usual to drink or somewhat less?	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . 4 NOTHING TO DRINK 5 DON'T KNOW 8
539	When (NAME) had a (fever/cough), was he/she given less than usual to eat, about the same amount, more than usual, or nothing to eat? IF LESS, PROBE: Was he/she given much less than usual to eat or somewhat less?	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8	MUCH LESS . . . . . 1 SOMEWHAT LESS . 2 ABOUT THE SAME . 3 MORE . . . . 4 STOPPED FOOD . 5 NEVER GAVE FOOD 6 DON'T KNOW 8
540	Did you seek advice or treatment for the illness from any source?	YES . . . . 1 NO . . . . 2 (SKIP TO 545)←	YES . . . . 1 NO . . . . 2 (SKIP TO 545)←	YES . . . . 1 NO . . . . 2 (SKIP TO 545)←

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NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME ______	NEXT-TO-LAST BIRTH NAME ______	SECOND-FROM-LAST BIRTH NAME ______
541	Where did you seek advice or treatment? Anywhere else? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF A HOSPITAL, HEALTH CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE THE NAME OF THE PLACE. ______ (NAME OF PLACE(S))	PUBLIC SECTOR GOVT HOSPITAL/ POLYCLINIC . A GOVT HEALTH CENTER ..... B GOVT HEALTH POST/CHPS . C MOBILE CLINIC . D FIELDWORKER . E OTHER PUBLIC ______ F (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC .... G PVT DOCTOR ... H PHARMACY ... I MOBILE CLINIC . J FIELDWORKER . K FPG/PPAG CLINIC L MATERNITY HOME M OTHER PRIVATE MED. ______ N (SPECIFY) OTHER SOURCE SHOP/MARKET .. O TRADITIONAL PRACTITIONER P DRUG PEDDLER Q OTHER ______ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL/ POLYCLINIC . A GOVT HEALTH CENTER ..... B GOVT HEALTH POST/CHPS . C MOBILE CLINIC . D FIELDWORKER . E OTHER PUBLIC ______ F (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC .... G PVT DOCTOR ... H PHARMACY ... I MOBILE CLINIC . J FIELDWORKER . K FPG/PPAG CLINIC L MATERNITY HOME M OTHER PRIVATE MED. ______ N (SPECIFY) OTHER SOURCE SHOP/MARKET .. O TRADITIONAL PRACTITIONER P DRUG PEDDLER Q OTHER ______ X (SPECIFY)	PUBLIC SECTOR GOVT HOSPITAL/ POLYCLINIC . A GOVT HEALTH CENTER ..... B GOVT HEALTH POST/CHPS . C MOBILE CLINIC . D FIELDWORKER . E OTHER PUBLIC ______ F (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/ CLINIC .... G PVT DOCTOR ... H PHARMACY ... I MOBILE CLINIC . J FIELDWORKER . K FPG/PPAG CLINIC L MATERNITY HOME M OTHER PRIVATE MED. ______ N (SPECIFY) OTHER SOURCE SHOP/MARKET .. O TRADITIONAL PRACTITIONER P DRUG PEDDLER Q OTHER ______ X (SPECIFY)
542	CHECK 541:	TWO OR MORE CODES CIRCLED ☐ ONLY ONE CODE CIRCLED ☐ (SKIP TO 544)	TWO OR MORE CODES CIRCLED ☐ ONLY ONE CODE CIRCLED ☐ (SKIP TO 544)	TWO OR MORE CODES CIRCLED ☐ ONLY ONE CODE CIRCLED ☐ (SKIP TO 544)
543	Where did you first seek advice or treatment? USE LETTER CODE FROM 541.	FIRST PLACE ... ☐	FIRST PLACE ... ☐	FIRST PLACE ... ☐
544	How many days after the illness began did you first seek advice or treatment for (NAME)? IF THE SAME DAY, RECORD '00'.	DAYS ..... ☐☐	DAYS ..... ☐☐	DAYS ..... ☐☐
545	Is (NAME) still sick with a (fever/ cough)?	FEVER ONLY ..... 1 COUGH ONLY ... 2 BOTH FEVER AND COUGH .... 3 NO, NEITHER ..... 4 DON'T KNOW ... 8	FEVER ONLY ..... 1 COUGH ONLY ... 2 BOTH FEVER AND COUGH .... 3 NO, NEITHER ..... 4 DON'T KNOW ... 8	FEVER ONLY ..... 1 COUGH ONLY ... 2 BOTH FEVER AND COUGH .... 3 NO, NEITHER ..... 4 DON'T KNOW ... 8
546	At any time during the illness, did (NAME) take any drugs for the illness?	YES .... 1 NO .... 2 (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573) DON'T KNOW 8	YES .... 1 NO .... 2 (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573) DON'T KNOW 8	YES .... 1 NO .... 2 (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 573) DON'T KNOW 8

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME ________	NEXT-TO-LAST BIRTH NAME ________	SECOND-FROM-LAST BIRTH NAME ________
547	What drugs did (NAME) take? Any other drugs? RECORD ALL MENTIONED.	ANTIMALARIAL DRUGS SP/FANSIDAR/ MALAFAN . . . A CHLOROQUINE . B CAMOQUINE . . . C QUININE . . . . D ARTESUNATE WITH AMODIAQUINE E ARTEMISININ . . . F ARTEMETHER/ LUMEFANTRINE G OTHER ANTI- MALARIAL ________ . . . H (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . I INJECTION . . . J OTHER DRUGS ASPIRIN . . . . K PARACETAMOL/ PANADOL . . . L IBUPROFEN . . . M HERBAL MEDICINE . N OTHER ________ X (SPECIFY) DON'T KNOW . . . . . Z	ANTIMALARIAL DRUGS SP/FANSIDAR/ MALAFAN . . . A CHLOROQUINE . B CAMOQUINE . . . C QUININE . . . . D ARTESUNATE WITH AMODIAQUINE E ARTEMISININ . . . F ARTEMETHER/ LUMEFANTRINE G OTHER ANTI- MALARIAL ________ . . . H (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . I INJECTION . . . J OTHER DRUGS ASPIRIN . . . . K PARACETAMOL/ PANADOL . . . L IBUPROFEN . . . M HERBAL MEDICINE . N OTHER ________ X (SPECIFY) DON'T KNOW . . . . . Z	ANTIMALARIAL DRUGS SP/FANSIDAR/ MALAFAN . . . A CHLOROQUINE . B CAMOQUINE . . . C QUININE . . . . D ARTESUNATE WITH AMODIAQUINE E ARTEMISININ . . . F ARTEMETHER/ LUMEFANTRINE G OTHER ANTI- MALARIAL ________ . . . H (SPECIFY) ANTIBIOTIC DRUGS PILL/SYRUP . . . I INJECTION . . . J OTHER DRUGS ASPIRIN . . . . K PARACETAMOL/ PANADOL . . . L IBUPROFEN . . . M HERBAL MEDICINE . N OTHER ________ X (SPECIFY) DON'T KNOW . . . . . Z
548	CHECK 547: ANY CODE A-I CIRCLED?	YES ☐ NO ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	YES ☐ NO ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	YES ☐ NO ☐ (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 573)
549	Did you already have (NAME OF DRUG FROM 547) at home when the child became ill? ASK SEPARATELY FOR EACH OF THE DRUGS 'A' THROUGH 'H' THAT THE CHILD IS RECORDED AS HAVING TAKEN IN 547. IF YES FOR ANY DRUG, CIRCLE CODE FOR THAT DRUG. IF NO FOR ALL DRUGS, CIRCLE 'Y'.	ANTIMALARIAL DRUGS SP/FANSIDAR/ MALAFAN . . . A CHLOROQUINE . B CAMOQUINE . . . C QUININE . . . . D ARTESUNATE WITH AMODIAQUINE E ARTEMISININ . . . F ARTEMETHER/ LUMEFANTRINE G OTHER ANTI- MALARIAL ________ . . . H (SPECIFY) ANTIBIOTIC PILL/ SYRUP . . . . I NO DRUG AT HOME . Y	ANTIMALARIAL DRUGS SP/FANSIDAR/ MALAFAN . . . A CHLOROQUINE . B CAMOQUINE . . . C QUININE . . . . D ARTESUNATE WITH AMODIAQUINE E ARTEMISININ . . . F ARTEMETHER/ LUMEFANTRINE G OTHER ANTI- MALARIAL ________ . . . H (SPECIFY) ANTIBIOTIC PILL/ SYRUP . . . . I NO DRUG AT HOME . Y	ANTIMALARIAL DRUGS SP/FANSIDAR/ MALAFAN . . . A CHLOROQUINE . B CAMOQUINE . . . C QUININE . . . . D ARTESUNATE WITH AMODIAQUINE E ARTEMISININ . . . F ARTEMETHER/ LUMEFANTRINE G OTHER ANTI- MALARIAL ________ . . . H (SPECIFY) ANTIBIOTIC PILL/ SYRUP . . . . I NO DRUG AT HOME . Y

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME ________	NEXT-TO-LAST BIRTH NAME ________	SECOND-FROM-LAST BIRTH NAME ________
550	CHECK 547: ANY CODE A-H CIRCLED?	YES ☐ ↓ NO ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	YES ☐ ↓ NO ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	YES ☐ ↓ NO ☐ (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 573)
551	CHECK 547: SP/FANSIDAR/MALAFAN ('A') GIVEN	CODE 'A' CIRCLED ☐ ↓ CODE 'A' NOT CIRCLED ☐ (SKIP TO 554)	CODE 'A' CIRCLED ☐ ↓ CODE 'A' NOT CIRCLED ☐ (SKIP TO 554)	CODE 'A' CIRCLED ☐ ↓ CODE 'A' NOT CIRCLED ☐ (SKIP TO 554)
552	How long after the fever started did (NAME) first take SP/Fansidar/Malafan?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8
553	For how many days did (NAME) take the SP/Fansidar/Malafan? IF 7 DAYS OR MORE, RECORD '7'	DAYS . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . ☐ DON'T KNOW . . . 8
554	CHECK 547: CHLOROQUINE ('B') GIVEN	CODE 'B' CIRCLED ☐ ↓ CODE 'B' NOT CIRCLED ☐ (SKIP TO 557)	CODE 'B' CIRCLED ☐ ↓ CODE 'B' NOT CIRCLED ☐ (SKIP TO 557)	CODE 'B' CIRCLED ☐ ↓ CODE 'B' NOT CIRCLED ☐ (SKIP TO 557)
555	How long after the fever started did (NAME) first take chloroquine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8
556	For how many days did (NAME) take the chloroquine? IF 7 DAYS OR MORE, RECORD '7'	DAYS . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . ☐ DON'T KNOW . . . 8
557	CHECK 547: CAMOQUINE ('C') GIVEN	CODE 'C' CIRCLED ☐ ↓ CODE 'C' NOT CIRCLED ☐ (SKIP TO 560)	CODE 'C' CIRCLED ☐ ↓ CODE 'C' NOT CIRCLED ☐ (SKIP TO 560)	CODE 'C' CIRCLED ☐ ↓ CODE 'C' NOT CIRCLED ☐ (SKIP TO 560)

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME ________	NEXT-TO-LAST BIRTH NAME ________	SECOND-FROM-LAST BIRTH NAME ________
558	How long after the fever started did (NAME) first take Camoquine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8
559	For how many days did (NAME) take the Camoquine? IF 7 DAYS OR MORE, RECORD '7'	DAYS . . . . [ ] DON'T KNOW . . . 8	DAYS . . . . [ ] DON'T KNOW . . . 8	DAYS . . . . [ ] DON'T KNOW . . . 8
560	CHECK 547: QUININE ('D') GIVEN	CODE 'D' CIRCLED [ ] ↓ CODE 'D' NOT CIRCLED [ ] (SKIP TO 563)	CODE 'D' CIRCLED [ ] ↓ CODE 'D' NOT CIRCLED [ ] (SKIP TO 563)	CODE 'D' CIRCLED [ ] ↓ CODE 'D' NOT CIRCLED [ ] (SKIP TO 563)
561	How long after the fever started did (NAME) first take quinine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8
562	For how many days did (NAME) take the quinine? IF 7 DAYS OR MORE, RECORD '7'	DAYS . . . . [ ] DON'T KNOW . . . 8	DAYS . . . . [ ] DON'T KNOW . . . 8	DAYS . . . . [ ] DON'T KNOW . . . 8
563	CHECK 547: ARTESUNATE WITH AMODIAQUINE ('E') GIVEN	CODE 'E' CIRCLED [ ] ↓ CODE 'E' NOT CIRCLED [ ] (SKIP TO 566)	CODE 'E' CIRCLED [ ] ↓ CODE 'E' NOT CIRCLED [ ] (SKIP TO 566)	CODE 'E' CIRCLED [ ] ↓ CODE 'E' NOT CIRCLED [ ] (SKIP TO 566)
564	How long after the fever started did (NAME) first take Artesunate with Amodiaquine combination?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8
565	For how many days did (NAME) take the Artesunate with Amodiaquine combination? IF 7 DAYS OR MORE, RECORD '7'	DAYS . . . . [ ] DON'T KNOW . . . 8	DAYS . . . . [ ] DON'T KNOW . . . 8	DAYS . . . . [ ] DON'T KNOW . . . 8

W-34

NO.	QUESTIONS AND FILTERS	LAST BIRTH NAME ______	NEXT-TO-LAST BIRTH NAME ______	SECOND-FROM-LAST BIRTH NAME ______
566	CHECK 547: ARTEMISININ ('F') GIVEN	CODE 'F' CIRCLED ☐ / CODE 'F' NOT CIRCLED ☐ (SKIP TO 569)	CODE 'F' CIRCLED ☐ / CODE 'F' NOT CIRCLED ☐ (SKIP TO 569)	CODE 'F' CIRCLED ☐ / CODE 'F' NOT CIRCLED ☐ (SKIP TO 569)
567	How long after the fever started did (NAME) first take Artemisinin?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8
568	For how many days did (NAME) take the Artemisinin? IF 7 DAYS OR MORE, RECORD '7'	DAYS . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . ☐ DON'T KNOW . . . 8
569	CHECK 547: ARTEMETHER/LUMEFANTRINE ('G') GIVEN	CODE 'G' CIRCLED ☐ / CODE 'G' NOT CIRCLED ☐ (SKIP TO 571A)	CODE 'G' CIRCLED ☐ / CODE 'G' NOT CIRCLED ☐ (SKIP TO 571A)	CODE 'G' CIRCLED ☐ / CODE 'G' NOT CIRCLED ☐ (SKIP TO 571A)
570	How long after the fever started did (NAME) first take Artemether/Lumefantrine?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8
571	For how many days did (NAME) take the Artemether/Lumefantrine? IF 7 DAYS OR MORE, RECORD '7'	DAYS . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . ☐ DON'T KNOW . . . 8
571A	CHECK 547: OTHER ANTIMALARIAL ('H') GIVEN	CODE 'H' CIRCLED ☐ / CODE 'H' NOT CIRCLED ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	CODE 'H' CIRCLED ☐ / CODE 'H' NOT CIRCLED ☐ (GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573)	CODE 'H' CIRCLED ☐ / CODE 'H' NOT CIRCLED ☐ (GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 573)
571B	How long after the fever started did (NAME) first take OTHER ANTIMALARIAL?	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8	SAME DAY . . . . . 0 NEXT DAY . . . . . 1 TWO DAYS AFTER FEVER . . . . . 2 THREE DAYS AFTER FEVER . . . . . 3 FOUR OR MORE DAYS AFTER FEVER . . 4 DON'T KNOW . . . 8
571C	For how many days did (NAME) take the (OTHER ANTIMALARIAL)? IF 7 DAYS OR MORE, RECORD '7'	DAYS . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . ☐ DON'T KNOW . . . 8	DAYS . . . . ☐ DON'T KNOW . . . 8
572		GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573.	GO BACK TO 503 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 573.	GO TO 503 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 573.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
573	CHECK 215 AND 218, ALL ROWS: NUMBER OF CHILDREN BORN IN 2003 OR LATER LIVING WITH THE RESPONDENT ONE OR MORE ☐ → RECORD NAME OF YOUNGEST CHILD LIVING WITH HER (AND CONTINUE WITH 574) _____ (NAME) NONE ☐ → 576		
574	The last time (NAME FROM 573) passed stools, what was done to dispose of the stools?	CHILD USED TOILET OR LATRINE . . . 01 PUT/RINSED INTO TOILET OR LATRINE . . . . . 02 PUT/RINSED INTO DRAIN OR DITCH . . . . . 03 THROWN INTO GARBAGE . . . . . 04 BURIED . . . . . 05 LEFT IN THE OPEN . . . . . 06 OTHER _____ 96 (SPECIFY)	
575	CHECK 528(a), ALL COLUMNS: NO CHILD RECEIVED FLUID FROM ORS PACKET ☐ ANY CHILD RECEIVED FLUID FROM ORS PACKET ☐ → 577		
576	Have you ever heard of a special product called ORS packet or a pre-packaged ORS liquid you can get for the treatment of diarrhea?	YES . . . . . 1 NO 2	
577	CHECK 215 AND 218, ALL ROWS: NUMBER OF CHILDREN BORN IN 2005 OR LATER LIVING WITH THE RESPONDENT ONE OR MORE ☐ → RECORD NAME OF YOUNGEST CHILD LIVING WITH HER (AND CONTINUE WITH 578) _____ (NAME) NONE ☐ → 601		
578	Now I would like to ask you about liquids or foods (NAME FROM 577) had yesterday during the day or at night. Did (NAME FROM 577) (drink/eat): Plain water? Commercially produced infant formula? Any commercially produced baby cereal such as Nestle Cerelac, Fresocrem? Any (other) porridge or gruel? ASK TO SEE THE BOX TO ENSURE THAT IT IS COMMERCIALLY PRODUCED AND FORTIFIED	YES NO DK PLAIN WATER . . . . . 1 2 8 FORMULA . . . . . 1 2 8 BABY CEREAL . . . . . 1 2 8 OTHER PORRIDGE/GRUEL. . 1 2 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP

579 Now I would like to ask you about (other) liquids or foods that (NAME FROM 577)/you may have had yesterday during the day or at night. I am interested in whether your child/you had the item even if it was combined with other foods.

	Did (NAME FROM 577)/you drink (eat):		CHILD YES	NO	DK	MOTHER YES	NO	DK
a)	Milk such as tinned, powdered, or fresh animal milk?	a	1	2	8	1	2	8
b)	Tea or coffee?	b	1	2	8	1	2	8
c)	Any other liquids (juice, cocoa)?	c	1	2	8	1	2	8
d)	Bread, rice, noodles, or other foods made from grains (kenkey,banku, koko,tuo zaafi,akple,weanimix)?	d	1	2	8	1	2	8
e)	Pumpkin, red or yellow yams, carrots, sweet potatoes that are yellow or orange inside?	e	1	2	8	1	2	8
f)	White potatoes, white yams, manioc, cassava, cocoyam, fufu or any other foods made from roots, tubers or plantain?	f	1	2	8	1	2	8
g)	Any dark green, leafy vegetables (kontomire, aleefu, ayoyo, kale,cassava leaves)?	g	1	2	8	1	2	8
h)	Ripe mangoes, paw paw?	h	1	2	8	1	2	8
i)	Any other fruits or vegetables [e.g. bananas, avocados, tomatoes, oranges, apples]?	i	1	2	8	1	2	8
j)	Liver, kidney, heart or other organ meats?	j	1	2	8	1	2	8
k)	Any meat, such as beef, pork, lamb, goat, chicken, or duck?	k	1	2	8	1	2	8
l)	Eggs?	l	1	2	8	1	2	8
m)	Fresh or dried fish or shellfish [e.g. prawn, lobster] ?	m	1	2	8	1	2	8
n)	Any foods made from beans, peas, lentils, or nuts?	n	1	2	8	1	2	8
o)	Cheese, yogurt or other milk products?	o	1	2	8	1	2	8
p)	Any oil, fats, or butter, or foods made with any of these?	p	1	2	8	1	2	8
q)	Any sugary foods such as chocolates, sweets, candies, pastries, cakes, or biscuits?	q	1	2	8	1	2	8
r)	Any other solid or semi-solid food?	r	1	2	8	1	2	8

580 CHECK 578 (LAST 2 CATEGORIES: BABY CEREAL OR OTHER PORRIDGE/GRUEL) AND 579 (CATEGORIES d THROUGH r FOR CHILD):

AT LEAST ONE "YES' ☐

NOT A SINGLE "YES" ☐ → 601

581 How many times did (NAME FROM 577) eat solid, semisolid, or soft foods yesterday during the day or at night?

IF 7 OR MORE TIMES, RECORD '7'.

NUMBER OF TIMES . . . . . ☐☐

DON'T KNOW 8

SECTION 6. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Are you currently married or living together with a man as if married?	YES, CURRENTLY MARRIED . . . . . 1 YES, LIVING WITH A MAN . . . . . 2 NO, NOT IN UNION 3	→ 604
602	Have you ever been married or lived together with a man as if married?	YES, FORMERLY MARRIED . . . . . 1 YES, LIVED WITH A MAN . . . . . 2 NO 3	→ 617
603	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . . 1 DIVORCED . . . . . 2 SEPARATED 3	→ 609
604	Is your husband/partner living with you now or is he staying elsewhere?	LIVING WITH HER . . . . . 1 STAYING ELSEWHERE 2	
605	RECORD THE HUSBAND'S/PARTNER'S NAME AND LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE. IF HE IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'.	NAME _____ LINE NO.	
606	Does your husband/partner have other wives or does he live with other women as if married?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 609
607	Including yourself, in total, how many wives or partners does your husband live with now as if married?	TOTAL NUMBER OF WIVES AND LIVE-IN PARTNERS . . . . . DON'T KNOW 98	
608	Are you the first, second, ... wife?	RANK	
609	Have you been married or lived with a man only once or more than once?	ONLY ONCE . . . . . 1 MORE THAN ONCE 2	
615	CHECK 609: MARRIED/ LIVED WITH A MAN ONLY ONCE → In what month and year did you start living with your husband/partner? MARRIED/ LIVED WITH A MAN MORE THAN ONCE → Now I would like to ask about when you started living with your first husband/partner. In what month and year was that?	MONTH . . . . . DON'T KNOW MONTH . . . . . 98 YEAR . . . . . DON'T KNOW YEAR 9998	→ 617
616	How old were you when you first started living with him?	AGE	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
617	CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
618	Now I need to ask you some questions about sexual activity in order to gain a better understanding of some important life issues. How old were you when you had sexual intercourse for the very first time?	NEVER HAD SEXUAL INTERCOURSE . . . . . 00 AGE IN YEARS . . . . . [ ][ ] FIRST TIME WHEN STARTED LIVING WITH (FIRST) HUSBAND/PARTNER 95	→ 621 → 621
619	CHECK 107: AGE 15-24 ↓ AGE 25-49 →		→ 641
620	Do you intend to wait until you get married to have sexual intercourse for the first time?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/UNSURE 8	→ 641
621	CHECK 107: AGE 15-24 ↓ AGE 25-49 →		→ 626
622	The first time you had sexual intercourse, was a male condom used?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/DON'T REMEMBER . . . 8	
623	How old was the person you first had sexual intercourse with?	AGE OF PARTNER . . . . . [ ][ ] DON'T KNOW 98	→ 626
624	Was this person older than you, younger than you, or about the same age as you?	OLDER . . . . . 1 YOUNGER . . . . . 2 ABOUT THE SAME AGE . . . . . 3 DON'T KNOW/DON'T REMEMBER . . . 8	→ 626
625	Would you say this person was ten or more years older than you or less than ten years older than you?	TEN OR MORE YEARS OLDER . . . . . 1 LESS THAN TEN YEARS OLDER . . . 2 OLDER, UNSURE HOW MUCH 3	
626	When was the last time you had sexual intercourse? IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS. IF 12 MONTHS (ONE YEAR) OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO . . . . . 1 [ ][ ] WEEKS AGO . . . . . 2 [ ][ ] MONTHS AGO . . . . . 3 [ ][ ] YEARS AGO . . . . . 4 [ ][ ]	→ 640

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
626A	Now I would like to ask you some questions about your recent sexual activity. Let me assure you again that your answers are completely confidential and will not be told to anyone. If we should come to any question that you don't want to answer, just let me know and we will go to the next question. → SKIP TO 628			
627	When was the last time you had sexual intercourse with this person?		DAYS . 1 WEEKS 2 MONTHS 3	DAYS . 1 WEEKS 2 MONTHS 3
628	The last time you had sexual intercourse (with this second/third person), was a male condom used?	YES . . . . 1 NO . . . . 2 (SKIP TO 630)	YES . . . . 1 NO . . . . 2 (SKIP TO 630)	YES . . . . 1 NO . . . . 2 (SKIP TO 630)
629	Did you use a condom every time you had sexual intercourse with this person in the last 12 months?	YES . . . . 1 NO 2	YES . . . . 1 NO 2	YES . . . . 1 NO 2
630	What was your relationship to this person with whom you had sexual intercourse? IF BOYFRIEND: Were you living together as if married? IF YES, CIRCLE '2'. IF NO, CIRCLE '3'.	HUSBAND . . . . 1 (SKIP TO 636) LIVE-IN PARTNER . . . . 2 BOYFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . . 4 PROSTITUTE . . . . 5 OTHER ____________ 6 (SPECIFY)	HUSBAND . . . . 1 (SKIP TO 636) LIVE-IN PARTNER . . . . 2 BOYFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . . 4 PROSTITUTE . . . . 5 OTHER ____________ 6 (SPECIFY)	HUSBAND . . . . 1 (SKIP TO 636) LIVE-IN PARTNER . . . . 2 BOYFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . . 4 PROSTITUTE . . . . 5 OTHER ____________ 6 (SPECIFY)
631	For how long (have you had/did you have) a sexual relationship with this person? IF ONLY HAD SEXUAL RELATIONS WITH THIS PERSON ONCE, RECORD '01' DAYS.	DAYS . 1 MONTHS 2 YEARS 3	DAYS . 1 MONTHS 2 YEARS 3	DAYS . 1 MONTHS 2 YEARS 3
632	CHECK 107:	AGE 15-24 / AGE 25-49 (SKIP TO 636)	AGE 15-24 / AGE 25-49 (SKIP TO 636)	AGE 15-24 / AGE 25-49 (SKIP TO 636)
633	How old is this person?	AGE OF PARTNER (SKIP TO 636) DON'T KNOW 98	AGE OF PARTNER (SKIP TO 636) DON'T KNOW 98	AGE OF PARTNER (SKIP TO 636) DON'T KNOW 98
634	Is this person older than you, younger than you, or about the same age?	OLDER . . . . 1 YOUNGER . . . . . 2 SAME AGE . . . . . 3 DON'T KNOW . . . 8 (SKIP TO 636)	OLDER . . . . 1 YOUNGER . . . . . 2 SAME AGE . . . . . 3 DON'T KNOW . . . 8 (SKIP TO 636)	OLDER . . . . 1 YOUNGER . . . . . 2 SAME AGE . . . . . 3 DON'T KNOW . . . 8 (SKIP TO 636)
635	Would you say this person is ten or more years older than you or less than ten years older than you?	TEN OR MORE YEARS OLDER . 1 LESS THAN TEN YEARS OLDER . 2 OLDER, UNSURE HOW MUCH . . . 3	TEN OR MORE YEARS OLDER . 1 LESS THAN TEN YEARS OLDER . 2 OLDER, UNSURE HOW MUCH . . . 3	TEN OR MORE YEARS OLDER . 1 LESS THAN TEN YEARS OLDER . 2 OLDER, UNSURE HOW MUCH . . . 3

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
636	The last time you had sexual intercourse with this person, did you or this person drink alcohol?	YES . . . . . 1 NO . . . . . 2 (SKIP TO 638) ←	YES . . . . . 1 NO . . . . . 2 (SKIP TO 638) ←	YES . . . . . 1 NO . . . . . 2 (SKIP TO 639) ←
637	Were you or your partner drunk at that time? IF YES: Who was drunk?	RESPONDENT ONLY 1 PARTNER ONLY . . . 2 RESPONDENT AND PARTNER BOTH . 3 NEITHER 4	RESPONDENT ONLY 1 PARTNER ONLY . . . 2 RESPONDENT AND PARTNER BOTH . 3 NEITHER 4	RESPONDENT ONLY 1 PARTNER ONLY . . . 2 RESPONDENT AND PARTNER BOTH . 3 NEITHER 4
638	Apart from [this person/these two people], have you had sexual intercourse with any other person in the last 12 months?	YES . . . . . 1 (GO BACK TO 627 IN NEXT COLUMN) ← NO . . . . . 2 (SKIP TO 639A) ←	YES . . . . . 1 (GO BACK TO 627 IN NEXT COLUMN) ← NO . . . . . 2 (SKIP TO 639A) ←	
639	In total, with how many different people have you had sexual intercourse in the last 12 months? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.'			NUMBER OF PARTNERS LAST 12 MONTHS . . . ☐☐ DON'T KNOW . . . 98

639A	In total, with how many different people have you had sexual intercourse in the last month? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.'	NUMBER OF PARTNERS IN MONTH . . . . . ☐☐ DON'T KNOW 98	
640	In total, with how many different people have you had sexual intercourse in your lifetime? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.'	NUMBER OF PARTNERS IN LIFETIME . . . . . ☐☐ DON'T KNOW 98	
641	Do you know of a place where a person can get male condoms?	YES . . . . . 1 NO 2	→ 701
642	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC . . . A GOVT. HEALTH CENTER . . . . . B GOVT. HEALTH POST/CHPS . . . C FAMILY PLANNING CLINIC . . . . . D MOBILE CLINIC . . . . . E FIELDWORKER/OUTREACH/ PEER EDUCATOR . . . . . F OTHER PUBLIC _____ (SPECIFY) G PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . H PRIVATE DOCTOR . . . . . I PHARMACY . . . . . J CHEMICAL/DRUG STORE K FP/PPAG CLINIC . . . . . L MATERNITY HOME . . . . . M OTHER PRIVATE MEDICAL _____ (SPECIFY) N OTHER SOURCE SHOP/MARKET . . . . . O CHURCH . . . . . P COMMUNITY VOLUNTEER . . . . . Q FRIEND/RELATIVE . . . . . R OTHER _____ (SPECIFY) X	
643	If you wanted to, could you yourself get a condom?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/UNSURE 8	

SECTION 7. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	CHECK 311/311A: NEITHER STERILIZED ☐ HE OR SHE STERILIZED ☐ → 713		
702	CHECK 226: NOT PREGNANT OR UNSURE ☐ PREGNANT ☐ Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD . . . . . 1 NO MORE/NONE . . . . . 2 → 704 SAYS SHE CAN'T GET PREGNANT . 3 → 713 UNDECIDED/DON'T KNOW AND PREGNANT . . . . . 4 → 709 UNDECIDED/DON'T KNOW AND NOT PREGNANT OR UNSURE . . . . . 5 → 708	
703	CHECK 226: NOT PREGNANT OR UNSURE ☐ PREGNANT ☐ How long would you like to wait from now before the birth of (a/another) child? After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 → 708 SAYS SHE CAN'T GET PREGNANT 994 → 713 AFTER MARRIAGE . . . . . 995 OTHER _____ 996 → 708 (SPECIFY) DON'T KNOW 998	
704	CHECK 226: NOT PREGNANT OR UNSURE ☐ PREGNANT ☐ → 709		
705	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED ☐ NOT CURRENTLY USING ☐ CURRENTLY USING ☐ → 713		
706	CHECK 703: NOT ASKED ☐ 24 OR MORE MONTHS OR 02 OR MORE YEARS ☐ 00-23 MONTHS OR 00-01 YEAR ☐ → 709		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
707	CHECK 702: WANTS TO HAVE A/ANOTHER CHILD ☐ → You have said that you do not want (a/another) child soon, but you are not using any method to avoid pregnancy. Can you tell me why you are not using a method? Any other reason? WANTS NO MORE/ NONE ☐ → You have said that you do not want any (more) children, but you are not using any method to avoid pregnancy. Can you tell me why you are not using a method? Any other reason? RECORD ALL REASONS MENTIONED.	NOT MARRIED . . . . . A FERTILITY-RELATED REASONS NOT HAVING SEX . . . . . B INFREQUENT SEX . . . . . C MENOPAUSAL/HYSTERECTOMY . D SUBFECUND/INFECUND . . . . . E POSTPARTUM AMENORRHEIC . . . F BREASTFEEDING . . . . . G FATALISTIC . . . . . H OPPOSITION TO USE RESPONDENT OPPOSED . . . . . I HUSBAND/PARTNER OPPOSED . J OTHERS OPPOSED . . . . . K RELIGIOUS PROHIBITION . . . . . L LACK OF KNOWLEDGE KNOWS NO METHOD . . . . . M KNOWS NO SOURCE . . . . . N METHOD-RELATED REASONS HEALTH CONCERNS . . . . . O FEAR OF SIDE EFFECTS . . . . . P LACK OF ACCESS/TOO FAR . . . . . Q COSTS TOO MUCH . . . . . R INCONVENIENT TO USE . . . . . S INTERFERES WITH BODY'S NORMAL PROCESSES . . . . . T OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
708	CHECK 310: USING A CONTRACEPTIVE METHOD? NOT ASKED ☐ → NO, NOT CURRENTLY USING ☐ → YES, CURRENTLY USING ☐ → 713		
709	Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future?	YES . . . . . 1 NO . . . . . 2 → 711 DON'T KNOW . . . . . 8 → 713	
710	Which contraceptive method would you prefer to use?	FEMALE STERILIZATION . . . . . 01 MALE STERILIZATION . . . . . 02 PILL . . . . . 03 IUD . . . . . 04 INJECTABLES . . . . . 05 IMPLANTS . . . . . 06 MALE CONDOM . . . . . 07 FEMALE CONDOM . . . . . 08 DIAPHRAGM . . . . . 09 FOAM/JELLY . . . . . 10 LACTATIONAL AMEN. METHOD . . . . . 11 RHYTHM METHOD . . . . . 12 WITHDRAWAL . . . . . 13 OTHER _____ 96 (SPECIFY) UNSURE 98	→ 713

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
711	What is the main reason that you think you will not use a contraceptive method at any time in the future?	NOT MARRIED . . . . . 11 FERTILITY-RELATED REASONS INFREQUENT SEX/NO SEX . . . 22 MENOPAUSAL/HYSTERECTOMY 23 SUBFECUND/INFECUND . . . . . 24 WANTS AS MANY CHILDREN AS POSSIBLE . . . . . 26 OPPOSITION TO USE RESPONDENT OPPOSED . . . . . 31 HUSBAND/PARTNER OPPOSED 32 OTHERS OPPOSED . . . . . 33 RELIGIOUS PROHIBITION . . . . . 34 LACK OF KNOWLEDGE KNOWS NO METHOD . . . . . 41 KNOWS NO SOURCE . . . . . 42 METHOD-RELATED REASONS HEALTH CONCERNS . . . . . 51 FEAR OF SIDE EFFECTS . . . . . 52 LACK OF ACCESS/TOO FAR . . . 53 COSTS TOO MUCH . . . . . 54 INCONVENIENT TO USE . . . . . 55 INTERFERES WITH BODY'S NORMAL PROCESSES . . . . . 56 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→ 713
712	Would you ever use a contraceptive method if you were married?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
713	CHECK 216: HAS LIVING CHILDREN ↓ If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ↓ If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NONE . . . . . 00 NUMBER . . . . . ☐☐ OTHER _____ 96 (SPECIFY)	→ 715 → 715
714	How many of these children would you like to be boys, how many would you like to be girls and for how many would the sex not matter?	BOYS GIRLS EITHER NUMBER ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	
715	In the last few months have you: Heard about family planning on the radio? Seen about family planning on the television? Read about family planning in a newspaper or magazine?	YES NO RADIO . . . . . 1 2 TELEVISION . . . . . 1 2 NEWSPAPER OR MAGAZINE . . . 1 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
717	CHECK 601: YES, CURRENTLY MARRIED ☐ YES, LIVING WITH A MAN ☐ NO, NOT IN UNION ☐ → 801		
718	CHECK 311/311A: CODE B, G, OR M CIRCLED ☐ → 720 NO CODE CIRCLED ☐ → 722 OTHER ☐		
719	Does your husband/partner know that you are using a method of family planning?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
720	Would you say that using contraception is mainly your decision, mainly your husband's/partner's decision, or did you both decide together?	MAINLY RESPONDENT . . . . . 1 MAINLY HUSBAND/PARTNER . . . . . 2 JOINT DECISION . . . . . 3 OTHER _____ 6 (SPECIFY)	
721	CHECK 311/311A: NEITHER STERILIZED ☐ HE OR SHE STERILIZED ☐ → 722A		
722	Does your husband/partner want the same number of children that you want, or does he want more or fewer than you want?	SAME NUMBER . . . . . 1 MORE CHILDREN . . . . . 2 FEWER CHILDREN . . . . . 3 DON'T KNOW 8	
722A	I will now read you some statements about contraception. Please tell me if you agree or disagree with each one. a) Contraception is women's business and a man should not have to worry about it. b) Women who use contraception may become promiscuous. c) Having too many children may be dangerous for a woman d) It is better not to have more children than we can afford e) Children in smaller families are more likely to succeed	AGREE / DISAGREE / DK CONTRACEPTION WOMAN'S BUSINESS . 1 2 8 WOMAN MAY BECOME PROMISCUOUS . . . . . 1 2 8 DANGEROUS F/WOMAN 1 2 8 CHILDREN NOT AFFORD 1 2 8 CHILDREN SUCCEED 1 2 8	

SECTION 8. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	CHECK 601 AND 602: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ FORMERLY MARRIED/ LIVED WITH A MAN ☐ → 803 NEVER MARRIED AND NEVER LIVED WITH A MAN ☐ → 807		
802	How old was your husband/partner on his last birthday?	AGE IN COMPLETED YEARS ☐☐	
803	Did your (last) husband/partner ever attend school?	YES . . . . . 1 NO . . . . . 2 → 806	
804	What was the highest level of school he attended: primary, middle/JSS, secondary/SSS, or higher?	PRIMARY . . . . . 1 MIDDLE/JSS . . . . . 2 SECONDARY/SSS . . . . . 3 HIGHER . . . . . 4 DON'T KNOW . . . . . 8 → 806	
805	What was the highest grade he completed at that level?	GRADE . . . . . ☐☐ DON'T KNOW 98	
806	CHECK 801: CURRENTLY MARRIED/ LIVING WITH A MAN ☐ What is your husband's/partner's occupation? That is, what kind of work does he mainly do? FORMERLY MARRIED/ LIVED WITH A MAN ☐ What was your (last) husband's/ partner's occupation? That is, what kind of work did he mainly do?	_____ ☐☐ _____ _____	
807	Aside from your own housework, have you done any work in the last seven days?	YES . . . . . 1 NO . . . . . 2 → 811	
808	As you know, some women take up jobs for which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. In the last seven days, have you done any of these things or any other work?	YES . . . . . 1 NO . . . . . 2 → 811	
809	Although you did not work in the last seven days, do you have any job or business from which you were absent for leave, illness, vacation, maternity leave or any other such reason?	YES . . . . . 1 NO . . . . . 2 → 811	
810	Have you done any work in the last 12 months?	YES . . . . . 1 NO . . . . . 2 → 818	
811	What is your occupation, that is, what kind of work do you mainly do?	_____ ☐☐ _____ _____	
812	CHECK 811: WORKS IN AGRICULTURE ☐ DOES NOT WORK IN AGRICULTURE ☐ → 814		
813	Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's land?	OWN LAND . . . . . 1 FAMILY LAND . . . . . 2 RENTED LAND . . . . . 3 SOMEONE ELSE'S LAND 4	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
814	Do you do this work for a member of your family, for someone else, or are you self-employed?	FOR FAMILY MEMBER . . . . . 1 FOR SOMEONE ELSE . . . . . 2 SELF-EMPLOYED 3	
815	Do you usually work at home or away from home?	HOME . . . . . 1 AWAY 2	
816	Do you usually work throughout the year, or do you work seasonally, or only once in a while?	THROUGHOUT THE YEAR . . . . . 1 SEASONALLY/PART OF THE YEAR . 2 ONCE IN A WHILE 3	
817	Are you paid in cash or kind for this work or are you not paid at all?	CASH ONLY . . . . . 1 CASH AND KIND . . . . . 2 IN KIND ONLY . . . . . 3 NOT PAID 4	
818	CHECK 601: CURRENTLY MARRIED/LIVING WITH A MAN ☐	NOT IN UNION ☐	→ 827
819	CHECK 817: CODE 1 OR 2 CIRCLED ☐	OTHER ☐	→ 822
820	Who usually decides how the money you earn will be used: mainly you, mainly your husband/partner, or you and your husband/partner jointly?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 OTHER _____ 6 (SPECIFY)	
821	Would you say that the money that you earn is more than what your husband/partner earns, less than what he earns, or about the same?	MORE THAN HIM . . . . . 1 LESS THAN HIM . . . . . 2 ABOUT THE SAME . . . . . 3 HUSBAND/PARTNER DOESN'T BRING IN ANY MONEY . . . . . 4 DON'T KNOW 8	→ 823
822	Who usually decides how your husband's/partner's earnings will be used: you, your husband/partner, or you and your husband/partner jointly?	RESPONDENT . . . . . 1 HUSBAND/PARTNER . . . . . 2 RESPONDENT AND HUSBAND/PARTNER JOINTLY . . . 3 HUSBAND/PARTNER HAS NO EARNINGS . . . . . 4 OTHER _____ 6 (SPECIFY)	
823	Who usually makes decisions about health care for yourself: you, your husband/partner, you and your husband/partner jointly, or someone else?	RESPONDENT = 1 HUSBAND/PARTNER = 2 RESPONDENT & HUSBAND/PARTNER JOINTLY = 3 SOMEONE ELSE = 4 OTHER = 6 1 2 3 4 6	
824	Who usually makes decisions about making major household purchases?	1 2 3 4 6	
825	Who usually makes decisions about making purchases for daily household needs?	1 2 3 4 6	
826	Who usually makes decisions about visits to your family or relatives?	1 2 3 4 6	
826A	Who makes decisions about how many children to have?	1 2 3 4 6	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
827	PRESENCE OF OTHERS AT THIS POINT (PRESENT AND LISTENING, PRESENT BUT NOT LISTENING, OR NOT PRESENT)	PRES./ LISTEN. / PRES./ NOT LISTEN. / NOT PRES. CHILDREN < 10 . . . . . 1 2 3 HUSBAND . . . . . 1 2 3 OTHER MALES . . . . . 1 2 3 OTHER FEMALES . . . 1 2 3	
828	Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:	YES / NO / DK	
	If she goes out without telling him?	GOES OUT 1 2 8	
	If she neglects the children?	NEGL. CHILDREN . . . 1 2 8	
	If she argues with him?	ARGUES 1 2 8	
	If she refuses to have sex with him?	REFUSES SEX 1 2 8	
	If she burns the food?	BURNS FOOD 1 2 8	

SECTION 9. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES . . . . . 1 NO 2	→ 942
902	Can people reduce their chance of getting the AIDS virus by having just one uninfected sex partner who has no other sex partners?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
903	Can people get the AIDS virus from mosquito bites?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
904	Can people reduce their chance of getting the AIDS virus by using a condom every time they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
905	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
906	Can people reduce their chance of getting the AIDS virus by not having sexual intercourse at all?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
907	Can people get the AIDS virus because of witchcraft or other supernatural means?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
908	Is it possible for a healthy-looking person to have the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
909	Can the virus that causes AIDS be transmitted from a mother to her baby: During pregnancy? During delivery? By breastfeeding?	YES NO DK DURING PREG. . . . . 1 2 8 DURING DELIVERY . . . 1 2 8 BREASTFEEDING . . . 1 2 8	
910	CHECK 909: AT LEAST ONE 'YES' ☐ OTHER ☐		→ 912
911	Are there any special drugs that a doctor or a nurse can give to a woman infected with the AIDS virus to reduce the risk of transmission to the baby?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
912	Have you heard about special antiretroviral drugs (Nevirapine) that people infected with the AIDS virus can get from a doctor or a nurse to help them live longer?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
913	CHECK 208 AND 215: NO BIRTHS ☐ LAST BIRTH SINCE JANUARY 2005 ☐ LAST BIRTH BEFORE JANUARY 2005 ☐		→ 922 → 922
914	CHECK 407 FOR LAST BIRTH: HAD ANTENATAL CARE ☐ NO ANTENATAL CARE ☐		→ 922
914A	CHECK FOR PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
915	During any of the antenatal visits for your last birth, did anyone talk to you about: Babies getting the AIDS virus from their mother? Things that you can do to prevent getting the AIDS virus? Getting tested for the AIDS virus?	YES NO DK AIDS FROM MOTHER 1 2 8 THINGS TO DO . 1 2 8 TESTED FOR AIDS . 1 2 8	
916	Were you offered a test for the AIDS virus as part of your antenatal care?	YES . . . . . 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
917	I don't want to know the results, but were you tested for the AIDS virus as part of your antenatal care?	YES . . . . . 1 NO 2	→ 922
918	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	
919	Where was the test done? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, VCT CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. HEALTH POST/CHPS . . . . . 13 STAND-ALONE VCT CENTER . . . 14 FAMILY PLANNING CLINIC . . . . . 15 MOBILE CLINIC . . . . . 16 FIELDWORKER/OUTREACH/ PEER EDUCATOR . . . . . 17 OTHER PUBLIC _____ 18 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . 21 STAND-ALONE VCT CENTER . . . 22 PHARMACY . . . . . 23 CHEMICAL/DRUG STORE 24 FP/PPAG CLINIC . . . . . 25 MATERNITY HOME . . . . . 26 OTHER PRIVATE MEDICAL _____ 27 (SPECIFY) OTHER _____ 96 (SPECIFY)	
920	Have you been tested for the AIDS virus since that time you were tested during your pregnancy?	YES . . . . . 1 NO 2	→ 923
921	When was the last time you were tested for the AIDS virus?	LESS THAN 12 MONTHS AGO . . . . . 1 12 - 23 MONTHS AGO . . . . . 2 2 OR MORE YEARS AGO 3	→ 929
922	I don't want to know the results, but have you ever been tested to see if you have the AIDS virus?	YES . . . . . 1 NO 2	→ 927
923	When was the last time you were tested?	LESS THAN 12 MONTHS AGO . . . . . 1 12 - 23 MONTHS AGO . . . . . 2 2 OR MORE YEARS AGO 3	
924	The last time you had the test, did you yourself ask for the test, was it offered to you and you accepted, or was it required?	ASKED FOR THE TEST . . . . . 1 OFFERED AND ACCEPTED . . . . . 2 REQUIRED 3	
925	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	
926	Where was the test done? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, VCT CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. HEALTH POST/CHPS . . . . . 13 STAND-ALONE VCT CENTER . . . 14 FAMILY PLANNING CLINIC . . . . . 15 MOBILE CLINIC . . . . . 16 FIELDWORKER/OUTREACH/ PEER EDUCATOR . . . . . 17 OTHER PUBLIC _____ 18 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . 21 STAND-ALONE VCT CENTER . . . 22 PHARMACY . . . . . 23 CHEMICAL/DRUG STORE 24 FP/PPAG CLINIC . . . . . 25 MATERNITY HOME . . . . . 26 OTHER PRIVATE MEDICAL _____ 27 (SPECIFY) OTHER _____ 96 (SPECIFY)	→ 929

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
927	Do you know of a place where people can go to get tested for the AIDS virus?	YES . . . . . 1 NO 2	→ 929
928	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER VCT CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC . . . A GOVT. HEALTH CENTER . . . . . B GOVT. HEALTH POST/CHPS . . . . . C STAND-ALONE VCT CENTER . . . D FAMILY PLANNING CLINIC . . . . . E MOBILE CLINIC . . . . . F FIELDWORKER/OUTREACH/ PEER EDUCATOR . . . . . G OTHER PUBLIC _____ (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ H PRIVATE DOCTOR . . . . . I STAND-ALONE VCT CENTER . . . J PHARMACY . . . . . K CHEMICAL/DRUG STORE L FP/PPAG CLINIC . . . . . M MATERNITY HOME . . . . . N OTHER PRIVATE MEDICAL _____ (SPECIFY) O OTHER SOURCE SHOP/MARKET . . . . . P CHURCH . . . . . Q FRIEND/RELATIVE . . . . . R OTHER _____ (SPECIFY) X	
929	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
930	If a member of your family got infected with the AIDS virus, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
931	If a member of your family became sick with AIDS, would you be willing to care for her or him in your own household?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
932	In your opinion, if a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in the school?	SHOULD BE ALLOWED . . . . . 1 SHOULD NOT BE ALLOWED . . . . . 2 DK/NOT SURE/DEPENDS 8	
940	Should children age 12-14 be taught about using a condom to avoid getting AIDS?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
941	Should children age 12-14 be taught to wait until they get married to have sexual intercourse in order to avoid getting AIDS?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
942	CHECK 901: HEARD ABOUT AIDS → Apart from AIDS, have you heard about other infections that can be transmitted through sexual contact? NOT HEARD ABOUT AIDS → Have you heard about infections that can be transmitted through sexual contact?	YES . . . . . 1 NO 2	
943	CHECK 618: HAS HAD SEXUAL INTERCOURSE HAS NOT HAD SEXUAL INTERCOURSE		→ 951
944	CHECK 942: HEARD ABOUT OTHER SEXUALLY TRANSMITTED INFECTIONS? YES NO		→ 946

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
945	Now I would like to ask you some questions about your health in the last 12 months. During the last 12 months, have you had a disease which you got through sexual contact?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
946	Sometimes women experience a bad smelling abnormal genital discharge. During the last 12 months, have you had a bad smelling abnormal genital discharge?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
947	Sometimes women have a genital sore or ulcer. During the last 12 months, have you had a genital sore or ulcer?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
948	CHECK 945, 946, AND 947: HAS HAD AN INFECTION (ANY 'YES') ↓ HAS NOT HAD AN INFECTION OR DOES NOT KNOW →		951
949	The last time you had (PROBLEM FROM 945/946/947), did you seek any kind of advice or treatment?	YES . . . . . 1 NO 2	→ 951
950	Where did you go? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER VCT CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC . . . A GOVT. HEALTH CENTER . . . . . B GOVT. HEALTH POST/CHPS . . . . . C FAMILY PLANNING CLINIC . . . . . D STAND-ALONE VCT CENTER . . . E FIELDWORKER/OUTREACH/ PEER EDUCATOR . . . . . F OTHER PUBLIC _____ G (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . H STAND-ALONE VCT CENTER . . . I PHARMACY . . . . . J CHEMICAL/DRUG STORE K FP/PPAG CLINIC . . . . . L MATERNITY HOME . . . . . M OTHER PRIVATE MEDICAL _____ N (SPECIFY) OTHER SOURCE SHOP/MARKET . . . . . O FRIEND/RELATIVE . . . . . P TRADITIONAL PRACTICIONER Q OTHER _____ X (SPECIFY)	
951	Husbands and wives do not always agree on everything. If a wife knows her husband has a disease that she can get during sexual intercourse, is she justified in refusing to have sex with him?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
952	If a wife knows her husband has a disease that she can get during sexual intercourse, is she justified in asking that they use a condom when they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
953	Is a wife justified in refusing to have sex with her husband when she is tired or not in the mood?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
954	Is a wife justified in refusing to have sex with her husband when she knows her husband has sex with other women?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
955	CHECK 601: CURRENTLY MARRIED/ LIVING WITH A MAN ↓ NOT IN UNION →		1001
956	Can you say no to your husband/partner if you do not want to have sexual intercourse?	YES . . . . . 1 NO . . . . . 2 DEPENDS/NOT SURE 8	
957	Could you ask your husband/partner to use a condom if you wanted him to?	YES . . . . . 1 NO . . . . . 2 DEPENDS/NOT SURE 8	

SECTION 10. OTHER HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1001	Have you ever heard of an illness called tuberculosis or TB?	YES . . . . . 1 NO 2	→ 1005
1002	How does tuberculosis spread from one person to another? PROBE: Any other ways? RECORD ALL MENTIONED.	THROUGH THE AIR WHEN COUGHING OR SNEEZING . . . . . A THROUGH SHARING UTENSILS . . . . . B THROUGH TOUCHING A PERSON WITH TB . . . . . C THROUGH FOOD . . . . . D THROUGH SEXUAL CONTACT . . . . . E THROUGH MOSQUITO BITES . . . . . F OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
1003	Can tuberculosis be cured?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1004	If a member of your family got tuberculosis, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/ DEPENDS 8	
1005	Now I would like to ask you some other questions relating to health matters. Have you had an injection for any reason in the last 12 months? IF YES: How many injections have you had? IF NUMBER OF INJECTIONS IS GREATER THAN 90, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . ☐☐ NONE 00	→ 1009
1006	Among these injections, how many were administered by a doctor, a nurse, a pharmacist, a dentist, or any other health worker? IF NUMBER OF INJECTIONS IS GREATER THAN 90, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . ☐☐ NONE 00	→ 1009
1007	The last time you had an injection given to you by a health worker, where did you go to get the injection? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC . . . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. HEALTH POST/CHPS . . . . . 13 STAND-ALONE VCT CENTER . . . . . 14 FAMILY PLANNING CLINIC . . . . . 15 MOBILE CLINIC . . . . . 16 FIELDWORKER/OUTREACH/ PEER EDUCATOR . . . . . 17 OTHER PUBLIC _____ 18 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . 21 STAND-ALONE VCT CENTER . . . . . 22 PHARMACY . . . . . 23 CHEMICAL/DRUG STORE . . . . . 24 FP/PPAG CLINIC . . . . . 25 MATERNITY HOME . . . . . 26 OTHER PRIVATE MEDICAL _____ 27 (SPECIFY) OTHER PLACE AT HOME . . . . . 31 OTHER _____ 96 (SPECIFY)	
1008	Did the person who gave you that injection take the syringe and needle from a new, unopened package?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1009	Do you currently smoke cigarettes?	YES . . . . . 1 NO 2	→ 1011
1010	In the last 24 hours, how many sticks of cigarettes did you smoke?	CIGARETTES . . . . . ☐☐	
1011	Do you currently smoke or use any other type of tobacco?	YES . . . . . 1 NO 2	→ 1012A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1012	What (other) type of tobacco do you currently smoke or use? RECORD ALL MENTIONED.	PIPE . . . . . A CHEWING TOBACCO . . . . . B SNUFF . . . . . C CIGARS . . . . . D OTHER _____ X (SPECIFY)	
1012A	Do you consume alcoholic beverages?	YES . . . . . 1 NO 2	→ 1013
1012B	In the last 7 days (a week) did you drink an alcoholic beverage? IF 'YES', PROBE: How many times?	ONCE . . . . . 01 2-3 TIMES . . . . . 02 4 TIMES OR MORE . . . . . 03 NONE 04	
1013	Many different factors can prevent women from getting medical advice or treatment for themselves. When you are sick and want to get medical advice or treatment, is each of the following a big problem or not?	BIG PROB-LEM / NOT A BIG PROB-LEM	
	Getting permission to go?	PERMISSION TO GO . . . 1 2	
	Getting money needed for treatment?	GETTING MONEY 1 2	
	The distance to the health facility?	DISTANCE 1 2	
	Having to take transport?	TAKING TRANSPORT . . . 1 2	
	Not wanting to go alone?	GO ALONE 1 2	
	Concern that there may not be a female health provider?	NO FEMALE PROV. 1 2	
	Concern that there may not be any health provider?	NO PROVIDER 1 2	
	Concern that there may be no drugs available?	NO DRUGS 1 2	
1014	Do you have any health insurance or are you a member of a mutual health organization?	YES . . . . . 1 NO 2	→ 1016
1015	What type of health insurance do you have? RECORD ALL MENTIONED.	NATIONAL /DISTRICT HEALTH INSURANCE(NHIS) . . . . . A HEALTH INSURANCE THROUGH EMPLOYER . . . . . B MUTUAL HEALTH ORGANIZATION/ COMMUNITY-BASED HEALTH INSURANCE . . . . . C OTHER PRIVATELY PURCHASED COMMERCIAL HEALTH INSURANCE.... D OTHER _____ X (SPECIFY)	
1015A	CHECK 1015: CODE 'A' FOR NHIS NOT CIRCLED ↓ ☐ CODE 'A' FOR NHIS CIRCLED ☐		→1015C
1015B	Why have you not registered with the National Health Insurance Scheme (NHIS)? RECORD ALL MENTIONED	NOT HEARD OF NHIS . . . . . A CANNOT AFFORD PREMIUM . . . . . B DO NOT TRUST . . . . . C DON'T NEED HEALTH INSURANCE . . . . . D NHIS DOES NOT COVER HEALTH SERVICES I NEED . . . . . E OTHER _____ X (SPECIFY)	→ 1015I
1015C	Did you pay your NHIS membership yourself?	YES, PAID MYSELF . . . . . 01 YES, PAID BY A RELATIVE/FRIEND . . . 02 YES, PAID BY EMPLOYER/SSNIT . . . . . 03 NO, EXEMPT AS ELDERLY (70+ YEARS) 04 NO, EXEMPT AS PENSIONER . . . . . 05 NO, EXEMPT AS INDIGENT (POOR) . . . 06 NO, OTHER _____ 96 (SPECIFY)	
1015D	Do you hold a valid National Health Insurance Scheme (NHIS) card? IF ANSWER IS 'YES', REQUEST TO SEE THE CARD	YES, CARD SEEN . . . . . 1 YES, CARD NOT SEEN/LOST . . . . . 2 NO 3	→ 1015F

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1015E	Why do you not have a valid NHIS card?	REGISTERED, NOT PAID FULL\ . . . . . 1 REGISTERED, CARD NOT RECEIVED . . . . . 2 REGISTERED, WAITING PERIOI . . . . . 3 NOT RENEWED REGISTRATIOI . . . . . 4 LOST NHIS CARD . . . . . 5 OTHER _____ 6 (SPECIFY)	→1015I → 1015G → 1015I
1015F	How many weeks did it take you to obtain your NHIS card?	NUMBER OF WEEKS ☐☐ DON'T KNOW 98	→ 1015I
1015G	Do you plan to renew the NHIS card?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE 8	→1015I →1015I
1015H	Why do you not want to renew the NHIS card? Anything else? RECORD ALL MENTIONED.	HAVE NOT BEEN SICK . . . . . A PREMIUM EXPENSIVI . . . . . B STILL PAY OUT OF POCKET . . . . . C WORSE QUALITY CARE WITH CARD . . . D WAITING TIME FOR CARD LONG . . . . . E USED SERVICES NOT COVERED . . . . . F DID NOT USE ANY HEALTH SERVICES G USE CLINICS OR TRADITIONAL PRACTITIONERS WHO ARE NOT COVERED . . . . . H OTHER _____ X (SPECIFY)	
1015I	Do you have to pay out of pocket for drugs and services?	YES . . . . . 1 NO . . . . . 2 SOMETIMES 3	
1015J	Are there any services that you need from a health provider that are not covered by NHIS?	YES . . . . . 1 NO 2	→1015L
1015K	What are these services? Anything else? RECORD ALL MENTIONED.	FAMILY PLANNING . . . . . A LABORATORY INVESTIGATIONS . . . . . B ANTENATAL CARE . . . . . C POSTNATAL CARE . . . . . D CARE FOR NEWBORN FOR UP TO 3 MONTHS . . . . . E OTHER _____ X (SPECIFY)	
1015L	In your opinion, do NHIS card holders get better/same/worse servIce than others?	BETTER . . . . . 1 SAME . . . . . 2 WORSE . . . . . 3 DON'T KNOW/NOT SURE 8	
1015M	In your opinion, did you receive good service last time you were treated at a clinic or hospital? IF NO, PROBE	YES . . . . . 1 NO, WAITING TIMES WERE TOO LONG 2 NO, STAFF NOT POLITE . . . . . 3 NO, DID NOT RECEIVE ENOUGH INFORMATION ABOUT ILLNESS AND TREATMENT . . . . . 4 OTHER _____ 6 (SPECIFY)	
1016	I am going to ask you about the time you spent being physically active in the last 7 days. This is about the activities you do at work, as part of your house and yard work, to get from place to place in your spare time, exercise or sport. Now, think about all the vigorous activities which take hard physcial effort that you did in the past 7 days: activties that make you breathe much harder than normal and may include heavy lifting, digging, jogging, or fast bicycling.Think about only those physical activities that you did at least 15 minutes at a time. In the last 7 days, on how many days did you do vigorous physical activities that lasted for at least 15mins each time? IF 'NONE' RECORD '0'	NUMBER OF DAYS . . . . . ☐ DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1017	How many hours do you rest a day, including naps and sleep both during the day and night?	1-3 HOURS . . . . . 1 4-6 HOURS . . . . . 2 7-9 HOURS . . . . . 3 10 AND MORE HOURS . . . . . 4 DON'T KNOW 8	
1018	Now I would like to ask you about liquids and foods that you consume. How many glasses of water do you drink in one day on average? IF MORE THAN 9, RECORD '9', IF 'NONE' RECORD '0'	NUMBER OF GLASSES ☐	
1019	In a typical week, on how many days do you eat fruits, for example mangoes, paw paw, banana, orange, avocados, tomatoes, passion fruit, etc? IF 'NONE' RECORD '0'	NUMBER OF DAYS . . . . . ☐ DON'T KNOW/NOT SURE 8	→ 1021
1020	On a day when you eat fruits, how many servings do you eat on average? IF 'NONE' RECORD '0'	NUMBER OF SERVINGS . . . . . ☐ DON'T KNOW/NOT SURE 8	
1021	In a typical week, on how many days do you eat vegetables, for example carrots, cabbage, dark green leafy vegetables (e.g. kontomire), pumpkin, squash, etc? IF 'NONE' RECORD '0'	NUMBER OF DAYS . . . . . ☐ DON'T KNOW/NOT SURE 8	→ 1100
1022	On a day when you eat vegetables, how many servings do you eat on average? IF 'NONE' RECORD '0'	NUMBER OF SERVINGS . . . . . ☐ DON'T KNOW/NOT SURE 8	

SECTION 11: DOMESTIC VIOLENCE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1100	CHECK HH Q.138 AND COVER PAGE OF WOMAN'S QUESTIONNAIRE: WOMAN SELECTED FOR THIS SECTION ↓ WOMAN NOT SELECTED →		1135
1101	CHECK FOR PRESENCE OF OTHERS: DO NOT CONTINUE UNTIL EFFECTIVE PRIVACY IS ENSURED. PRIVACY OBTAINED . . . . . 1 ↓ PRIVACY NOT POSSIBLE . . . . . 2 →		1134
	READ TO THE RESPONDENT Now I would like to ask you questions about some other important aspects of a woman's life. I know that some of these questions are very personal. However, your answers are crucial for helping to understand the condition of women in Ghana. Let me assure you that your answers are completely confidential and will not be told to anyone, no one else will know that you were asked these questions, and no one else in this household is being asked these questions.		
1102	CHECK 601 AND 602: CURRENTLY MARRIED/ LIVING WITH A MAN ↓ FORMERLY MARRIED/ LIVED WITH A MAN ↓ (READ IN PAST TENSE) NEVER MARRIED/ NEVER LIVED WITH A MAN →		1114
1103	First, I am going to ask you about some situations which happen to some women. Please tell me if these apply to your relationship with your (last) husband/partner?		
	a) He (is/was) jealous or angry if you (talk/talked) to other men?	JEALOUS 1 2 8	
	b) He frequently (accuses/accused) you of being unfaithful?	ACCUSES 1 2 8	
	c) He (does/did) not permit you to meet your female friends?	NOT MEET FRIENDS 1 2 8	
	d) He (tries/tried) to limit your contact with your family?	NO FAMILY 1 2 8	
	e) He (insists/insisted) on knowing where you (are/were) at all times?	WHERE YOU ARE 1 2 8	
	f) He (does/did) not trust you with any money?	MONEY 1 2 8	
	g) He (refuses/refused) or (denies/denied) to have sexual intercourse with you?	REFUSES SEX 1 2 8	
1103A	CHECK 204 AND 205: HAS CHILDREN LIVING ELSEWHERE ↓ NO CHILDREN LIVING ELSEWHERE →		1104
1103B	Does/did he prevent you from seeing your children?	YES . . . . . 1 NO . . . . . 2 DK 8	
1103C	CHECK 215 AND 217: IF CHILD 3 YEARS OR OLDER OR BORN BEFORE JAN 2005 ↓ IF CHILD LESS THAN 3 YEARS →		1104
1103D	Does/did he refuse to pay children's school fees?	YES . . . . . 1 NO . . . . . 2 DK 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1104	Now if you will permit me, I need to ask some more questions about your relationship with your (last) husband/partner. If we should come to any question that you do not want to answer, just let me know and we will go on to the next question.		
	A (Does/did) your (last) husband/partner ever:	B How often did this happen during the last 12 months: often, only sometimes, or not at all?	
		OFTEN / SOME-TIMES / NOT AT ALL	
	a) say or do something to humiliate you in front of others?	YES 1 → / NO 2 ↓ — 1 / 2 / 3	
	b) threaten to hurt or harm you or someone close to you?	YES 1 → / NO 2 ↓ — 1 / 2 / 3	
	c) insult you or make you feel bad about yourself?	YES 1 → / NO 2 ↓ — 1 / 2 / 3	
1105	A (Does/did) your (last) husband/partner ever do any of the following things to you:	B How often did this happen during the last 12 months: often, only sometimes, or not at all?	
		OFTEN / SOME-TIMES / NOT AT ALL	
	a) push you, shake you, or throw something at you?	YES 1 → / NO 2 ↓ — 1 / 2 / 3	
	b) slap you?	YES 1 → / NO 2 ↓ — 1 / 2 / 3	
	c) twist your arm or pull your hair?	YES 1 → / NO 2 ↓ — 1 / 2 / 3	
	d) punch you with his fist or with something that could hurt you?	YES 1 → / NO 2 ↓ — 1 / 2 / 3	
	e) kick you, drag you or beat you up?	YES 1 → / NO 2 ↓ — 1 / 2 / 3	
	f) try to choke you or burn you on purpose?	YES 1 → / NO 2 ↓ — 1 / 2 / 3	
	g) threaten or attack you with a knife, gun, or any other weapon?	YES 1 → / NO 2 ↓ — 1 / 2 / 3	
	h) physically force you to have sexual intercourse with him even when you did not want to?	YES 1 → / NO 2 ↓ — 1 / 2 / 3	
	i) force you to perform any sexual acts you did not want to?	YES 1 → / NO 2 ↓ — 1 / 2 / 3	
1106	CHECK 1105A (a-i): AT LEAST ONE 'YES' ☐ ↓ / NOT A SINGLE 'YES' ☐ →		1109
1107	How long after you first got married to/started living with your (last) husband/partner did (this/any of these things) first happen? IF LESS THAN ONE YEAR, RECORD '00'.	NUMBER OF YEARS . . . . . ☐☐ BEFORE MARRIAGE/BEFORE LIVING TOGETHER 95	
1108	Did the following ever happen as a result of what your (last) husband/partner did to you:		
	a) You had cuts, bruises or aches?	YES . . . . . 1 / NO 2	
	b) You had eye injuries, sprains, dislocations, or burns?	YES . . . . . 1 / NO 2	
	c) You had deep wounds, broken bones, broken teeth, or any other serious injury?	YES . . . . . 1 / NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1109	Have you ever hit, slapped, kicked, or done anything else to physically hurt your (last) husband/partner at times when he was not already beating or physically hurting you?	YES . . . . . 1 NO 2	→ 1112
1111	In the last 12 months, how often have you done this to your (last) husband/partner: often, only sometimes, or not at all?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NOT AT ALL 3	
1112	Does (did) your (last) husband/partner drink alcohol?	YES . . . . . 1 NO 2	→ 1114
1113	How often does (did) he get drunk: often, only sometimes, or never?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NEVER 3	
1114	CHECK 601 AND 602: EVER MARRIED/LIVED WITH A MAN → From the time you were 15 years old has anyone other than your (current/last) husband/partner hit, slapped, kicked, or done anything else to hurt you physically? NEVER MARRIED/ NEVER LIVED WITH A MAN → From the time you were 15 years old has anyone ever hit, slapped, kicked, or done anything else to hurt you physically?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER 3	→ 1117
1115	Who has hurt you in this way? Anyone else? RECORD ALL MENTIONED.	MOTHER/STEP-MOTHER . . . . . A FATHER/STEP-FATHER . . . . . B SISTER/BROTHER . . . . . C DAUGHTER/SON . . . . . D OTHER RELATIVE . . . . . E FORMER HUSBAND/PARTNER . . . . . F CURRENT BOYFRIEND . . . . . G FORMER BOYFRIEND . . . . . H MOTHER-IN-LAW . . . . . I FATHER-IN-LAW . . . . . J OTHER IN-LAW . . . . . K TEACHER . . . . . L EMPLOYER/SOMEONE AT WORK . . . . . M POLICE/SOLDIER . . . . . N OTHER _____ (SPECIFY) X	
1116	In the last 12 months, how often have you been hit, slapped, kicked, or physically hurt by this/these person(s): often, only sometimes, or not at all?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NOT AT ALL 3	
1117	CHECK 201, 226, AND 229: EVER BEEN PREGNANT (YES ON 201 OR 226 OR 229) NEVER BEEN PREGNANT →		1120
1118	Has any one ever hit, slapped, kicked, or done anything else to hurt you physically while you were pregnant?	YES . . . . . 1 NO 2	→ 1120
1119	Who has done any of these things to physically hurt you while you were pregnant? Anyone else? RECORD ALL MENTIONED.	CURRENT HUSBAND/ LIVE-IN PARTNER . . . . . A MOTHER/STEP-MOTHER . . . . . B FATHER/STEP-FATHER . . . . . C SISTER/BROTHER . . . . . D DAUGHTER/SON . . . . . E OTHER RELATIVE . . . . . F FORMER HUSBAND/ PARTNER . . . . . G CURRENT BOYFRIEND . . . . . H FORMER BOYFRIEND . . . . . I MOTHER-IN-LAW . . . . . J FATHER-IN-LAW . . . . . K OTHER IN-LAW . . . . . L TEACHER . . . . . M EMPLOYER/SOMEONE AT WORK . . . . . N POLICE/SOLDIER . . . . . O OTHER _____ (SPECIFY) X	→ 1120 → 1120
1119A	Have you ever lost your pregnancy as a result of what your (last) husband/partner did to you?	YES . . . . . 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1120	CHECK 618: EVER HAD SEX? HAS EVER HAD SEX ☐ NEVER HAD SEX ☐ → 1125		
1121	The first time you had sexual intercourse, would you say that you had it because you wanted to, or because you were forced to have it against your will?	WANTED TO . . . . . 1 FORCED TO . . . . . 2 REFUSED TO ANSWER/ NO RESPONSE 3	
1122	CHECK 601 AND 602: EVER MARRIED/LIVED WITH A MAN ☐ → In the last 12 months, has anyone other than your husband/partner forced you to have sexual intercourse against your will? NEVER MARRIED/NEVER LIVED WITH A MAN ☐ → In the last 12 months has anyone forced you to have sexual intercourse against your will?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER 3	
1123	CHECK 1121 AND 1122: 1121 ='1' OR '3' **AND** 1122 ='2' OR '3' ☐ OTHER ☐ → 1126		
1124	CHECK 1105A(h) and 1105A(i): 1105A(h) IS NOT '1' **AND** 1105A(i) IS NOT '1' ☐ OTHER ☐ → 1126		
1125	At any time in your life, as a child or as an adult, has anyone ever forced you in any way to have sexual intercourse or perform any other sexual acts?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER 3	→ 1128
1126	How old were you the first time you were forced to have sexual intercourse or perform any other sexual acts?	AGE IN COMPLETED YEARS . . . . . ☐☐ DON'T KNOW 98	
1127	Who was the person who forced you at that time?	CURRENT HUSBAND/PARTNER . . . . . 01 FORMER HUSBAND/PARTNER . . . . . 02 CURRENT/FORMER BOYFRIEND . . . . . 03 FATHER . . . . . 04 STEP FATHER . . . . . 05 OTHER RELATIVE . . . . . 06 IN-LAW . . . . . 07 OWN FRIEND/ACQUAINTANCE . . . . . 08 FAMILY FRIEND . . . . . 09 TEACHER . . . . . 10 EMPLOYER/SOMEONE AT WORK . . . . . 11 POLICE/SOLDIER . . . . . 12 PRIEST/RELIGIOUS LEADER . . . . . 13 STRANGER . . . . . 14 OTHER _____ 96 (SPECIFY)	
1128	CHECK 1105A (a-i), 1114, 1122 AND 1125: AT LEAST ONE 'YES' ☐ NOT A SINGLE 'YES' ☐ → 1132		
1129	Thinking about what you yourself have experienced among the different things we have been talking about, have you ever tried to seek help to stop (the/these) person(s) from doing this to you again?	YES . . . . . 1 NO 2	→ 1131
1130	From whom have you sought help? Anyone else? RECORD ALL MENTIONED.	OWN FAMILY . . . . . A HUSBAND/PARTNER'S FAMILY . . . . . B CURRENT/LAST/LATE HUSBAND/PARTNER . . . . . C CURRENT/FORMER BOYFRIEND . . . . . D MALE FRIEND . . . . . E FEMALE FRIEND . . . . . F NEIGHBOR . . . . . G RELIGIOUS LEADER . . . . . H DOCTOR/MEDICAL PERSONNEL . . . . . I POLICE . . . . . J LAWYER . . . . . K SOCIAL SERVICE ORGANIZATION . . . . . L COMMUNITYLEADER/LOCAL ADMIN . . . . . M OTHER _____ X (SPECIFY)	→ 1132

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1131	Have you ever told any one else about this?	YES . . . . . 1 NO 2	
1132	As far as you know, did your father ever beat your mother?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
1132A	As far as you know, did your mother ever beat your father?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

THANK THE RESPONDENT FOR HER COOPERATION AND REASSURE HER ABOUT THE CONFIDENTIALITY OF HER ANSWERS.
FILL OUT THE QUESTIONS BELOW WITH REFERENCE TO THE DOMESTIC VIOLENCE MODULE ONLY.

			YES ONCE	YES, MORE THAN ONCE	NO
1133	DID YOU HAVE TO INTERRUPT THE INTERVIEW BECAUSE SOME ADULT WAS TRYING TO LISTEN, OR CAME INTO THE ROOM, OR INTERFERED IN ANY OTHER WAY?	HUSBAND	1	2	3
		OTHER MALE ADULT	1	2	3
		FEMALE ADULT	1	2	3
1134	INTERVIEWER'S COMMENTS / EXPLANATION FOR NOT COMPLETING THE DOMESTIC VIOLENCE MODULE				
1135	RECORD THE TIME.	HOURS . . . . . ☐☐ MINUTES . . . . . ☐☐			

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____

INSTRUCTIONS:
ONLY ONE CODE SHOULD APPEAR IN ANY BOX.
ALL MONTHS SHOULD BE FILLED IN.

INFORMATION TO BE CODED FOR EACH COLUMN

BIRTHS, PREGNANCIES, CONTRACEPTIVE USE

- B BIRTHS
- P PREGNANCIES
- T TERMINATIONS

- 0 NO METHOD
- 1 FEMALE STERILIZATION
- 2 MALE STERILIZATION
- 3 PILL
- 4 IUD
- 5 INJECTABLES
- 6 IMPLANTS
- 7 MALE CONDOM
- 8 FEMALE CONDOM
- 9 DIAPHRAGM
- J FOAM OR JELLY
- K LACTATIONAL AMENORRHEA METHOD
- L RHYTHM METHOD
- M WITHDRAWAL
- X OTHER _____ (SPECIFY)

	12	DEC	01		
	11	NOV	02		
	10	OCT	03		
	09	SEP	04		
2	08	AUG	05		2
0	07	JUL	06		0
0	06	JUN	07		0
8	05	MAY	08		8
	04	APR	09		
	03	MAR	10		
	02	FEB	11		
	01	JAN	12		
	12	DEC	13		
	11	NOV	14		
	10	OCT	15		
	09	SEP	16		
2	08	AUG	17		2
0	07	JUL	18		0
0	06	JUN	19		0
7	05	MAY	20		7
	04	APR	21		
	03	MAR	22		
	02	FEB	23		
	01	JAN	24		
	12	DEC	25		
	11	NOV	26		
	10	OCT	27		
	09	SEP	28		
2	08	AUG	29		2
0	07	JUL	30		0
0	06	JUN	31		0
6	05	MAY	32		6
	04	APR	33		
	03	MAR	34		
	02	FEB	35		
	01	JAN	36		
	12	DEC	37		
	11	NOV	38		
	10	OCT	39		
	09	SEP	40		
2	08	AUG	41		2
0	07	JUL	42		0
0	06	JUN	43		0
5	05	MAY	44		5
	04	APR	45		
	03	MAR	46		
	02	FEB	47		
	01	JAN	48		
	12	DEC	49		
	11	NOV	50		
	10	OCT	51		
	09	SEP	52		
2	08	AUG	53		2
0	07	JUL	54		0
0	06	JUN	55		0
4	05	MAY	56		4
	04	APR	57		
	03	MAR	58		
	02	FEB	59		
	01	JAN	60		
	12	DEC	61		
	11	NOV	62		
	10	OCT	63		
	09	SEP	64		
2	08	AUG	65		2
0	07	JUL	66		0
0	06	JUN	67		0
3	05	MAY	68		3
	04	APR	69		
	03	MAR	70		
	02	FEB	71		
	01	JAN	72		

SEPTEMBER 2008

GHANA DEMOGRAPHIC AND HEALTH SURVEY
MAN'S QUESTIONNAIRE

MINISTRY OF HEALTH, GHANA

GHANA STATISTICAL SERVICE

IDENTIFICATION

LOCALITY NAME _____

NAME OF HOUSEHOLD HEAD _____

EA NUMBER . . . . . | | |

STRUCTURE NUMBER . . . . . | | |

HOUSEHOLD NUMBER . . . . . | | |

REGION . . . . . | |

DISTRICT . . . . . | |

URBAN/RURAL (URBAN = 1; RURAL = 2) . . . . . |_|

CITY/LARGE TOWN/SMALL TOWN/VILLAGE (CITY=1, LARGE TOWN=2, SMALL TOWN=3, VILLAGE=4) |_|

NAME AND LINE NUMBER OF MAN _____ | |

MAN SELECTED FOR DV INTERVIEW (YES = 1; NO = 2) . . . . . |_|

CHECK COLUMN 10 IN HOUSEHOLD QUESTIONNAIRE. IF BOX IS MARKED 'DV' RECORD 1.
MAKE SURE LINE NUMBER CORRESPONDS TO THE MAN'S LINE NUMBER SELECTED FOR DV.

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE	_____	_____	_____	DAY
				MONTH
				YEAR 2008
INTERVIEWER'S NAME	_____	_____	_____	INT. NUMBER
RESULT*	_____	_____	_____	RESULT
NEXT VISIT: DATE	_____	_____		TOTAL NUMBER OF VISITS
TIME	_____	_____		

*RESULT CODES:

1	COMPLETED	4	REFUSED		
2	NOT AT HOME	5	PARTLY COMPLETED	7	OTHER _____ (SPECIFY)
3	POSTPONED	6	INCAPACITATED		

LANGUAGE OF QUESTIONNAIRE: 1 LANGUAGE OF INTERVIEW: | | LANGUAGE OF RESPONDENT | |

LANGUAGE CODES: ENGLISH = 1, AKAN = 2, GA = 3, EWE = 4, NZEMA = 5, DAGBANI = 6, OTHER = 7 (SPECIFY) _____

TRANSLATOR USED: (YES = 1, NO = 2) |_|

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

SECTION 1. RESPONDENT'S BACKGROUND

INTRODUCTION AND CONSENT

INFORMED CONSENT

Hello. My name is _____ and I am working for Ghana Statistical Service and Ministry of Health. We are conducting a national survey to ask men and women about various health issues. We would very much appreciate your participation in this survey. This information will help the government to plan health services. The survey usually takes about 20 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to anyone other than members of our survey team.

Participation in this survey is voluntary, and if we should come to any question you don't want to answer, just let me know and I will go on to the next question; or you can stop the interview at any time. However, we hope that you will participate in this survey since your views are important.

At this time, do you want to ask me anything about the survey? May I begin the interview now?

Signature of interviewer: _____ Date: _____

RESPONDENT AGREES TO BE INTERVIEWED . . . . . 1 ↓ RESPONDENT DOES NOT AGREE TO BE INTERVIEWED . . . 2 → END

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME.	HOUR . . . . . ☐☐ MINUTES . . . . . ☐☐	
102	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? IF LESS THAN ONE YEAR, RECORD '00' YEARS.	YEARS . . . . . ☐☐ ALWAYS . . . . . 95 VISITOR 96	→ 104
103	Just before you moved here, did you live in a city, in a town, or in the countryside?	CITY . . . . . 1 TOWN . . . . . 2 COUNTRYSIDE 3	
104	In the last 12 months, on how many separate occasions have you traveled away from your home community and slept away?	NUMBER OF TRIPS . . . . . ☐☐ NONE 00	→ 106
105	In the last 12 months, have you been away from your home community for more than one month at a time?	YES . . . . . 1 NO 2	
106	In what month and year were you born?	MONTH . . . . . ☐☐ DON'T KNOW MONTH . . . . . 98 YEAR . . . . . ☐☐☐☐ DON'T KNOW YEAR 9998	
107	How old were you at your last birthday? COMPARE AND CORRECT 106 AND/OR 107 IF INCONSISTENT.	AGE IN COMPLETED YEARS ☐☐	
108	Have you ever attended school?	YES . . . . . 1 NO 2	→ 112
109	What is the highest level of school you attended: primary, middle/JSS, secondary/SSS or higher?	PRIMARY . . . . . 1 MIDDLE/JSS . . . . . 2 SECONDARY/SSS . . . . . 3 HIGHER 4	
110	What is the highest grade you completed at that level?	GRADE . . . . . ☐☐	
111	CHECK 109: PRIMARY OR MIDDLE/JSS ↓ SECONDARY/SSS OR HIGHER ☐		→ 115

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
112	Now I would like you to read this sentence to me. SHOW LITERACY CARD TO RESPONDENT. IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me?	CANNOT READ AT ALL . . . . . 1 ABLE TO READ ONLY PARTS OF SENTENCE . . . . . 2 ABLE TO READ WHOLE SENTENCE. . 3 NO CARD WITH REQUIRED LANGUAGE _____ 4 (SPECIFY LANGUAGE) BLIND/VISUALLY IMPAIRED 5	
113	Have you ever participated in a literacy program or any other program that involves learning to read or write (not including primary school)?	YES . . . . . 1 NO 2	
114	CHECK 112: CODE '2', '3', OR '4' CIRCLED ☐ → CODE '1' OR '5' CIRCLED ☐ → 116		
115	Do you read a newspaper or magazine almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
116	Do you listen to the radio almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
117	Do you watch television almost every day, at least once a week, less than once a week or not at all?	ALMOST EVERY DAY . . . . . 1 AT LEAST ONCE A WEEK . . . . . 2 LESS THAN ONCE A WEEK . . . . . 3 NOT AT ALL 4	
118	What is your religion?	CATHOLIC . . . . . 01 ANGLICAN . . . . . 02 METHODIST . . . . . 03 PRESBYTERIAN . . . . . 04 PENTECOSTAL/CHARISMATIC . . . . . 05 OTHER CHRISTIAN . . . . . 06 MUSLIM . . . . . 07 TRADITIONAL/SPIRITUALIST . . . . . 08 NO RELIGION . . . . . 09 OTHER _____ 96 (SPECIFY)	
119	To which ethnic group do you belong?	AKAN . . . . . 01 GA/DANGME . . . . . 02 EWE . . . . . 03 GUAN . . . . . 04 MOLE-DAGBANI . . . . . 05 GRUSSI . . . . . 06 GRUMA . . . . . 07 MANDE . . . . . 08 OTHER _____ 96 (SPECIFY)	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about any children you have had during your life. I am interested in all of the children that are biologically yours, even if they are not legally yours or do not have your last name. Have you ever fathered any children with any woman?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 206
202	Do you have any sons or daughters that you have fathered who are now living with you?	YES . . . . . 1 NO 2	→ 204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME . . . . . [ ][ ] DAUGHTERS AT HOME . . . . . [ ][ ]	
204	Do you have any sons or daughters that you have fathered who are alive but do not live with you?	YES . . . . . 1 NO 2	→ 206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE . . . . . [ ][ ] DAUGHTERS ELSEWHERE . . . . [ ][ ]	
206	Have you ever fathered a son or a daughter who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but did not survive?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD . . . . . [ ][ ] GIRLS DEAD . . . . . [ ][ ]	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL CHILDREN . . . . . [ ][ ]	
209	CHECK 208: HAS HAD MORE THAN ONE CHILD ↓ HAS HAD ONLY ONE CHILD → 212 HAS NOT HAD ANY CHILDREN → 301		
210	Did all of the children you have fathered have the same biological mother?	YES . . . . . 1 NO 2	→ 212
211	In all, how many women have you fathered children with?	NUMBER OF WOMEN . . . . . [ ][ ]	
212	How old were you when your (first) child was born?	AGE IN YEARS . . . . . [ ][ ]	
213	CHECK 203 AND 205: AT LEAST ONE LIVING CHILD ↓ NO LIVING CHILDREN → 301		
214	How many years old is your (youngest) child?	AGE IN YEARS . . . . . [ ][ ]	
215	CHECK 214: (YOUNGEST) CHILD IS AGE 0-3 YEARS ↓ OTHER → 301		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
216	What is the name of your (youngest) child? WRITE NAME OF (YOUNGEST) CHILD _____ (NAME OF (YOUNGEST) CHILD)		
217	When (NAME)'s mother was pregnant with (NAME), did she have any antenatal check-ups?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 3	→ 219
218	Were you ever present during any of those antenatal check-ups?	PRESENT . . . . . 1 NOT PRESENT 2	
219	Was (NAME) born in a hospital or health facility?	HOSPITAL/HEALTH FACILITY . . . . . 1 OTHER 2	→ 221
220	What was the main reason why (NAME)'s mother did not deliver in a hospital or health facility?	COSTS TOO MUCH . . . . . 01 FACILITY NOT OPEN . . . . . 02 TOO FAR/NO TRANSPORTATION . . . 03 DON'T TRUST FACILITY/POOR QUALITY SERVICE . . . . . 04 NO FEMALE PROVIDER AT FACILITY . 05 NOT THE FIRST CHILD . . . . . 06 CHILD'S MOTHER DID NOT THINK IT WAS NECESSARY . . . . . 07 HE DID NOT THINK IT WAS NECESSARY . . . . . 08 FAMILY DID NOT THINK NECESSARY 09 FAMILY/HUSBAND DID NOT ALLOW 10 NOT CUSTOMARY 11 S/HE DID NOT KNOW WHERE TO GO . . 12 HE COULD NOT ACCOMPANY HER . . 13 INCONVENTIENT SERVICE HOUR . . . . 14 LONG WAITING TIME . . . . . 15 OTHER _____ 96 (SPECIFY) DON"T KNOW 98	
221	When a child has diarrhea, how much fluid should he or she be given to drink: more than usual, the same amount as usual, less than usual, or should he or she not be given anything to drink at all?	MORE THAN USUAL . . . . . 1 ABOUT THE SAME . . . . . 2 LESS THAN USUAL . . . . . 3 NOTHING TO DRINK . . . . . 4 DON'T KNOW 8	

SECTION 3. CONTRACEPTION

301	Now I would like to talk about family planning - the various ways or methods that a couple can use to delay or avoid a pregnancy. Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)? CIRCLE CODE 1 IN 301 FOR EACH METHOD MENTIONED SPONTANEOUSLY. THEN PROCEED DOWN COLUMN 301, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 1 IF METHOD IS RECOGNIZED, AND CODE 2 IF NOT RECOGNIZED. THEN, FOR METHODS 02, 07, 11, AND 12, ASK 302 IF 301 HAS CODE 1 CIRCLED.		302 Have you ever used (METHOD)?
01	FEMALE STERILIZATION Women can have an operation to avoid having any more children.	YES . . . . . 1 NO 2	
02	MALE STERILIZATION Men can have an operation to avoid having any more children.	YES . . . . . 1 NO . . . . . 2 →	Have you ever had an operation to avoid having any more children? YES . . . . . 1 NO 2
03	PILL Women can take a pill every day to avoid becoming pregnant.	YES . . . . . 1 NO 2	
04	IUD Women can have a loop or coil placed inside them by a doctor or a nurse.	YES . . . . . 1 NO 2	
05	INJECTABLES Women can have an injection by a health provider that stops them from becoming pregnant for one or more months.	YES . . . . . 1 NO 2	
06	IMPLANTS Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for one or more years.	YES . . . . . 1 NO 2	
07	MALE CONDOM Men can put a rubber sheath on their penis before sexual ntercourse.	YES . . . . . 1 NO . . . . . 2 →	YES . . . . . 1 NO 2
08	FEMALE CONDOM Women can place a sheath in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	
09	DIAPHRAGM Women can place a thin flexible disk in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	
10	FOAM OR JELLY Women can place a suppository, jelly, or cream in their vagina before sexual intercourse.	YES . . . . . 1 NO 2	
11	RHYTHM METHOD (CALENDAR) Every month that a woman is sexually active she can avoid pregnancy by not having sexual intercourse on the days of the month she is most likely to get pregnant.	YES . . . . . 1 NO . . . . . 2 →	YES . . . . . 1 NO 2
12	WITHDRAWAL Men can be careful and pull out before climax.	YES . . . . . 1 NO . . . . . 2 →	YES . . . . . 1 NO 2
13	LACTATIONAL AMENORRHEA METHOD (LAM)	YES . . . . . 1 NO 2	
14	EMERGENCY CONTRACEPTION As an emergency measure after sexual intercourse, women can take special pills at any time within 5 days to prevent pregnancy.	YES . . . . . 1 NO 2	
15	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	YES . . . . . 1 _____ (SPECIFY) _____ (SPECIFY) NO 2	YES . . . . . 1 NO . . . . . 2 YES . . . . . 1 NO 2

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
303	In the last few months have you: Heard about family planning on the radio? Seen about family planning on the television? Read about family planning in a newspaper or magazine?	YES NO RADIO . . . . . 1 2 TELEVISION . . . . . 1 2 NEWSPAPER OR MAGAZINE 1 2	
304	In the last few months, have you discussed the practice of family planning with a health worker or health professional?	YES . . . . . 1 NO 2	
304A	In the last few months, have you discussed the practice of family planning with your wife/ cohabiting partner?	YES . . . . . 1 NO 2	
305	Now I would like to ask you about a woman's risk of pregnancy. From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant if she has sexual intercourse?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 307
306	Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?	JUST BEFORE HER PERIOD BEGINS . . . . . 1 DURING HER PERIOD . . . . . 2 RIGHT AFTER HER PERIOD HAS ENDED . . . . . 3 HALFWAY BETWEEN TWO PERIODS . . . . . 4 OTHER _____ 6 (SPECIFY) DON'T KNOW 8	
307	Do you think that a woman who is breastfeeding her baby can become pregnant?	YES . . . . . 1 NO . . . . . 2 DEPENDS . . . . . 3 DON'T KNOW 8	
308	I will now read you some statements about contraception. Please tell me if you agree or disagree with each one. a) Contraception is women's business and a man should not have to worry about it. b) Women who use contraception may become promiscuous. c) Having too many children may be dangerous for a woman d) It is better not to have more children than we can afford e) Children in smaller families are more likely to succeed	AGREE / DISAGREE / DK CONTRACEPTION WOMAN'S BUSINESS . 1 2 8 WOMAN MAY BECOME PROMISCUOUS . . . . 1 2 8 DANGEROUS F/WOMAN 1 2 8 CHILDREN NOT AFFORD 1 2 8 CHILDREN SUCCEED 1 2 8	
309	CHECK 301 (07) KNOWS MALE CONDOM YES ↓ NO →		→ 401
310	Do you know of a place where a person can get condoms?	YES . . . . . 1 NO 2	→ 401
311	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC . . . A GOVT. HEALTH CENTER . . . . . B GOVT. HEALTH POST/CHPS . . . . . C FAMILY PLANNING CLINIC . . . . . D MOBILE CLINIC . . . . . E FIELDWORKER/OUTREACH/ PEER EDUCATOR . . . . . F OTHER PUBLIC _____ G (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . H PRIVATE DOCTOR . . . . . I PHARMACY . . . . . J CHEMICAL/DRUG STORE K FP/PPAG CLINIC . . . . . L MATERNITY HOME. . . . . M OTHER PRIVATE MEDICAL _____ N (SPECIFY) OTHER SOURCE SHOP/MARKET . . . . . O CHURCH . . . . . P COMMUNITY VOLUNTEER . . . . . Q FRIEND/RELATIVE . . . . . R OTHER _____ (SPECIFY) X	
312	If you wanted to, could you yourself get a condom?	YES . . . . . 1 NO 2	

SECTION 4. MARRIAGE AND SEXUAL ACTIVITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
401	Are you currently married or living together with a woman as if married?	YES, CURRENTLY MARRIED . . . . . 1 YES, LIVING WITH A WOMAN . . . . . 2 NO, NOT IN UNION 3	→ 404
402	Have you ever been married or lived together with a woman as if married?	YES, FORMERLY MARRIED . . . . . 1 YES, LIVED WITH A WOMAN . . . . . 2 NO 3	→ 413
403	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED . . . . . 1 DIVORCED . . . . . 2 SEPARATED 3	→ 410
404	Is your wife/partner living with you now or is she staying elsewhere?	LIVING WITH HIM . . . . . 1 STAYING ELSEWHERE 2	
405	Do you have more than one wife or woman you live with as if married?	YES . . . . . 1 NO 2	→ 407
406	Altogether, how many wives do you have or other partners do you live with as if married?	TOTAL NUMBER OF WIVES AND LIVE-IN PARTNERS . . . ☐☐	
407	CHECK 405: ONE WIFE/ PARTNER ☐ → Please tell me the name of (your wife/the woman you are living with as if married). MORE THAN ONE WIFE/ PARTNER ☐ → Please tell me the name of each of your current wives and/or of each woman you are living with as if married. RECORD THE NAME AND THE LINE NUMBER FROM THE HOUSEHOLD QUESTIONNAIRE FOR EACH WIFE AND LIVE-IN PARTNER. IF A WOMAN IS NOT LISTED IN THE HOUSEHOLD, RECORD '00'. ASK 408 FOR EACH PERSON.	NAME _____ LINE NUMBER ☐☐ 408 How old was (NAME) on her last birthday? AGE ☐☐ _____ ☐☐ ☐☐ _____ ☐☐ ☐☐ _____ ☐☐ ☐☐ _____ ☐☐ ☐☐	
409	CHECK 407: ONE WIFE/ PARTNER ☐ → MORE THAN ONE WIFE/ PARTNER ☐		→ 411A
410	Have you been married or lived with a woman only once or more than once?	ONLY ONCE . . . . . 1 MORE THAN ONCE 2	→ 411A
411	In what month and year did you start living with your (wife/ partner)?	MONTH . . . . . ☐☐	
411A	Now I would like to ask a question about your first wife/partner. In what month and year did you start living with your first wife/ partner?	DON'T KNOW MONTH . . . . . 98 YEAR . . . . . ☐☐☐☐ DON'T KNOW YEAR 9998	→ 413
412	How old were you when you first started living with her?	AGE . . . . . ☐☐	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
413	CHECK FOR THE PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
414	Now I would like to ask you some questions about sexual activity in order to gain a better understanding of some important life issues. How old were you when you had sexual intercourse for the very first time?	NEVER HAD SEXUAL INTERCOURSE . . . . . 00 AGE IN YEARS . . . . . ☐☐ FIRST TIME WHEN STARTED LIVING WITH (FIRST) WIFE/PARTNER 95	→ 417 → 417
415	CHECK 107: AGE 15-24 ☐ ↓ AGE 25-59 ☐		→ 501
416	Do you intend to wait until you get married to have sexual intercourse for the first time?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/UNSURE 8	→ 501
417	CHECK 107: AGE 15-24 ☐ ↓ AGE 25-59 ☐		→ 419
418	The <u>first</u> time you had sexual intercourse, was a condom used?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW/DON'T REMEMBER . . . 8	
419	When was the <u>last</u> time you had sexual intercourse? IF LESS THAN 12 MONTHS, ANSWER MUST BE RECORDED IN DAYS, WEEKS OR MONTHS. IF 12 MONTHS (ONE YEAR) OR MORE, ANSWER MUST BE RECORDED IN YEARS.	DAYS AGO . . . . . 1 ☐☐ WEEKS AGO . . . . . 2 ☐☐ MONTHS AGO . . . . . 3 ☐☐ YEARS AGO . . . . . 4 ☐☐	→ 435

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
420	Now I would like to ask you some questions about your recent sexual activity. Let me assure you again that your answers are completely confidential and will not be told to anyone. If we should come to any question that you don't want to answer, just let me know and we will go to the next question.			→ SKIP TO 422
421	When was the last time you had sexual intercourse with this person?		DAYS . 1 WEEKS 2 MONTHS 3	DAYS . 1 WEEKS 2 MONTHS 3
422	The last time you had sexual intercourse (with this second/third person), was a male condom used?	YES . . . . 1 NO . . . . 2 (SKIP TO 424)	YES . . . . 1 NO . . . . 2 (SKIP TO 424)	YES . . . . 1 NO . . . . 2 (SKIP TO 424)
423	Was a condom used every time you had sexual intercourse with this person in the last 12 months?	YES . . . . 1 NO 2	YES . . . . 1 NO 2	YES . . . . 1 NO 2
424	What was your relationship to this (second/third) person with whom you had sexual intercourse? IF GIRLFRIEND: Were you living together as if married? IF YES, CIRCLE '2'. IF NO, CIRCLE '3'.	WIFE . . . . 1 (SKIP TO 426) LIVE-IN PARTNER . . . . 2 GIRLFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . . 4 PROSTITUTE . . . . 5 OTHER ____________ 6 (SPECIFY)	WIFE . . . . 1 (SKIP TO 426) LIVE-IN PARTNER . . . . 2 GIRLFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . . 4 PROSTITUTE . . . . 5 OTHER ____________ 6 (SPECIFY)	WIFE . . . . 1 (SKIP TO 426) LIVE-IN PARTNER . . . . 2 GIRLFRIEND NOT LIVING WITH RESPONDENT . . . . 3 CASUAL ACQUAINTANCE . . . 4 PROSTITUTE . . . . 5 OTHER ____________ 6 (SPECIFY)
425	For how long (have you had/did you have) a sexual relationship with this (second/third) person? IF ONLY HAD SEXUAL RELATIONS WITH THIS PERSON ONCE, RECORD '01' DAYS.	DAYS . 1 MONTHS 2 YEARS 3	DAYS . 1 MONTHS 2 YEARS 3	DAYS . 1 MONTHS 2 YEARS 3
426	The last time you had sexual intercourse with this (second/third) person, did you or this person drink alcohol?	YES . . . . 1 NO . . . . 2 (SKIP TO 428)	YES . . . . 1 NO . . . . 2 (SKIP TO 428)	YES . . . . 1 NO . . . . 2 (SKIP TO 429)
427	Were you or your partner drunk at that time? IF YES: Who was drunk?	RESPONDENT ONLY 1 PARTNER ONLY . . . 2 RESPONDENT AND PARTNER BOTH . 3 NEITHER 4	RESPONDENT ONLY 1 PARTNER ONLY . . . 2 RESPONDENT AND PARTNER BOTH . 3 NEITHER 4	RESPONDENT ONLY 1 PARTNER ONLY . . . 2 RESPONDENT AND PARTNER BOTH . 3 NEITHER 4
428	Apart from [this person/these two people], have you had sexual intercourse with any other person in the last 12 months?	YES . . . . 1 (GO BACK TO 421 IN NEXT COLUMN) NO . . . . 2 (SKIP TO 430)	YES . . . . 1 (GO BACK TO 421 IN NEXT COLUMN) NO . . . . 2 (SKIP TO 430)	
429	In total, with how many different people have you had sexual intercourse in the last 12 months? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.'			NUMBER OF PARTNERS LAST 12 MONTHS . . . DON'T KNOW . . . 98

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
430	CHECK 424 (ALL COLUMNS): AT LEAST ONE PARTNER IS PROSTITUTE ☐ NO PARTNERS ARE PROSTITUTES ☐ → 432		
431	CHECK 424 AND 422 (ALL COLUMNS): CONDOM USED WITH EVERY PROSTITUTE ☐ → 434 OTHER ☐ → 434A		
432	In the last 12 months, did you pay anyone in exchange for having sexual intercourse?	YES . . . . . 1 NO . . . . . 2 → 434A	
433	The last time you paid someone in exchange for having sexual intercourse, was a condom used?	YES . . . . . 1 NO . . . . . 2 → 434A	
434	Was a condom used during sexual intercourse every time you paid someone in exchange for having sexual intercourse in the last 12 months?	YES . . . . . 1 NO . . . . . 2 DK 8	
434A	In total, with how many different people have you had sexual intercourse in the last month? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.'	NUMBER OF PARTNERS IN MONTH . . . . . ☐☐ DON'T KNOW 98	
435	In total, with how many different people have you had sexual intercourse in your lifetime? IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE. IF NUMBER OF PARTNERS IS GREATER THAN 95, WRITE '95.'	NUMBER OF PARTNERS IN LIFETIME . . . . . ☐☐ DON'T KNOW 98	
436	CHECK 422, MOST RECENT PARTNER (FIRST COLUMN): NOT ASKED ☐ → 442 CONDOM USED ☐ NO CONDOM USED ☐ → 442		
437	You told me that a condom was used the last time you had sex. May I see the package of condoms you were using at that time? RECORD NAME OF BRAND IF PACKAGE SEEN.	PACKAGE SEEN . . . . . 1 BRAND NAME _____ (SPECIFY) ☐☐ DOES NOT HAVE/NOT SEEN 2	→ 439
438	Do you know the brand name of the condom used at that time? RECORD NAME OF BRAND.	BRAND NAME _____ (SPECIFY) ☐☐ DON'T KNOW 98	
439	How many condoms did you get the last time?	NUMBER OF CONDOMS . . . . . ☐☐☐ DON'T KNOW 998	
440	The last time you obtained the condoms, how much did you pay in total, including the cost of the condom(s) and any consultation you may have had?	COST ..... ☐☐.☐☐ FREE . . . . . 99.95 DON'T KNOW 99.98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
441	From where did you obtain the condom the last time? PROBE TO IDENTIFY TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC . . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. HEALTH POST/CHPS . . . . 13 FAMILY PLANNING CLINIC . . . . . 14 MOBILE CLINIC . . . . . 15 FIELDWORKER/OUTREACH/ PEER EDUCATOR . . . . . 16 OTHER PUBLIC _____ 17 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC . . . . . 20 PRIVATE DOCTOR . . . . . 21 PHARMACY . . . . . 22 CHEMICAL/DRUG STORE . . . . . 23 FP/PPAG CLINIC . . . . . 24 MATERNITY HOME . . . . . 25 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) OTHER SOURCE SHOP/MARKET . . . . . 31 CHURCH . . . . . 32 COMMUNITY VOLUNTEER . . . . . 33 FRIEND/RELATIVE . . . . . 34 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
442	CHECK 302 (02): RESPONDENT EVER STERILIZED NO ☐ YES ☐ → 501		
443	The last time you had sex did you or your partner use any method (other than a condom) to avoid or prevent a pregnancy?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	→ 501
444	What method did you or your partner use? PROBE: Did you or your partner use any other method to prevent pregnancy? RECORD ALL MENTIONED.	FEMALE STERILIZATION . . . . . A PILL . . . . . B IUD . . . . . C INJECTABLES . . . . . D IMPLANTS . . . . . E FEMALE CONDOM . . . . . F DIAPHRAGM . . . . . G FOAM/JELLY . . . . . H LAM . . . . . I RHYTHM METHOD . . . . . J WITHDRAWAL . . . . . K OTHER _____ X (SPECIFY)	

SECTION 5. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	CHECK 407: ONE OR MORE WIVES/PARTNERS ☐ QUESTION NOT ASKED ☐ →		508
502	CHECK 302: MAN NOT STERILIZED ☐ MAN STERILIZED ☐ →		508
503	(Is your wife (partner)/Are any of your wives (partners)) currently pregnant?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
504	CHECK 503: NO WIFE/PARTNER PREGNANT OR DON'T KNOW ☐ Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? WIFE(WIVES)/ PARTNER(S) PREGNANT ☐ Now I have some questions about the future. After the child(ren) you and your (wife(wives)/partner(s)) are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD . . . . . 1 NO MORE/NONE . . . . . 2 COUPLE INFECUND . . . . . 3 WIFE (WIVES)/PARTNER(S) STERILIZED . . . . . 4 UNDECIDED/DON'T KNOW 8	508
505	CHECK 407: ONE WIFE/ PARTNER ☐ MORE THAN ONE WIFE/ PARTNER ☐ →		507
506	CHECK 503: WIFE/PARTNER NOT PREGNANT OR DON'T KNOW ☐ How long would you like to wait from now before the birth of (a/another) child? WIFE/PARTNER PREGNANT ☐ After the birth of the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 COUPLE INFECUND . . . . . 994 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	508
507	How long would you like to wait from now before the birth of (a/another) child?	MONTHS . . . . . 1 ☐☐ YEARS . . . . . 2 ☐☐ SOON/NOW . . . . . 993 HE/ALL HIS WIVES/PARTNERS ARE INFECUND . . . . . 994 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
508	CHECK 203 AND 205: HAS LIVING CHILDREN ☐↓ NO LIVING CHILDREN ☐↓ If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NONE . . . . . 00 NUMBER . . . . . ☐☐ OTHER _____ 96 (SPECIFY)	→ 601 → 601
509	How many of these children would you like to be boys, how many would you like to be girls and for how many would the sex not matter?	BOYS GIRLS EITHER NUMBER ☐☐ ☐☐ ☐☐ OTHER _____ 96 (SPECIFY)	

SECTION 6. EMPLOYMENT AND GENDER ROLES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Have you done any work in the last seven days?	YES . . . . . 1 NO 2	→604
602	Although you did not work in the last seven days, do you have any job or business from which you were absent for leave, illness, vacation, or any other such reason?	YES . . . . . 1 NO 2	→604
603	Have you done any work in the last 12 months?	YES . . . . . 1 NO 2	→613
604	What is your occupation, that is, what kind of work do you mainly do?	_____ ☐☐ _____ _____	
605	CHECK 604: WORKS IN AGRICULTURE ☐ DOES NOT WORK IN AGRICULTURE ☐		→607
606	Do you work mainly on your own land or on family land, or do you work on land that you rent from someone else, or do you work on someone else's land?	OWN LAND . . . . . 1 FAMILY LAND . . . . . 2 RENTED LAND . . . . . 3 SOMEONE ELSE'S LAND 4	
607	Do you do this work for a member of your family, for someone else, or are you self-employed?	FOR FAMILY MEMBER . . . . . 1 FOR SOMEONE ELSE . . . . . 2 SELF-EMPLOYED 3	
608	Do you usually work throughout the year, or do you work seasonally, or only once in a while?	THROUGHOUT THE YEAR . . . . . 1 SEASONALLY/PART OF THE YEAR . 2 ONCE IN A WHILE 3	
609	Are you paid in cash or kind for this work or are you not paid at all?	CASH ONLY . . . . . 1 CASH AND KIND . . . . . 2 IN KIND ONLY . . . . . 3 NOT PAID 4	
610	CHECK 407: ONE OR MORE WIVES/PARTNERS ☐ QUESTION NOT ASKED ☐		→613
611	CHECK 609: CODE 1 OR 2 CIRCLED ☐ OTHER ☐		→613
612	Who usually decides how the money you earn will be used: mainly you, mainly your (wife (wives)/partner(s)), or you and your (wife (wives)/partner(s)) jointly?	RESPONDENT . . . . . 1 WIFE(WIVES)/PARTNER(S) . . . . . 2 RESPONDENT AND WIFE (WIVES)/ PARTNER(S) JOINTLY . . . . . 3 OTHER _____ 6 SPECIFY	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
613	In a couple, who do you think should have the greater say in each of the following decisions: the husband, the wife or both equally:	HUS-BAND: 1 · WIFE: 2 · BOTH EQUALLY: 3 · DON'T KNOW/ DEPENDS: 8	
	a) making major household purchases?	a) 1 2 3 8	
	b) making purchases for daily household needs?	b) 1 2 3 8	
	c) deciding about visits to the wife's family or relatives?	c) 1 2 3 8	
	d) deciding what to do with the money she earns for her work?	d) 1 2 3 8	
	e) deciding how many children to have?	e) 1 2 3 8	
614	I will now read you some statements about pregnancy. Please tell me if you agree or disagree with them.	AGREE: 1 · DIS-AGREE: 2 · DK: 8	
	a) Childbearing is a woman's concern and there is no need for the father to get involved.	CHILDBEARING WOMAN'S CONCERN: 1 2 8	
	b) It is crucial for the mother's and child's health that a woman have assistance from a doctor or nurse at delivery.	DOCTOR/NURSE'S ASSISTANCE CRUCIAL: 1 2 8	
615	Sometimes a husband is annoyed or angered by things that his wife does. In your opinion, is a husband justified in hitting or beating his wife in the following situations:	YES: 1 · NO: 2 · DK: 8	
	If she goes out without telling him?	GOES OUT 1 2 8	
	If she neglects the children?	NEGL. CHILDREN . . . 1 2 8	
	If she argues with him?	ARGUES 1 2 8	
	If she refuses to have sex with him?	REFUSES SEX 1 2 8	
	If she burns the food?	BURNS FOOD 1 2 8	
616	Do you think that if a woman refuses to have sex with her husband when he wants her to, he has the right to…	YES: 1 · NO: 2 · DON'T KNOW/ DEPENDS: 8	
	a) Get angry and reprimand her?	a) 1 2 8	
	b) Refuse to give her money or other means of support?	b) 1 2 8	
	c) Use force and have sex with her even if she doesn't want to?	c) 1 2 8	
	d) Go ahead and have sex with another woman?	d) 1 2 8	

SECTION 7. HIV/AIDS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	Now I would like to talk about something else. Have you ever heard of an illness called AIDS?	YES . . . . . 1 NO 2	→ 733
702	Can people reduce their chances of getting the AIDS virus by having just one uninfected sex partner who has no other sex partners?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
703	Can people get the AIDS virus from mosquito bites?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
704	Can people reduce their chance of getting the AIDS virus by using a condom every time they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
705	Can people get the AIDS virus by sharing food with a person who has AIDS?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
706	Can people reduce their chance of getting the AIDS virus by not having sexual intercourse at all?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
707	Can people get the AIDS virus because of witchcraft or other supernatural means?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
708	Is it possible for a healthy-looking person to have the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
709	Can the virus that causes AIDS be transmitted from a mother to her baby: During pregnancy? During delivery? By breastfeeding?	YES NO DK DURING PREG. . . . . 1 2 8 DURING DELIVERY . . . 1 2 8 BREASTFEEDING . . . 1 2 8	
710	CHECK 709: AT LEAST ONE 'YES' ☐ ↓ OTHER ☐ →		712
711	Are there any special drugs that a doctor or a nurse can give to a woman infected with the AIDS virus to reduce the risk of transmission to the baby?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
712	Have you heard about special antiretroviral drugs (USE LOCAL NAME) that people infected with the AIDS virus can get from a doctor or a nurse to help them live longer?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
712A	CHECK FOR PRESENCE OF OTHERS. BEFORE CONTINUING, MAKE EVERY EFFORT TO ENSURE PRIVACY.		
713	I don't want to know the results, but have you ever been tested to see if you have the AIDS virus?	YES . . . . . 1 NO 2	→ 718
714	When was the last time you were tested?	LESS THAN 12 MONTHS AGO . . . . . 1 12 - 23 MONTHS AGO . . . . . 2 2 OR MORE YEARS AGO 3	
715	The last time you had the test, did you yourself ask for the test, was it offered to you and you accepted, or was it required?	ASKED FOR THE TEST . . . . . 1 OFFERED AND ACCEPTED . . . . . 2 REQUIRED 3	
716	I don't want to know the results, but did you get the results of the test?	YES . . . . . 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
717	Where was the test done? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER, VCT CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. HEALTH POST/CHPS . . . . . 13 STAND-ALONE VCT CENTER . . . 14 FAMILY PLANNING CLINIC . . . . . 15 MOBILE CLINIC . . . . . 16 FIELDWORKER/OUTREACH/ PEER EDUCATOR . . . . . 17 OTHER PUBLIC _____ 18 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . 21 STAND-ALONE VCT CENTER . . . 22 PHARMACY . . . . . 23 CHEMICAL/DRUG STORE 24 FP/PPAG CLINIC . . . . . 25 MATERNITY HOME . . . . . 26 OTHER PRIVATE MEDICAL _____ 27 (SPECIFY) OTHER _____ 96 (SPECIFY)	→ 720
718	Do you know of a place where people can go to get tested for the AIDS virus?	YES . . . . . 1 NO 2	→ 720
719	Where is that? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER VCT CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC . . . A GOVT. HEALTH CENTER . . . . . B GOVT. HEALTH POST/CHPS . . . . . C STAND-ALONE VCT CENTER . . . D FAMILY PLANNING CLINIC . . . . . E MOBILE CLINIC . . . . . F FIELDWORKER/OUTREACH/ PEER EDUCATOR . . . . . G OTHER PUBLIC _____ (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ H PRIVATE DOCTOR . . . . . I STAND-ALONE VCT CENTER . . . J PHARMACY . . . . . K CHEMICAL/DRUG STORE . . . . . L FP/PPAG CLINIC . . . . . M MATERNITY HOME . . . . . N OTHER PRIVATE MEDICAL _____ O (SPECIFY) OTHER _____ X (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
720	Would you buy fresh vegetables from a shopkeeper or vendor if you knew that this person had the AIDS virus?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
721	If a member of your family got infected with the AIDS virus, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
722	If a member of your family became sick with AIDS, would you be willing to care for her or him in your own household?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
723	In your opinion, if a female teacher has the AIDS virus but is not sick, should she be allowed to continue teaching in the school?	SHOULD BE ALLOWED . . . . . 1 SHOULD NOT BE ALLOWED . . . . . 2 DK/NOT SURE/DEPENDS 8	
731	Should children age 12-14 be taught about using a condom to avoid getting AIDS?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
732	Should children age 12-14 be taught to wait until they get married to have sexual intercourse in order to avoid getting AIDS?	YES . . . . . 1 NO . . . . . 2 DK/NOT SURE/DEPENDS 8	
733	CHECK 701: HEARD ABOUT AIDS → Apart from AIDS, have you heard about other infections that can be transmitted through sexual contact? NOT HEARD ABOUT AIDS → Have you heard about infections that can be transmitted through sexual contact?	YES . . . . . 1 NO 2	
734	CHECK 414: HAS HAD SEXUAL INTERCOURSE HAS NOT HAD SEXUAL INTERCOURSE → 742		
735	CHECK 733: HEARD ABOUT OTHER SEXUALLY TRANSMITTED INFECTIONS? YES NO → 737		
736	Now I would like to ask you some questions about your health in the last 12 months. During the last 12 months, have you had a disease which you got through sexual contact?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
737	Sometimes men experience an abnormal discharge from their penis. During the last 12 months, have you had an abnormal discharge from your penis?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
738	Sometimes men have a sore or ulcer near their penis. During the last 12 months, have you had a sore or ulcer near your penis?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
739	CHECK 736, 737, AND 738: HAS HAD AN INFECTION (ANY 'YES') ↓ HAS NOT HAD AN INFECTION OR DOES NOT KNOW →		→ 742
740	The last time you had (PROBLEM FROM 736/737/738), did you seek any kind of advice or treatment?	YES . . . . . 1 NO 2	→ 742
741	Where did you go? Any other place? PROBE TO IDENTIFY EACH TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE(S). IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER VCT CENTER, OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC . . . A GOVT. HEALTH CENTER . . . . . B GOVT. HEALTH POST/CHPS . . . . . C FAMILY PLANNING CLINIC . . . . . D STAND-ALONE VCT CENTER . . . E FIELDWORKER/OUTREACH/ PEER EDUCATOR . . . . . F OTHER PUBLIC _____ (SPECIFY) G PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . H STAND-ALONE VCT CENTER . . . . . I PHARMACY . . . . . J CHEMICAL/DRUG STORE . . . . . K FP/PPAG CLINIC . . . . . L MATERNITY HOME . . . . . M OTHER PRIVATE MEDICAL _____ (SPECIFY) N OTHER SOURCE SHOP/MARKET . . . . . O FRIEND/RELATIVE . . . . . P TRADITIONAL PRACTICIONER . . . Q OTHER _____ (SPECIFY) X	
742	Husband and wives do not always agree in everything. If a wife knows her husband has a disease that she can get during sexual intercourse, is she justified in refusing to have sex with him?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
743	If a wife knows her husband has a disease that she can get during sexual intercourse, is she justified in asking that they use a condom when they have sex?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
744	Is a wife justified in refusing to have sex with her husband when she is tired or not in the mood?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
745	Is a wife justified in refusing to have sex with her husband when she knows her husband has sex with other women?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

SECTION 8. OTHER HEALTH ISSUES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801	Have you ever heard of an illness called tuberculosis or TB?	YES . . . . . 1 NO 2	→ 805
802	How does tuberculosis spread from one person to another? PROBE: Any other ways? RECORD ALL MENTIONED.	THROUGH THE AIR WHEN COUGHING OR SNEEZING . . . . . A THROUGH SHARING UTENSILS . . . . . B THROUGH TOUCHING A PERSON WITH TB . . . . . C THROUGH FOOD . . . . . D THROUGH SEXUAL CONTACT . . . . . E THROUGH MOSQUITO BITES . . . . . F OTHER _____ X (SPECIFY) DON'T KNOW . . . . . Z	
803	Can tuberculosis be cured?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
804	If a member of your family got tuberculosis, would you want it to remain a secret or not?	YES, REMAIN A SECRET . . . . . 1 NO . . . . . 2 DON'T KNOW/NOT SURE/ DEPENDS 8	
805	Some men are circumcised. Are you circumcised?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
806	Now I would like to ask you some other questions relating to health matters. Have you had an injection for any reason in the last 12 months? IF YES: How many injections have you had? IF NUMBER OF INJECTIONS IS GREATER THAN 90, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . ☐☐ NONE 00	→ 810
807	Among these injections, how many were administered by a doctor, a nurse, a pharmacist, a dentist, or any other health worker? IF NUMBER OF INJECTIONS IS GREATER THAN 90, OR DAILY FOR 3 MONTHS OR MORE, RECORD '90'. IF NON-NUMERIC ANSWER, PROBE TO GET AN ESTIMATE.	NUMBER OF INJECTIONS . . . ☐☐ NONE 00	→ 810
808	The last time you had an injection given to you by a health worker, where did you go to get the injection? PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF HOSPITAL, HEALTH CENTER OR CLINIC IS PUBLIC OR PRIVATE MEDICAL, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVT. HOSPITAL/POLYCLINIC . . . 11 GOVT. HEALTH CENTER . . . . . 12 GOVT. HEALTH POST/CHPS . . . . . 13 STAND-ALONE VCT CENTER . . . 14 MOBILE CLINIC . . . . . 15 FIELDWORKER/OUTREACH/ PEER EDUCATOR . . . . . 16 OTHER PUBLIC _____ 17 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC/ PRIVATE DOCTOR . . . . . 21 STAND-ALONE VCT CENTER . . . 22 PHARMACY . . . . . 23 CHEMICAL/DRUG STORE . . . . . 24 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) OTHER PLACE AT HOME . . . . . 31 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
809	Did the person who gave you that injection take the syringe and needle from a new, unopened package?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
810	Do you currently smoke cigarettes?	YES . . . . . 1 NO 2	→ 812
811	In the last 24 hours, how many sticks of cigarettes did you smoke?	CIGARETTES	
812	Do you currently smoke or use any other type of tobacco?	YES . . . . . 1 NO 2	→ 813A
813	What (other) type of tobacco do you currently smoke or use? RECORD ALL MENTIONED.	PIPE . . . . . A CHEWING TOBACCO . . . . . B SNUFF . . . . . C CIGAR . . . . . D OTHER _____ X (SPECIFY)	
813A	Do you consume alcoholic beverages?	YES . . . . . 1 NO 2	→ 814
813B	In the last 7 days (a week) did you drink an alcoholic beverage? IF 'YES', PROBE: How many times?	ONCE . . . . . 01 2-3 TIMES . . . . . 02 4 TIMES OR MORE . . . . . 03 NONE 04	
813C	How often do you get drunk: often, only sometimes, or never?	OFTEN . . . . . 01 SOMETIMES . . . . . 02 NEVER 03	
814	Do you have any health insurance or are you a member of a mutual health organization?	YES . . . . . 1 NO 2	→ 821
815	What type of health insurance do you have? RECORD ALL MENTIONED.	NATIONAL /DISTRICT HEALTH INSURANCE(NHIS) . . . . . A HEALTH INSURANCE THROUGH EMPLOYER . . . . . B MUTUAL HEALTH ORGANIZATION/ COMMUNITY-BASED HEALTH INSURANCE . . . . . C OTHER PRIVATELY PURCHASED COMMERCIAL HEALTH INSURANCE. D OTHER _____ X (SPECIFY)	
815A	CHECK 815: CODE 'A' FOR NHIS NOT CIRCLED ↓ ☐ CODE 'A' FOR NHIS CIRCLED ☐ →		815C
815B	Why have you not registered with the National Health Insurance Scheme (NHIS)? RECORD ALL MENTIONED	NOT HEARD OF NHIS . . . . . A CANNOT AFFORD PREMIUM . . . . . B DO NOT TRUST . . . . . C DON'T NEED HEALTH INSURANCE . . . D NHIS DOES NOT COVER HEALTH SERVICES I NEED . . . . . E OTHER _____ X (SPECIFY)	→ 815I
815C	Did you pay your NHIS membership yourself?	YES, PAID MYSELF . . . . . 01 YES, PAID BY A RELATIVE/FRIEND 02 YES, PAID BY EMPLOYER/SSNIT . . . 03 NO, EXEMPT AS ELDERLY (70+) . . . 04 NO, EXEMPT AS PENSIONER . . . . . 05 NO, EXEMPT AS INDIGENT (POOR) 06 NO, OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
815D	Do you hold a valid National Health Insurance Scheme (NHIS) card? IF ANSWER IS 'YES', REQUEST TO SEE THE CARD	YES, CARD SEEN . . . . . 1 YES, CARD NOT SEEN . . . . . 2 NO 3	→ 815F
815E	Why do you not have a valid NHIS card?	REGISTERED, NOT PAID FULLY . . . 1 REGISTERED, CARD NOT RECEIVED . . . . . 2 → 815I REGISTERED, WAITING PERIOD . . 3 NOT RENEWED REGISTRATION . . 4 → 815G LOST NHIS CARD . . . . . 5 OTHER _____ 6 → 815I (SPECIFY)	
815F	How many weeks did it take you to obtain your NHIS card?	NUMBER OF WEEKS [ ][ ] → 815I DON'T KNOW 98	
815G	Do you plan to renew the NHIS card?	YES . . . . . 1 → 815I NO . . . . . 2 DON'T KNOW/NOT SURE . . . . . 8 → 815I	
815H	Why do you not want to renew the NHIS card? Anything else? RECORD ALL MENTIONED.	HAVE NOT BEEN SICK . . . . . A PREMIUM EXPENSIVE . . . . . B STILL PAY OUT OF POCKET . . . . . C WORSE QUALITY CARE WITH CARD . D WAITING TIME FOR CARD LONG . . E USED SERVICES NOT COVERED . . F DID NOT USE ANY HEALTH SERVICES G USE CLINICS OR TRADITIONAL PRACTITIONERS WHO ARE NOT COVERED . . . . . H OTHER _____ X (SPECIFY)	
815I	Do you have to pay out of pocket for drugs and services?	YES . . . . . 1 NO . . . . . 2 SOMETIMES 3	
815J	Are there any services that you need from a health provider that are not covered by NHIS?	YES . . . . . 1 NO . . . . . 2 → 815L	
815K	What are these services? Anything else? RECORD ALL MENTIONED.	FAMILY PLANNING . . . . . A LABORATORY INVESTIGATIONS . . . . . B CARE FOR NEWBORN FOR UP TO 3 MONTHS . . . . . C PROSTATE CANCER SCREENING/ TREATMENT . . . . . D OTHER _____ X (SPECIFY)	
815L	In your opinion, do NHIS card holders get better/same/worse service than others?	BETTER . . . . . 1 SAME . . . . . 2 WORSE . . . . . 3 DON'T KNOW/NOT SURE 8	
815M	In your opinion, did you receive good service last time you were treated at a clinic or hospital? IF NO, PROBE	YES . . . . . 1 NO, WAITING TIMES WERE TOO LONG 2 NO, STAFF NOT POLITE . . . . . 3 NO, DID NOT RECEIVE ENOUGH INFORMATION ABOUT ILLNESS AND TREATMENT . . . . . 4 OTHER _____ . . . . 6 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
821	I am going to ask you about the time you spent being physically active in the last 7 days. This is about the activities you do at work, as part of your house and yard work, to get from place to place, in your spare time, exercise or sport. Now, think about all the vigorous activities which take hard physical effort that you did in the past 7 days: activties that make you breathe much harder than normal and may include heavy lifting, digging, jogging, or fast bicycling.Think about only those physical activities that you did at least 15 minutes at a time. In the last 7 days, on how many days did you do vigorous physical activities that lasted for at least 15mins each time? IF 'NONE' RECORD '0'	NUMBER OF DAYS . . . . . ☐ DON'T KNOW 8	
822	How many hours do you rest a day, including naps and sleep both during day and night?	1-3 HOURS . . . . . 1 4-6 HOURS . . . . . 2 7-9 HOURS . . . . . 3 10 AND MORE HOURS . . . . . 4 DON'T KNOW 8	
823	Now I would like to ask you about liquids and foods that you consume. How many glasses of water do you drink in one day on average? IF MORE THAN 9, RECORD '9' IF 'NONE' RECORD '0'	NUMBER OF GLASSES ☐	
824	In a typical week, on how many days do you eat fruits, for example mangoes, paw paw, banana, orange, avocados, tomatoes, passion fruit, etc? IF 'NONE' RECORD '0'	NUMBER OF DAYS . . . . . ☐ DON'T KNOW/NOT SURE 8	→ 826
825	On a day when you eat fruits, how many servings do you eat on average? IF 'NONE' RECORD '0'	NUMBER OF SERVINGS . . . . . ☐ DON'T KNOW/NOT SURE 8	
826	In a typical week, on how many days do you eat vegetables, for example carrots, cabbage, dark green leafy vegetables (e.g. kontomire), pumpkin, squash, etc? IF 'NONE' RECORD '0'	NUMBER OF DAYS . . . . . ☐ DON'T KNOW/NOT SURE 8	→ 900
827	On a day when you eat vegetables, how many servings do you eat on average? IF 'NONE' RECORD '0'	NUMBER OF SERVINGS . . . . . ☐ DON'T KNOW/NOT SURE 8	

SECTION 9: DOMESTIC VIOLENCE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
900	CHECK HH Q.138 AND COVER PAGE OF MAN'S QUESTIONNAIRE MAN SELECTED FOR THIS SECTION MAN NOT SELECTED		935
901	CHECK FOR PRESENCE OF OTHERS: DO NOT CONTINUE UNTIL EFFECTIVE PRIVACY IS ENSURED. PRIVACY OBTAINED . . . . . 1 PRIVACY NOT POSSIBLE 2		934
	READ TO THE RESPONDENT Now I would like to ask you questions about some other important aspects of a man's life. I know that some of these questions are very personal. However, your answers are crucial for helping to understand the condition of men in Ghana. Let me assure you that your answers are completely confidential and will not be told to anyone, no one else will know that you were asked these questions, and no one else in this household is being asked these questions.		
902	CHECK 401 AND 402: CURRENTLY MARRIED/ LIVING WITH A WOMAN FORMERLY MARRIED/ LIVED WITH A WOMAN (READ IN PAST TENSE) NEVER MARRIED/ NEVER LIVED WITH A WOMAN		914
903	First, I am going to ask you about some situations which happen to some men. Please tell me if these apply to your relationship with your (last) wife/partner?		
	a) She (is/was) jealous or angry if you (talk/talked) to other women?	JEALOUS 1 2 8	
	b) She frequently (accuses/accused) you of being unfaithful?	ACCUSES 1 2 8	
	c) She (does/did) not permit you to meet your male friends?	NOT MEET FRIENDS 1 2 8	
	d) She (tries/tried) to limit your contact with your family?	NO FAMILY 1 2 8	
	e) She (insists/insisted) on knowing where you are at all times?	WHERE YOU ARE 1 2 8	
	f) She frequently (complains/complained) that you don't provide enough money?	MONEY 1 2 8	
	g) She frequently (refuses/refused) to cook and (denies/denied) you food?	DENIES FOOD 1 2 8	
	h) She frequently (refuses/refused) or (denies/denied) to have sexual intercourse with you when you want her to?	DENIES SEX 1 2 8	
904	Now if you will permit me, I need to ask some more questions about your relationship with your (last) wife/partner. If we should come to any question that you do not want to answer, just let me know and we will go on to the next question.		
	A (Does/did) your (last) wife/partner ever:	B How often did this happen during the last 12 months: often, only sometimes, or not at all?	
	a) say or do something to humiliate you in front of others?	YES 1 → OFTEN 1 SOMETIMES 2 NOT AT ALL 3 NO 2	
	b) threaten to hurt or harm you or someone close to you?	YES 1 → 1 2 3 NO 2	
	c) insult you or make you feel bad about yourself?	YES 1 → 1 2 3 NO 2	
	d) scream and shout at you?	YES 1 → 1 2 3 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
905	A (Does/did) your (last) wife/partner ever do any of the following things to you:	B How often did this happen during the last 12 months: often, only sometimes, or not at all?	

				OFTEN	SOME-TIMES	NOT AT ALL
a)	push you, shake you, or throw something at you?	YES 1 →		1	2	3
		NO 2 ↓				
b)	slap you?	YES 1 →		1	2	3
		NO 2 ↓				
c)	twist your arm?	YES 1 →		1	2	3
		NO 2 ↓				
d)	punch you with her fist or with something that could hurt you?	YES 1 →		1	2	3
		NO 2 ↓				
e)	kick you, drag you or beat you up?	YES 1 →		1	2	3
		NO 2 ↓				
f)	try to choke you or burn you on purpose?	YES 1 →		1	2	3
		NO 2 ↓				
g)	threaten or attack you with a knife, gun, or any other weapon?	YES 1 →		1	2	3
		NO 2 ↓				
h)	kicked or pulled your external genitalia?	YES 1 →		1	2	3
		NO 2 ↓				

906	CHECK 905A (a-h): AT LEAST ONE 'YES' ↓ NOT A SINGLE 'YES' →		909
907	How long after you first got married to/started living with your (last) wife/partner did this/any of these things first happen? IF LESS THAN ONE YEAR, RECORD '00'.	NUMBER OF YEARS . . . . . □□ BEFORE MARRIAGE/BEFORE LIVING TOGETHER 95	
908	Did the following ever happen as a result of what your (last) wife/partner did to you: a) You had cuts, bruises or aches? b) You had eye injuries, sprains, dislocations, or burns? c) You had deep wounds, broken bones, broken teeth, or any other serious injury?	YES . . . . . 1 NO . . . . . 2 YES . . . . . 1 NO . . . . . 2 YES . . . . . 1 NO 2	
909	Have you ever hit, slapped, kicked, or done anything else to physically hurt your (last) wife/partner at times when she was not already beating or physically hurting you?	YES . . . . . 1 NO 2	→ 912
911	In the last 12 months, how often have you done this to your (last) wife/partner: often, only sometimes, or not at all?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NOT AT ALL 3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
912	Does (did) your (last) wife/partner drink alcohol?	YES . . . . . 1 NO 2	→ 914
913	How often does (did) she get drunk: often, only sometimes, or never?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NEVER 3	
914	CHECK 401 AND 402: EVER MARRIED/LIVED WITH A WOMAN → From the time you were 15 years old has anyone other than your (current/last) wife/partner hit, slapped, kicked, or done anything else to hurt you physically? NEVER MARRIED/ NEVER LIVED WITH A WOMAN → From the time you were 15 years old has anyone ever hit, slapped, kicked, or done anything else to hurt you physically?	YES . . . . . 1 NO . . . . . 2 REFUSED TO ANSWER/ NO ANSWER 3	→ 928
915	Who has hurt you in this way? Anyone else? RECORD ALL MENTIONED.	MOTHER/STEP-MOTHER . . . . . A FATHER/STEP-FATHER . . . . . B SISTER/BROTHER . . . . . C DAUGHTER/SON . . . . . D OTHER RELATIVE . . . . . E FORMER WIFE/PARTNER . . . . . F CURRENT GIRLFRIEND . . . . . G FORMER GIRLFRIEND . . . . . H MOTHER-IN-LAW . . . . . I FATHER-IN-LAW . . . . . J OTHER IN-LAW . . . . . K TEACHER . . . . . L EMPLOYER/SOMEONE AT WORK . . . M POLICE/SOLDIER . . . . . N MALE FRIEND . . . . . O STRANGER . . . . . P OTHER _____ X (SPECIFY)	
916	In the last 12 months, how often have you been hit, slapped, kicked, or physically hurt by this/these person(s): often, only sometimes, or not at all?	OFTEN . . . . . 1 SOMETIMES . . . . . 2 NOT AT ALL 3	
928	CHECK 905A (a-h) AND 914: AT LEAST ONE 'YES' → NOT A SINGLE 'YES' →		→ 932
929	Thinking about what you yourself have experienced among the different things we have been talking about, have you ever tried to seek help to stop (the/these) person(s) from doing this to you again?	YES . . . . . 1 NO 2	→ 931
930	From whom have you sought help? Anyone else? RECORD ALL MENTIONED.	OWN FAMILY . . . . . A WIFE/PARTNER'S FAMILY . . . . B CURRENT/LAST/LATE WIFE/PARTNER . . . . . C CURRENT/FORMER GIRLFRIEND . . . D MALE FRIEND . . . . . E FEMALE FRIEND . . . . . F NEIGHBOR . . . . . G RELIGIOUS LEADER . . . . . H DOCTOR/MEDICAL PERSONNEL . . . I POLICE . . . . . J LAWYER . . . . . K SOCIAL SERVICE ORGANIZATION . L COMMUNITYLEADER/LOCAL ADMN M OTHER _____ X (SPECIFY)	→ 932
931	Have you ever told any one else about this?	YES . . . . . 1 NO 2	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
932	As far as you know, did your father ever beat your mother?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	
932A	As far as you know, did your mother ever beat your father?	YES . . . . . 1 NO . . . . . 2 DON'T KNOW 8	

THANK THE RESPONDENT FOR HIS COOPERATION AND REASSURE HIM ABOUT THE CONFIDENTIALITY OF HIS ANSWERS. FILL OUT THE QUESTIONS BELOW WITH REFERENCE TO THE DOMESTIC VIOLENCE MODULE ONLY.

933	DID YOU HAVE TO INTERRUPT THE INTERVIEW BECAUSE SOME ADULT WAS TRYING TO LISTEN, OR CAME INTO THE ROOM, OR INTERFERED IN ANY OTHER WAY?		YES ONCE	YES, MORE THAN ONCE	NO
		WIFE	1	2	3
		OTHER FEMALE ADULT . .	1	2	3
		MALE ADULT	1	2	3
934	INTERVIEWER'S COMMENTS / EXPLANATION FOR NOT COMPLETING THE DOMESTIC VIOLENCE MODULE				
935	RECORD THE TIME.	HOURS			
		MINUTES			

INTERVIEWER'S OBSERVATIONS

TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:

COMMENTS ON SPECIFIC QUESTIONS:

ANY OTHER COMMENTS:

SUPERVISOR'S OBSERVATIONS

NAME OF SUPERVISOR: _____ DATE: _____

EDITOR'S OBSERVATIONS

NAME OF EDITOR: _____ DATE: _____