## Nigeria

## 7 Health Survey

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National Population Commission<br>Federal Republic of Nigeria

ORC Macro
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This report summarizes the findings of the 2003 Nigeria Demographic and Health Survey (2003 NDHS), which was conducted by the National Population Commission of the Federal Republic of Nigeria. ORC Macro provided technical assistance. Funding was provided by the U.S. Agency for international development (USAID).

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## MESSAGE FROM THE VICE PRESIDENT

In the past, demographic data required for meaningful development planning was scarce and scanty. The present administration, in its efforts to ensure the production of adequate, reliable and timely demographic data, will continue to support the conduct of surveys and population censuses periodically.

The implementation of the 2003 Nigeria Demographic and Health Survey (2003 NDHS) further shows the renewed effort of government to alleviate poverty and to resolve related health problems with the goal of overall improvement in the quality of life in Nigeria.

Nigeria's commitment to population and reproductive health issues is of paramount concern to the government, and efforts will continue to be strengthened so as to ensure that the set objectives are achieved and realized.

Information provided in this report should be fully utilized by all at the three tiers of government to ensure success in the health sector. I commend USAID for the generous support provided for the study and urge the National Population Commission to continue its effort to generate additional demographic data required for meaningful planning and development.


His Excellency<br>Atiku Abubakar<br>(Turakin Adamawa)<br>Vice President<br>Federal Republic of Nigeria<br>Abuja

## MESSAGE FROM THE CHAIRMAN

I am delighted to present the final report of the 2003 Nigeria Demographic and Health Survey (2003 NDHS). The 2003 NDHS is the latest in the periodic Demographic and Health Survey (DHS) series, which started in Nigeria at the national level in 1990. The surveys are designed to measure levels, patterns, and trends of demographic and health indicators. This report, which is a sequel to the preliminary report that was produced in October of last year, is more detailed and comprehensive.

The success of the 2003 NDHS was made possible by the support and collaboration of a number of organizations and individuals. In this connection, I wish to acknowledge the assistance of the United States Agency for International Development (USAID/Nigeria), which provided the funding for the survey. I also wish to express appreciation to ORC Macro for its technical assistance in all the stages of the survey. The National Population Commission remains grateful to other development partners, especially the Department for International Development (DFID), United Nations Population Fund (UNFPA), and UNICEF for their supportive roles.

Finally, I wish to commend the report of the 2003 NDHS to policymakers, programme administrators and researchers. The text and the tables have been presented in a user-friendly manner and I hope end-users will avail themselves of this vital information.


Chief S. D. Makama
(Ubandoman Pyem)
Chairman
National Population Commission
Abuja

## PREFACE

The 2003 Nigeria Demographic and Health Survey (2003 NDHS) is the third national Demographic and Health Survey (DHS) in a series under the worldwide Demographic and Health Surveys programme. The first Nigeria DHS survey was conducted in 1990. Funding for the 2003 NDHS survey was provided by the U.S. Agency for International Development (USAID/Nigeria), while technical assistance was provided by ORC Macro. The United Nations Population Fund (UNFPA) and United Nations Children’s Fund (UNICEF) also provided logistical support. Fieldwork for the survey took place between March and September 2003 in selected clusters nationwide.

The major objective of the 2003 NDHS, which is a follow-up to the 1999 NDHS, is to obtain and provide information on fertility, fertility preferences, use and knowledge of family planning methods, maternal and childhood health, maternal and childhood mortality, breastfeeding practices, nutrition, knowledge of HIV/AIDS, and other health issues. Compared with the 1999 NDHS, the 2003 NDHS has a wider scope. For example, unlike the 1999 survey, the 2003 survey includes a module on malaria and another on testing for salt. In addition, the 2003 data are geo-referenced to allow for more detailed geographical analysis. Other innovations of the 2003 NDHS include the concurrent processing of data even as fieldwork was ongoing. This innovation served a dual purpose by facilitating field checks for errors and hastening the process of data entry and analysis.

As may be expected, the findings of the 2003 NDHS are more comprehensive than findings for the two previous DHS surveys conducted in the country. Indeed, the production of the survey report within nine months after the completion of fieldwork is unprecedented, making the findings the most timely and up to date. The enforcement of standards and consistency and a response rate of more than 90 percent also make the findings very reliable.

In addition to presenting national estimates, the report provides estimates of key indicators of fertility, mortality, and health for rural and urban areas in Nigeria and for the six geo-political zones. Overall, the report provides information on a number of key topics to guide planners, policymakers, programme managers and researchers in the planning, implementation, monitoring, and evaluation of population and health programmes in Nigeria.

Highlights of the 2003 NDHS indicate on the one hand a national total fertility rate of 5.7, and on the other hand, a national infant mortality rate of 100 deaths per 1,000 live births and an under-five mortality rate of 203 deaths per 1,000 live births. The gap between knowledge and use of family planning methods is still wide. Knowledge of HIV/AIDS remains high.

The unprecedented success of the 2003 NDHS was made possible by the contributions of a number of organizations and individuals. I wish to acknowledge the support of USAID/Nigeria for funding the survey. Similarly, I appreciate ORC Macro's technical support in the design and implementation of the survey. The personal commitment of the ORC Macro Country Manager, Ms. Holly Newby, and her colleagues is particularly remarkable and is very much appreciated.

I also acknowledge and appreciate the logistics support provided by other development partners, especially the UNFPA, DFID, and UNICEF. The 2003 NDHS witnessed the support and collaboration of other stakeholders such as the Federal Ministry of Health. Their contributions are very much appreciated.

As the National Population Commission continues with its efforts to ensure the availability and dissemination of up to date and reliable demographic and health data, it is hoped that end users will make use of the available information for programme evaluation and for socio-economic planning.


Dr. A. O. Akinsanya
Director-General
National Population Commission

## ACKNOWLEDGMENTS

In the recent past, adequate, timely and reliable data in Nigeria have been scarce and very limited for planning and socio-economic development. The 2003 Nigeria Demographic and Health Survey (2003 NDHS) is the latest in the series of DHS surveys conducted in Nigeria and provides indicators for the strategic management and monitoring of socio-economic activities including health programmes.

The 2003 NDHS was designed to provide data to monitor the population and health situation in Nigeria. Specifically, the 2003 NDHS collected information on fertility levels and preferences, awareness and use of family planning methods, maternal and child health, breastfeeding practices, nutritional status of mothers and young children, childhood mortality, use of bed nets, female genital cutting, marriage, sexual activity, and awareness and behaviour regarding AIDS and other sexually transmitted infections.

On behalf of the Commission, I gratefully acknowledge the support of the United States Agency for International Development (USAID/Nigeria) in providing funds to cover the cost of the 2003 NDHS. The technical support provided by ORC Macro played a key role during the implementation period. Worthy of mention is Ms. Holly Newby, the ORC Macro Country Manager who worked tirelessly during the period. Her efforts are greatly appreciated. Mr. Albert Themme and Ms. Elizabeth Britton handled data processing of the NDHS marvelously and in record time. Their efforts deserve our appreciation and gratitude. I wish to commend the efforts of Dr. Alfredo Aliaga, the Sampling Specialist at ORC Macro, who provided technical support during the sample selection exercise. Other ORC Macro officials, such as Ms. Anne Cross, Dr. Fern Greenwell and Ms. Arlinda Zhuzhuni, deserve our deep appreciation for their contributions at different stages of the 2003 NDHS implementation.

In the area of logistics, we acknowledge with gratitude the support of United Nations Population Fund (UNFPA), United Nations Children's Fund (UNICEF) and Department for International Development (DFID).

The Chairman of the Commission and his team of Federal Commissioners greatly assisted during the implementation period by providing excellent leadership and advocacy support. The unflinching support and technical assistance provided by the Director-General and all Directors is hereby acknowledged. The U.N. Chief Technical Adviser, Prof. G.B. Fosu, took pains in providing technical support, including the review of the report, and his efforts are highly appreciated. During the implementation period of the survey, the core team-also referred to as Zonal Coordinators-worked tirelessly and their efforts are hereby acknowledged. The survey could not have been conducted in such a timely and successful fashion without the commitment of the entire field staff of the 2003 NDHS. The entire data processing staff is also commended for their important role in the timely processing of the data.

A number of organizations rendered immense support during the implementation stage including the Federal Ministry of Health, the National Action Committee on AIDS, and the National Programme on Immunization. Some members of academia in various Nigerian universities served as resource persons during the report writing exercise. Their useful contributions and commitment are commendable and hereby acknowledged.

Finally, our special gratitude goes to all the households, men, and women who were selected and who responded very well during the survey; without their participation and support, this project would have been a failure. Our appreciation goes to the entire people of Nigeria for their understanding and for making possible an enabling environment conducive to the conduct of this very important survey.


Samuel A. Ogunlade
Project Director
National Population Commission

## SUMMARY OF FINDINGS

The 2003 Nigeria Demographic and Health Survey (2003 NDHS) is the third national Demographic and Health Survey conducted in Nigeria. The 2003 NDHS is based on a nationally representative sample of over 7,000 households. All women age 15-49 in these households and all men age $15-59$ in a subsample of onethird of the households were individually interviewed. The survey provides up-to-date information on the population and health situation in Nigeria. Specifically, the 2003 NDHS collected information on fertility levels and preferences, awareness and use of family planning methods, maternal and child health, breastfeeding practices, nutritional status of women and young children, childhood mortality, use of bed nets, female genital cutting, marriage, sexual activity, and awareness and behaviour regarding AIDS and other sexually transmitted infections in Nigeria.

The National Population Commission conducted the survey, which was in the field from March to August 2003. ORC Macro, though the MEASURE DHS+ project, provided technical support. The U.S. Agency for International Development (USAID)/Nigeria funded the survey. Other development partners, including the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), and Department for International Development (DFID), also provided support for the survey.

## Fertility

Fertility Levels, Trends, and Preferences. The total fertility rate (TFR) in Nigeria is 5.7. This means that at current fertility levels, the average Nigerian woman who is at the beginning of her childbearing years will give birth to 5.7 children by the end of her lifetime. Compared with previous national surveys, the 2003 survey shows a modest decline in fertility over the last two decades: from a TFR of 6.3 in the 1981-82 National Fertility Survey (NFS) to 6.0 in the 1990 NDHS to 5.7 in the 2003 NDHS. However, the 2003 NDHS rate of 5.7 is significantly higher than the 1999 NDHS rate of 5.2. Analysis
has shown that the 1999 survey underestimated the true levels of fertility in Nigeria.

On average, rural women will have one more child than urban women ( 6.1 and 4.9, respectively). Fertility varies considerably by region of residence, with lower rates in the south and higher rates in the north. Fertility also has a strong negative correlation with a woman's educational attainment.

Most Nigerians, irrespective of their number of living children, want large families. The ideal number of children is 6.7 for all women and 7.3 for currently married women. Nigerian men want even more children than women. The ideal number of children for all men is 8.6 and for currently married men is 10.6 . Clearly, one reason for the slow decline in Nigerian fertility is the desire for large families.

Birth Intervals. A 36-month interval between deliveries is best for mother and child; longer birth intervals also contribute to reduction in overall levels of fertility. The median birth interval in Nigeria is 31 months, which is close to the optimal interval. The median interval is lowest among mothers age 15-19 (26 months) and highest among mothers age 40-49 (39 months). While there is no difference in birth intervals between urban and rural women, birth intervals do vary considerably by region of residence. Women in the South West have the longest median birth interval ( 37 months) and women in the South East have the shortest median birth interval (27 months), a difference of almost one year.

Initiation of Sexual Behaviour and Childbearing at Young Ages. One-third of women age 25-49 reported that they had had sexual intercourse by age 15 . By age 20, more than three-quarters of women, and by age 25 , nine in ten women have had sexual intercourse. One-quarter of teenage women has given birth or is pregnant. Early childbearing is more of a rural phenomenon, with 30 percent of rural women age 15-19 having begun childbearing compared with 17 percent of urban women in the same age group. Overall, median age at first birth is increasing. Whereas median age at first birth is less than 19 years among women over age 35, it is 20.3 years among women age 25-29.

## Family Planning

Knowledge of Family Planning Methods. About eight in ten women and nine in ten men know at least one modern method of family planning. The pill, injectables, and the male condom are the most widely known modern methods among both women and men. Mass media is an important source of information on family planning. Radio is the most frequent source of family planning messages: 40 percent of women and 56 percent of men say they heard a radio message about family planning during the months preceding the survey. However, more than half of women (56 percent) and 41 percent men were not exposed to family planning messages from a mass media source.

Current Use. A total of 13 percent of currently married women are using a method of family planning, including 8 percent who are using a modern method. The most common modern methods are the pill, injectables, and the male condom (2 percent each). Urban women are more than twice as likely as rural women to use a method of contraception (20 percent versus 9 percent). Contraceptive use varies significantly by region. For example, one-third of married women in the South West use a method of contraception compared with just 4 percent of women in the North East and 5 percent of women in the North West.

Source of Family Planning Methods. Fifty-eight percent of users get their contraceptive methods from private health care providers, more than twice as many as get them from the public sector (23 percent). The private sector is the most common source for the pill (74 percent) and male condoms (59 percent). Provision of injectables for current users is shared equally by the private sector and the public sector (48 percent each).

Unmet Need for Family Planning. While most women want large families, there is a minority who want to limit their family size or wait a period of time before having their next birth but are not using contraception. Seventeen percent of currently married women are in these two categories and have an unmet need for family planning.

Information on contacts of nonusers with family planning providers is important for determining whether family planning initiatives are effective or not. During the year preceding the survey, 4 percent of nonusers reported that they were visited by a family planning service provider at home; 6 percent of nonusers visited a health facility and discussed family planning with a provider; and 24 percent of nonusers who visited a health facility did not discuss family planning. This is an indication of missed opportunities for increasing family planning acceptance and use.

## Child Health

Mortality. The 2003 NDHS survey estimates infant mortality to be 100 per 1,000 live births for the 1999-2003 period. This infant mortality rate is significantly higher than the estimates from both the 1990 and 1999 NDHS surveys; the earlier surveys underestimated mortality levels in certain regions of the country, which in turn biased downward the national estimates. Thus, the higher rate from the 2003 NDHS is more likely due to better data quality than an actual increase in mortality risk overall.

The rural infant mortality rate (121 per 1,000) is considerably higher than the urban rate (81 per 1,000 ), due in large part to the difference in neonatal mortality rates. As in other countries, low maternal education, a low position on the household wealth index, and shorter birth intervals are strongly associated with increased mortality risk. The under-five mortality rate for the 1999-2003 period was 201 per 1,000.

Vaccinations. Only 13 percent of Nigerian children age 12-23 months can be considered fully vaccinated, that is, have received BCG, measles, and three doses each of DPT and polio vaccine (excluding the polio vaccine given at birth). This is the lowest vaccination rate among African countries in which DHS surveys have been conducted since 1998. Less than half of children have received each of the recommended vaccinations, with the exception of polio 1 (67 percent) and polio 2 (52 percent). More than three times as many urban children as rural children are fully vaccinated ( 25 percent and 7 percent, respectively). WHO guidelines are that children should complete the schedule of recommended vaccinations by 12 months of age. In Nigeria, however, only 11 percent of children age 12-23
months received all of the recommended vaccinations before their first birthday.

Childhood Illness. In the two weeks preceding the survey, 10 percent of children experienced symptoms of acute respiratory infection (ARI), and 31 percent had a fever. Among children who experienced symptoms of ARI or fever, almost one-third (31 percent) sought treatment from a health facility or health care provider.

Approximately one-fifth of children had diarrhoea in the two weeks preceding the survey. Twenty-two percent of mothers reported that their children with diarrhoea were taken to a health provider. Overall, 40 percent received oral rehydration salts (ORS), recommended home fluids (RHF), or increased fluids. Less than one-fifth of children (18 percent) were given a solution made from ORS, despite the fact that 65 percent of mothers say they know about ORS packets. Although 20 percent of mothers said they gave their sick child more liquids than usual to drink, 38 percent of mothers said they curtailed fluid intake.

## Nutrition

Breastfeeding. Breastfeeding is almost universal in Nigeria, with 97 percent of children born in the five years preceding the survey having been breastfed. However, just one-third of children were given breast milk within one hour of birth ( 32 percent), and less than two-thirds were given breast milk within 24 hours of birth (63 percent). Overall, the median duration of any breastfeeding is 18.6 months, while the median duration of exclusive breastfeeding is only half a month.

Complementary Feeding. At age 6-9 months, the recommended age for introducing complementary foods, three-quarters of breastfeeding infants received solid or semisolid foods during the day or night preceding the interview; 56 percent received food made from grains, 25 percent received meat, fish, shellfish, poultry or eggs, and 24 percent received fruits or vegetables. Fruits and vegetables rich in vitamin A were consumed by 20 percent of breastfeeding infants age 6-9 months.

Nutritional Status of Children. Overall, 38 percent children are stunted (short for their age), 9 percent of children are wasted or thin (low weight-for-height), and 29 percent of children are underweight (low weight-for-age). Generally, children who live in rural areas or in the north and children of uneducated mothers are significantly more likely to be undernourished than other children. The children in the North West are particularly disadvantaged-one-third are severely stunted, which reflects extensive long-term malnutrition in the region.

Nutritional Status of Women. The mean body mass index (BMI) of Nigerian women is 22.3, which falls well within the internationally accepted normal range (between 18.5 and 24.9). Almost two-thirds of women ( 64 percent) have BMIs falling in the normal range; 15 percent are thin, including 2 percent who are severely thin. The youngest women are the most likely of all the population subgroups to be thin; one-quarter of women age 15-19 have a BMI of less than 18.5. One-fifth of Nigerian women weigh more than they should: 15 percent are overweight and 6 percent are obese. The likelihood of being overweight or obese increases with age.

## Women's Health

Maternal Care. Almost two-thirds of mothers in Nigeria (63 percent) received some antenatal care (ANC) for their most recent live birth in the five years preceding the survey. While one-fifth of mothers (21 percent) received ANC from a doctor, almost four in ten women received care from nurses or midwives ( 37 percent). Almost half of women (47 percent) made the minimum number of four recommended visits, but most of the women who received antenatal care did not get care within the first three months of pregnancy.

In terms of content of care, slightly more than half of women who received antenatal care said that they were informed of potential pregnancy complications ( 55 percent). Fifty-eight percent of women received iron tablets; almost two-thirds had a urine or blood sample taken; and 81 percent had their blood pressure measured. Almost half ( 47 percent) received no tetanus toxoid injections during their most recent birth.

The majority of births in Nigeria occur at home (66 percent). Only one-third of live births during the five years preceding the survey occured in a health
facility. Slightly more than one-third of births are attended by a doctor, nurse, or midwife. A smaller proportion of women receive postnatal care, which is crucial for monitoring and treating complications in the first two days after delivery. Only 23 percent of women who gave birth outside a health facility received postnatal care within two days of the birth of their last child. More than seven in ten women who delivered outside a health facility received no postnatal care at all.

Across all maternal care indicators, rural women are disadvantaged compared with urban women, and there are marked regional differences among women. Overall, women in the south, particularly the South East and South West, received better care than women in the north, especially women in the North East and North West.

Female Circumcision. Almost one-fifth of Nigerian women are circumcised, but the data suggest that the practice is declining. The oldest women are more than twice as likely as the youngest women to have been circumcised (28 percent versus 13 percent). Prevalence is highest among the Yoruba (61 percent) and Igbo (45 percent), who traditionally reside in the South West and South East. Half of the circumcised respondents could not identify the type of procedure performed. Among those women who could identify the type of procedure, the most common type of circumcision involved cutting and removal of flesh (44 percent of all circumcised women). Four percent of women reported that their vaginas were sewn closed during circumcision.

Among the 53 percent of Nigerian women who had heard of female circumcision, twothirds (66 percent) believe that female circumcision should be discontinued, while 21 percent want the practice to continue. Continuation of female circumcision finds greater support among southerners than northerners and among those who are circumcised than the uncircumcised. Even so, less than half of circumcised women want the practice to be continued ( 42 percent). Among men who had heard of the practice, similar to women, almost two-thirds are against continuation of female circumcision, while about one-fifth of this group were in favour if it.

Perceived Constraints to Use of Health Care. Survey respondents were asked to identify barriers to accessing health care services for themselves. Almost half of women cite at least one barrier to care. The most commonly cited problem is getting money for treatment ( 30 percent), followed by distance to health facility, and having to take transport (24 percent each). One in ten women say that getting permission to go is a problem.

## WOMEN's Characteristics and Status

While the majority of Nigerian women have had some education, 42 percent have never attended school. This is almost twice the proportion of men who have never attended school (22 percent).

Slightly over half of women report being currently employed ( 56 percent). Eighty-four percent of working women earn cash only or cash in addition to in-kind earnings. Almost three-quarters of women who receive cash earnings report that they alone decide how their earnings are used. An additional 16 percent say that they decide jointly with their husband or someone else. Only 10 percent of women report that someone else decides how their earnings will be used.

The 2003 NDHS collected information on women's participation in different types of decisions in the household. Almost half (46 percent) of currently married women reported that they did not have a final say (either alone or jointly) in any specified decision. Among married women, household decisionmaking is highly dominated by husbands.

To assess attitudes toward wife beating, respondents were asked whether a husband would be justified in beating his wife for specific reasons. A majority of both women and men (approximately six in ten) believe there are occasions when a man is justified in beating his wife. For example, approximately half of women believe that a husband is justified in hitting his wife if she goes out without telling him or if she neglects the children. These were also the most common justifications cited by men (50 percent and 47 percent, respectively).

## Malaria Control Program Indicators

Nets. Although malaria is a major public health concern in Nigeria, only 12 percent of households report owning at least one mosquito net. Even fewer,

2 percent of households, own an insecticide treated net (ITN). Rural households are almost three times as likely as urban households to own at least one mosquito net. Overall, 6 percent of children under age five sleep under a mosquito net, including 1 percent of children who sleep under an ITN. Five percent of pregnant women slept under a mosquito net the night before the survey, one-fifth of them under an ITN.

Use of Antimalarials. Overall, 20 percent of women reported that they took an antimalarial for prevention of malaria during their last pregnancy in the five years preceding the survey. Another 17 percent reported that they took an unknown drug, and 4 percent took paracetamol or herbs to prevent malaria. Only 1 percent received intermittent preventative treatment (IPT)-or preventive treatment with sulfadox-ine-pyrimethamine (Fansidar/SP) during an antenatal care visit. Among pregnant women who took an antimalarial, more than half (58 percent) used Daraprim, which has been found to be ineffective as a chemoprophylaxis during pregnancy. Additionally, 39 percent used chloroquine, which was the chemoprophylactic drug of choice until the introduction of IPT in Nigeria in 2001.

Among children who were sick with fever/convulsions, one-third took antimalarial drugs, the majority receiving the drugs the same day as the onset of the fever/convulsions or the following day.

## HIV/AIDS AND OTHER STIs

Knowledge. Almost all men (97 percent) and a majority of women ( 86 percent) reported that they had heard of AIDS. Considerably fewer know how to prevent transmission of the AIDS virus; men are better informed than women. Sixty-three percent of men and 45 percent of women reported knowing that condom use protects against HIV/AIDS. More respon-
dents (six in ten women and eight in ten men) reported knowing that limiting the number of sexual partners is a way to avoid HIV/AIDS. Less than half of the population knows that mother to child transmission of HIV is possible through breastfeeding. Few people (less than one in ten) know that a woman living with HIV can take drugs during pregnancy to reduce the risk of transmission.

HIV Testing and Counselling. Six percent of women and 14 percent of men have been tested for HIV and received the results of their test. During the 12 months preceding the survey, only 3 percent of women and 6 percent of men were tested and received their test results. About one-quarter of women received counselling or information about HIV/AIDS during an antenatal care visit.

High-risk Sex. A much higher percentage of men than women report having had sex with a nonmarital, noncohabiting partner at some time during the year preceding the survey ( 39 percent of men versus 14 percent of women). Less than half of men (47 percent) and less than one-quarter of women (23 percent) reported using a condom the last time they had sex with a nonmarital, noncohabiting partner. Fifteen percent of men who are currently married or cohabiting reported having high-risk sex in the past 12 months.

Sexually Transmitted Infections. Five percent of both women and men reported having a sexually transmitted infection (STI) or an associated symptom during the 12 months preceding the survey. The never-married population of both women and men are most at risk. Eight percent of never-married women and 7 percent of never-married men reported having an STI or STI symptom. Of these, 68 percent of women and 83 percent of men sought treatment for their STI or STI symptom; however, not everyone went to a health professional.

Orphanhood. Nationwide, fewer than 1 percent of children have lost both parents; 6 percent of children under age 15 have lost at least one parent.

## NIGERIA



## INTRODUCTION

### 1.1 History, Geography, and Economy of Nigeria

## History

The evolution of Nigeria from the mid-1800s until it attained independence in 1960 is largely the story of the transformational impact of the British on the people and culture of the Niger-Benue area. The British were in the Niger-Benue area to pursue interests that were largely economic and strategic. In the process of seeking to realize those interests, a sociopolitical aggregation-known today as Nigeriaemerged.

Nigeria came into existence as a nation-state in 1914 through the amalgamation of the North and South protectorates. Before then, there were various separate cultural, ethnic, and linguistic groups, such as the Oyo, Benin, Nupe, Jukun, Kanem-Bornu, and Hausa-Fulani empires. These peoples lived in kingdoms and emirates with traditional but sophisticated systems of government. There were also other relatively small but strong-and indeed resistant-ethnic groups (e.g., Ibo, Ibibio, and Tiv).

The British established a crown colony type of government after the amalgamation. The affairs of the colonial administration were conducted by the British until 1942, when a few Nigerians became involved in the administration of the country. In the early 1950s, Nigeria achieved partial self-government with a legislature in which the majority of the members were elected into an executive council; most were Nigerians. Nigeria became a federation of three regions in 1954 and remained so until its independence in October 1960, with the Lagos area as the Federal Capital Territory. Three years later, on October 1, 1963, Nigeria became a republic. Nigeria has since had different administrative structures. Within the boundaries of Nigeria are many social groups with distinct cultural traits, which are reflected in the diverse behaviour of the people. There are about 374 identifiable ethnic groups, but the Igbo, Hausa, and Yoruba are the major groups.

Presently, Nigeria is made up of 36 states and a Federal Capital Territory (FCT), which are grouped into six geopolitical regions: North Central, North East, North West, South East, South South, and South West. There are also 774 constitutionally recognized Local Government Areas (LGAs) in the country.

## Geography

Nigeria lies between $4^{\circ} 16^{\prime}$ and $13^{\circ} 53$ ' north latitude and between $2^{\circ} 40^{\prime}$ and $14^{\circ} 41^{\prime}$ east longitude. The country is in the West African subregion and borders Niger in the north, Chad in the northeast, Cameroon in the east, and Benin in the west. To the south, Nigeria is bordered by approximately 800 kilometres of the Atlantic Ocean, stretching from Badagry in the west to the Rio del Rey in the east.

With a total land area of 923,768 square kilometres, the country is the fourth largest in Africa. Nigeria is diverse climatically and topographically and exhibits a great variety of relief features, encompassing uplands of 600 to 1,300 metres on the North Central and the east highlands and lowlands of less than 20 metres in the coastal areas. The lowlands extend from the Sokoto plains to the Borno plains in the North, the coastal lowlands of Western Nigeria, and the Cross River basin in the east. The highland includes the Jos Plateau and the Adamawa highlands in the North, extending to the Obudu Plateau and

Oban Hills in the South East. Other topographic features include the Niger-Benue Trough and Chad Basin.

Nigeria has a tropical climate with wet and dry seasons associated with the movement of the Intertropical Convergence Zone north and south of the equator. The dry season occurs from October to March with a spell of coolness and dry, dusty harmattan wind felt mostly in the north in December and January. The wet season occurs from April to September. The temperature oscillates between $25^{\circ}$ and $40^{\circ} \mathrm{C}$, while rainfall ranges from 2,650 millimetres in the southeast to less than 600 millimetres in some parts of the north, mainly on the fringes of the Sahara Desert. The vegetation that results from these climatic differences consists of mangrove swamp forest in the Niger Delta and Sahel grassland in the north. Within a wide range of climatic, vegetation, and soil conditions, Nigeria possesses potential for a wide range of agricultural production.

## Economy

Nigeria's economic history and development have been closely tied to its agricultural sector. Before the discovery of oil, the country depended almost entirely on agriculture for food and on agroindustrial raw materials for foreign exchange earnings through commodity trade. Agriculture also provided gainful employment to over 75 percent of the country's labour force and satisfactory livelihood to over 90 percent of the population at the time of the country's independence. Over the years, the dominant role of agriculture in the economy, especially in terms of the country's foreign exchange earnings, gave way to petroleum. Since 1980, oil production has accounted for more than two-thirds of the gross domestic product (GDP) and more than 80 percent of total government revenue. To date, the government has largely controlled vast industrial and commercial enterprises; however, there is now a vigorous drive to privatization. There are also large, multinational companies, as well as organized small-scale enterprises.

Since the onset of the new democratic administration in 1999, economic policies have become more favourable to investment. Consequently, there has been an improvement in the performance of the domestic economy. Nigeria’s GDP was estimated at 2.7 percent in 1999, 2.8 percent in 2000, and 3.8 percent in 2001. The aggregate index of agricultural production was 3.9 percent in 2001, compared with 3.7 percent in 1999. The average industrial capacity utilization was 35.5 percent in 2001, representing an increase of 4.5 percent over the 1999 figure of 31 percent (Central Bank of Nigeria, 2002). Before the advent of the civilian administration in 1999, Nigeria had a large public sector, comprising over 550 public enterprises in most sectors of the economy and dominating activities in power, telecommunication, petroleum, and steel sectors. The public enterprise sector accounts for an estimated 50 percent of the total GDP, 57 percent of investments, and two thirds of formal sector employment.

Like other developing countries, the civilian administration in Nigeria has recognized the importance of privatization in the restructuring of its economy. The country embarked on a broader economic reform and liberalization programme designed to restore macroeconomic stability, achieve faster sustainable growth, raise living standards, and reduce poverty. The reform programme was also aimed at promoting greater private sector participation in economic activity, and it included the maintenance of sound macroeconomic policies, as well as deregulation, with emphasis on power, telecommunications, and downstream petroleum sectors. It is too early to determine the impact of privatization and liberalization on the Nigerian economy. However, it is believed that these economic policy reforms, combined with investments in human resources and physical infrastructure, as well as the establishment of macroeconomic stability and good governance, are essential to achieve a high rate of self-sustaining, long-term economic growth.

### 1.2 Population and Basic Demographic Indicators

In Nigeria, population has always been a contentious issue. Censuses conducted in Nigeria have been controversial and have on occasion given rise to impassioned concerns from sections of the population. To a large extent, this has been because population figures are used by the federal government as one factor in the allocation of funds. They are also used to determine representation in the Houses of Assembly and both chambers of the National Assembly.

The first attempt at a population census in Nigeria was in 1866. Subsequent censuses before 1952, such as 1911 and 1922, were restricted to some sections of the country. The 1952-53 enumeration was the first nationwide census. The first postindependence census conducted in 1962 was cancelled because of alleged irregularities in its conduct. Another census conducted in 1963 was officially accepted (Table 1.1). The 1973 exercise was declared unacceptable and was cancelled. Thereafter, no attempt was made at conducting a census until 1991.

Table 1.1 Basic demographic indicators
Demographic indicators from various sources, Nigeria 1963-1999

| Indicators | $\begin{gathered} \text { Census } \\ 1963 \end{gathered}$ | $\begin{gathered} \text { NFS } \\ 1981-1982 \end{gathered}$ | $\begin{gathered} \text { NDHS } \\ 1990 \end{gathered}$ | $\begin{gathered} \text { Census } \\ 1991 \end{gathered}$ | $\begin{aligned} & \text { NDHS } \\ & 1999^{1} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Population (millions) | 55.7 | 84.7 | u | 88.9 | u |
| Density (pop./sq.km) | 60 | 92 | u | 96 | u |
| Percent urban | 19 | 23 | 24 | 36.3 | u |
| Crude birth rate (CBR) | 66 | 46 | 39 | 44.6 | 38 |
| Crude death rate (CDR) | 27 | 16 | u | 14 | u |
| Total fertility rate (TFR) | u | 6.3 | 6 | 5.9 | 5.2 |
| Infant mortality rate (IMR) | u | 85 | 87 | 93 | 78 |
| Life expectancy at birth | 36 | 48 | u | 53.2 | u |
| $\mathrm{u}=$ Unknown (not available) |  |  |  |  |  |
| ${ }^{1}$ Reported rates. See 1999 NDHS final report for information on data quality. |  |  |  |  |  |
| Sources: National Population Commission; Federal Office of Statistics |  |  |  |  |  |

The total population of Nigeria as reported in the 1991 census was $88,992,220$. Using a growth rate of 2.83 percent per annum, the National Population Commission (NPC) estimates the current population of Nigeria to be about 126 million. This makes Nigeria the most populous nation in Africa and the tenth most populous in the world. The spatial distribution of the population within the country is uneven. Extensive areas in the Chad Basin, the middle Niger Valley, the grass plains, and the Niger Delta, among others, are sparsely populated. In contrast, there are large areas of densely populated rural districts, which support more than 400 persons per square kilometre in parts of Akwa Ibom, Imo, Anambra, and Enugu State, as well as around Kano, Katsina, and Sokoto States. However, the average population density of the country in 1991 was 96 persons per square kilometre. The most densely populated states are Lagos, Anambra, Imo, and Akwa Ibom. Except for Lagos, all states with high population densities are located in the South East of Nigeria. Kano State, with an average density of 281 persons per square kilometre, is by far the most densely populated state in the north.

The population of Nigeria is predominantly rural; approximately one-third live in urban areas. The states with the largest proportion of urban population are Lagos ( 94 percent), Oyo ( 69 percent), and Anambra ( 62 percent). The least urbanized states, with an urban population under 15 percent, include Sokoto (14 percent), Kebbi (12 percent), Akwa Ibom (12 percent) Taraba (10 percent), and Jigawa (7 percent) (NPC, 1998).

The effort to generate reliable demographic data has included the conduct of numerous sample surveys. These include the 1965-66 Rural Demographic Sample Survey and the 1980 National Demographic Sample Survey (NDSS) conducted by the Federal Office of Statistics and the National Population Bureau, respectively.

The 1981-1982 Nigeria Fertility Survey (NFS) was the first nationally representative survey on fertility, family planning, contraceptive use, and related topics. The first Nigeria Demographic and Health Survey (NDHS) followed in 1990. In addition to the topics covered by the NFS, the 1990 NDHS also collected information on issues related to maternal and child health. In 1994, the first sentinel survey was conducted to serve as a baseline study to monitor the various projects designed to achieve the objectives of the National Population Policy. In 1999, another NDHS was conducted. This was followed by a sentinel survey conducted in 2000.

### 1.3 Population and Health Policies and Programmes

## Population Policies and Programmes

On February 4, 1988, the Federal Government of Nigeria approved the National Policy on Population for Development in response to the pattern of population growth rate and its adverse effect on national development. Since that time, emerging issues highlighted by the 1991 National Population Census, the 1994 International Conference on Population and Development, the 1999 AIDS/HIV Summit in Abuja, and other fora resulted in a revision of the National Population Policy, which was signed by the President and Commander-in-Chief of the armed forces of the Federal Republic of Nigeria, Chief Olusegun Obasanjo (GCFR), on January 14, 2004. ${ }^{1}$ The policy recognizes that population factors, social and economic development, and environmental issues are irrevocably entwined and are all critical to the achievement of sustainable development in Nigeria.

The overall goal of the 2004 National Policy on Population for Sustainable Development is the improvement of the quality of life and the standards of living of the people of Nigeria. The specific goals are the following:

- Achievement of sustained economic growth, poverty eradication, protection and preservation of the environment, and provision of quality social services
- Achievement of a balance between the rate of population growth, available resources, and the social and economic development of the country
- Progress towards a complete demographic transition to reasonable birth rates and low death rates.
- Improvement in the reproductive health of all Nigerians at every stage of the life cycle
- Acceleration of a strong and immediate response to curb the spread of HIV/AIDS and other related infectious diseases
- Progress in achieving balanced and integrated urban and rural development.

To achieve these goals, the 2004 population policy sets out the following objectives:

[^0]- Increase understanding and awareness of the interrelationships between population factors, social and economic development, and the environment, and their mutual importance to the long-term sustainable development of Nigeria
- Expand access and coverage and improve the quality of reproductive and sexual health care services
- Strengthen and expand a comprehensive family planning and fertility management programme that ensures that all couples/individuals who want them have uninterrupted access to a reasonable range of contraceptive methods at affordable prices, and is also adequately responsive to the needs of infertile and subfertile couples
- Strengthen and improve safe motherhood programmes to reduce maternal mortality and morbidity and enhance the health of women
- Reduce infant and child mortality and improve the health and nutritional status of Nigerian children through expanded access to high-quality promotive, preventive, and curative health care services
- Promote Behavioural Change Communication (BCC) programmes to increase reproductive and sexual health knowledge, awareness, and behavioural change among Nigerians
- Empower women to participate actively and fully in all aspects of Nigeria's development and effectively address gender issues
- Enhance the involvement of men in reproductive health programmes and health care
- Increase the integration of adolescents and young people into development efforts and effectively address their reproductive health and related needs
- Increase and intensify coverage of population and family life education programmes
- Accelerate the integration of reproductive health and family planning concerns into sectoral programmes and activities
- Use effective advocacy to promote and accelerate attitudinal change towards population and reproductive health issues among public and private sector leaders
- Reduce and eventually eliminate harmful social and cultural practices that adversely affect the reproductive health of the population through the promotion of behavioural change and appropriate legislation
- Strengthen the national response to HIV/AIDS to rapidly control the spread of the epidemic and mitigate its social and economic impacts
- Encourage the integration of population groups with special needs, including nomads, refugees and displaced persons, the elderly, persons with disabilities, and remote rural dwellers into the development process
- Accelerate progress towards integrated urban and rural development and balanced population distribution
- Increase enrolment and retention of children, especially girls, in basic education and raise literacy levels among Nigerians
- Accelerate the integration of population factors into development planning at national, state and local government levels
- Improve the population, social, and economic database; promote and support population and development research; and help leadership groups recognize the important contribution that planning and data utilization make to the good governance of Nigeria
- Improve systems for monitoring and evaluating the implementation of the population policy and for reviewing the policy at periodic intervals.

The Government of Nigeria has set the goal of a 2-percent population growth rate by 2015 or beyond in its National Economic Policy. The targets for reduction in the total fertility rate and increases in modern contraceptive prevalence indicated below are consistent with this goal. The following key targets have been set to guide policy, programme planning, and implementation:

- Achieve a reduction of the national population growth rate to 2 percent or lower by the year 2015
- Achieve a reduction in the total fertility rate of at least 0.6 children every five years
- Increase the modern contraceptive prevalence rate by at least 2 percentage points per year
- Reduce the infant mortality rate to 35 deaths per 1,000 live births by 2015
- Reduce the child mortality rate to 45 deaths per 1,000 live births by 2015
- Reduce the maternal mortality ratio to 125 deaths per 100,000 live births by 2010 and to 75 per 100,000 live births by 2015
- Achieve sustainable universal basic education as soon as possible prior to 2015
- Eliminate the gap between men and women in enrolment in secondary, tertiary, vocational and technical education and training by 2015
- Eliminate illiteracy by 2020
- Achieve a 25 percent reduction in the adult prevalence of HIV every five years.


## Health Policies and Programmes

The Federal Government has several programmes and policies aimed at improving health care delivery services. The fourth National Development Plan (1981-1985) established a government commitment to provide adequate and effective primary health care that is promotive, protective, preventive, restorative, and rehabilitative to the entire population by the year 2000. A national health policy was consequently adopted in 1988. Its goal is to provide a formal framework for the direction of health management in Nigeria. The objective is to provide the population with access not only to primary health care but also to secondary and tertiary care, as needed, through a functional referral system. It defines the roles and responsibilities of the three tiers of government, as well as of civil society and nongovernmental organizations (NGOs).

In general, the provision of health services is the responsibility of federal, state, and local governments as well as religious organizations and individuals. The services are organized in a three-tier health care system:

1) Primary health care, which is largely the responsibility of local governments, with the support of the State Ministry of Health
2) Secondary health care, which provides specialized services to patients referred from the primary health care level and is the responsibility of the state government
3) Tertiary health care, which provides highly specialized referral services to the primary and secondary levels of the health care delivery system and is in the domain of the federal and state governments.

The national health policy regards primary health care as the framework to achieve improved health for the population. Primary health care services include health education; adequate nutrition; safe water and sanitation; reproductive health, including family planning; immunization against five major infectious diseases; provision of essential drugs; and disease control. The policy document requires that a comprehensive health care system delivered through the primary health centers should include maternal and child health care, including family planning services.

The health sector is characterized by wide regional disparities in status, service delivery, and resource availability. More health services are located in the southern states than in the north. The health sector has deteriorated despite Nigeria's high number of medical personnel per capita. The current priorities in the health sector are in the area of childhood immunization and prevention of HIV/AIDS.

### 1.4 EdUCATION

Education in Nigeria has evolved over a long period of time, with a series of policy changes. As a result, there have been increases in the enrolment of children and in the number of educational institutions both in the public and private sectors. The 1976 National Policy on Universal Primary Education gives every child the right to tuition-free primary education. Later, the 6-3-3-4 system was introduced, establishing six years of primary education, followed by three years of junior secondary and three years of senior secondary education; the last segment of four years is for university or polytechnic education. Subsequently, the National Literacy Programme for Adults was launched, followed by the establishment of nomadic education to address the needs of children of migrant cattle herders and fishermen in the riverine areas. In October 1999, Universal Basic Education (UBE) was launched, making it compulsory for every child to be educated free of tuition up to the junior secondary school level in an effort to meet Nigeria's manpower requirement for national development.

### 1.5 Organization and Objectives of the 2003 Nigeria Demographic and Health Survey

The 2003 Nigeria Demographic and Health Survey (2003 NDHS) is the latest in a series of nationally representative population and health surveys conducted in Nigeria. The 2003 NDHS was conducted by the National Population Commission (NPC); all activities were coordinated by a 12 -member committee. The survey was funded by USAID/Nigeria, while ORC Macro provided technical support through MEASURE DHS+, a project sponsored by the U.S Agency for International Development (USAID) to assist countries worldwide in conducting surveys to obtain information on key population and health indicators. Other development partners, including the Department for International Development (DFID), the United Nations Population Fund (UNFPA), and the United Nations Children’s Fund (UNICEF), also provided support for the survey.

The 2003 NDHS was designed to provide estimates for key indicators such as fertility, contraceptive use, infant and child mortality, immunization levels, use of family planning, maternal and child health, breastfeeding practices, nutritional status of mothers and young children, use of mosquito nets, female genital cutting, marriage, sexual activity, and awareness and behaviour regarding AIDS and other sexually transmitted infections in Nigeria.

## Sample Design

The sample for the 2003 NDHS was designed to provide estimates of population and health indicators (including fertility and mortality rates) for Nigeria as a whole, urban and rural areas, and six major subdivisions.

A representative probability sample of 7,864 households was selected for the 2003 NDHS sample. The sample was selected in two stages. In the first stage, 365 clusters were selected from a list of enumeration areas developed from the 1991 population census. In the second stage, a complete listing of households was carried out in each selected cluster. Households were then systematically selected for participation in the survey.

All women age 15-49 who were either permanent residents of the households in the 2003 NDHS sample or visitors present in the household on the night before the survey were eligible to be interviewed. In addition, in a subsample of one-third of all households selected for the survey, all men age 15-59 were eligible to be interviewed if they were either permanent residents or visitors present in the household on the night before the survey.

## Questionnaires

Three questionnaires were used for the 2003 NDHS: the Household Questionnaire, the Women’s Questionnaire, and the Men's Questionnaire. The content of these questionnaires was based on the model questionnaires developed by the MEASURE $D H S+$ programme for use in countries with low levels of contraceptive use.

The questionnaires were adapted during a technical workshop organized by the National Population Commission to reflect relevant issues in population and health in Nigeria. The workshop was attended by experts from the government, NGOs, and international donors. The adapted questionnaires were translated from English into the three major languages (Hausa, Igbo, and Yoruba) and pretested during November 2002.

The Household Questionnaire was used to list all 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 also 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 of the house, ownership of various durable goods, and ownership and use of mosquito nets. Additionally, the Household Questionnaire was used to record height and weight measurements of women age 15-49 and children under the age of 6 .

The Women's Questionnaire was used to collect information from all women age 15-49. These women were asked questions on the following topics:

- Background characteristics (e.g., education, residential history, media exposure)
- Birth history and childhood mortality
- Knowledge and use of family planning methods
- Fertility preferences
- Antenatal and delivery care
- Breastfeeding and child feeding practices
- Vaccinations and childhood illnesses
- Marriage and sexual activity
- Woman's work and husband's background characteristics
- Awareness and behaviour regarding AIDS and other sexually transmitted infections
- Female genital cutting.

The Men's Questionnaire was administered to all men age 15-59 living in every third household in the 2003 NDHS 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.

## Training of Field Staff

Over 100 people were recruited by the NPC to serve as supervisors, field editors, male and female interviewers, quality control personnel, and reserve interviewers. Efforts were made to recruit highcalibre personnel who came from all of the 36 states and the FCT to ensure appropriate linguistic and cultural diversity. They all participated in the main interviewer training, which was conducted from February 17 to March 8, 2003. The training was conducted in English and included lectures, presentations by outside experts, practical demonstrations, and practice interviewing in small groups. The practice interviews were conducted in the languages that the questionnaires were translated into: English, Hausa, Igbo, and Yoruba. Practice in certain less common dialects was also accomplished by translating directly from the English questionnaires. All of the field staff participated in three days of field practice. Finally, a series of special lectures was held specifically for the group comprising supervisors, field editors, quality control personnel, and field coordinators.

## Fieldwork

Fieldwork for the 2003 NDHS took place over a five-month period, from March to August 2003. Twelve interviewing teams carried out data collection. Each team consisted of one team supervisor, one field editor, four female interviewers, one male interviewer, and one driver. Special care was taken to monitor the quality of data collection. First, the field editor was responsible for reviewing all questionnaires for quality and consistency before the team's departure from the cluster. The field editor and supervisor would also sit in on interviews periodically. Twelve staff assigned from the NPC coordinated fieldwork activities and visited the teams at regular intervals to monitor the work. In addition, quality control personnel independently reinterviewed selected households after the departure of the teams. These checks were performed periodically through the duration of the fieldwork. ORC Macro also participated in field supervision.

## Data Processing

The processing of the 2003 NDHS results began shortly after the fieldwork commenced. Completed questionnaires were returned periodically from the field to NPC headquarters in Abuja, where they were entered and edited by data processing personnel who were specially trained for this task. The data processing personnel included two supervisors, a questionnaire administrator (who ensured that the expected numbers of questionnaires from all clusters were received), three office editors, 12 data entry operators, and a secondary editor. The concurrent processing of the data was an advantage since the NPC was able to advise field teams of problems detected during the data entry. In particular, tables were gener-
ated to check various data quality parameters. As a result, specific feedback was given to the teams to improve performance. The data entry and editing phase of the survey was completed in September 2003.

### 1.6 Response Rates

Table 1.2 shows household and individual response rates for the 2003 NDHS. A total of 7,864 households were selected for the sample, of which 7,327 were found. The shortfall is largely due to structures that were found to be vacant. Of the 7,327 existing households, 7,225 were successfully interviewed, yielding a household response rate of 99 percent. In these households, 7,985 women were identified as eligible for the individual interview. Interviews were completed with 95 percent of them. Of the 2,572 eligible men identified, 91 percent were successfully interviewed. There is little difference between urban and rural response rates.

| Table 1.2 Results of the household and individual interviews |  |  |  |
| :---: | :---: | :---: | :---: |
| Number of households, number of interviews, and response rates, according to residence, Nigeria 2003 |  |  |  |
|  | Residence |  | Total |
| Result | Urban | Rural |  |
| Household interviews |  |  |  |
| Households selected | 3,163 | 4,701 | 7,864 |
| Households occupied | 2,979 | 4,348 | 7,327 |
| Households interviewed | 2,931 | 4,294 | 7,225 |
| Household response rate | 98.4 | 98.8 | 98.6 |
| Interviews with women |  |  |  |
| Number of eligible women | 3,181 | 4,804 | 7,985 |
| Number of eligible women interviewed | 3,057 | 4,563 | 7,620 |
| Eligible woman response rate | 96.1 | 95.0 | 95.4 |
| Interviews with men |  |  |  |
| Number of eligible men | 1,073 | 1,499 | 2,572 |
| Number of eligible men interviewed | 986 | 1,360 | 2,346 |
| Eligible man response rate | 91.9 | 90.7 | 91.2 |

## HOUSEHOLD POPULATION AND HOUSING CHARACTERISTICS

This chapter presents a descriptive summary of some demographic and socioeconomic characteristics of the population in the sampled households. Also examined are environmental conditions such as housing facilities and physical features of the dwelling units in which the population lives.

All usual residents of each sampled household, plus all visitors who slept in that household the night before the interview, were listed using the household questionnaire. Some basic information was collected for each person, including age, sex, marital status, and education. In addition, information was collected on whether each person is a usual resident of the household or a visitor, and whether the person slept in the household the night prior to the survey interview. This allows the analysis of either de jure (usual residents) or de facto (those who are physically present there at the time of the survey) populations.

### 2.1 Household Population by Age, Sex, and Residence

Table 2.1 shows the distribution of the de facto household population in the 2003 Nigeria Demographic and Health Survey ( 2003 NDHS) by five-year age groups, according to sex and urban-rural residence. The 2003 NDHS households constitute a population of 35,173 persons. The population age structure indicates the history of the population of Nigeria and also its future course (Figure 2.1). About 50 percent of the population is female, and 50 percent is male. The proportion of persons in the younger age groups is substantially larger than the proportion in the older age groups for each sex in both urban and rural areas, which reflects the young age structure of the Nigerian population and is an indication of a population with high fertility. Forty-four percent of the population is below 15 years of age and 4 percent is age 65 or older.

| 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, Nigeria 2003 |  |  |  |  |  |  |  |  |  |
|  |  | Urban |  |  | Rural |  |  | Total |  |
| Age | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| < 5 | 14.8 | 15.2 | 15.0 | 18.2 | 16.7 | 17.4 | 17.0 | 16.2 | 16.6 |
| 5-9 | 14.4 | 13.1 | 13.7 | 15.7 | 14.9 | 15.3 | 15.2 | 14.3 | 14.8 |
| 10-14 | 12.4 | 13.4 | 12.9 | 12.2 | 11.8 | 12.0 | 12.3 | 12.3 | 12.3 |
| 15-19 | 10.8 | 10.4 | 10.6 | 9.5 | 10.3 | 9.9 | 9.9 | 10.3 | 10.1 |
| 20-24 | 9.6 | 9.4 | 9.5 | 7.8 | 8.9 | 8.4 | 8.4 | 9.1 | 8.8 |
| 25-29 | 7.7 | 8.8 | 8.3 | 6.4 | 8.1 | 7.3 | 6.8 | 8.4 | 7.6 |
| 30-34 | 6.3 | 5.7 | 6.0 | 5.7 | 5.9 | 5.8 | 5.9 | 5.8 | 5.9 |
| 35-39 | 4.4 | 5.7 | 5.1 | 4.7 | 4.5 | 4.6 | 4.6 | 4.9 | 4.7 |
| 40-44 | 4.4 | 4.1 | 4.2 | 4.0 | 4.2 | 4.1 | 4.1 | 4.2 | 4.2 |
| 45-49 | 4.1 | 3.5 | 3.8 | 3.2 | 3.2 | 3.2 | 3.5 | 3.3 | 3.4 |
| 50-54 | 3.0 | 3.5 | 3.3 | 3.2 | 3.8 | 3.5 | 3.1 | 3.7 | 3.4 |
| 55-59 | 2.2 | 2.1 | 2.1 | 2.1 | 2.4 | 2.2 | 2.1 | 2.3 | 2.2 |
| 60-64 | 2.1 | 1.7 | 1.9 | 2.5 | 2.0 | 2.3 | 2.4 | 1.9 | 2.1 |
| 65-69 | 1.5 | 1.1 | 1.3 | 1.6 | 1.1 | 1.4 | 1.6 | 1.1 | 1.4 |
| 70-74 | 1.0 | 0.8 | 0.9 | 1.5 | 1.0 | 1.3 | 1.3 | 1.0 | 1.1 |
| 75-79 | 0.4 | 0.4 | 0.4 | 0.6 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 |
| $80+$ | 0.8 | 0.9 | 0.8 | 1.0 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number | 6,017 | 5,870 | 11,887 | 11,441 | 11,844 | 23,286 | 17,459 | 17,714 | 35,173 |

Figure 2.1 Population Pyramid


### 2.2 Household Composition

Information about the composition of households by sex of the head of the household and size of the household is presented in Table 2.2. The data show that households in Nigeria are predominantly headed by men ( 83 percent) and less than one in five ( 17 percent) are headed by women. Female-headed households are more common in urban areas ( 19 percent) than in rural areas ( 15 percent). There is significant variation by region: the proportion of households headed by a female ranges from a low of 7 percent in the North East to a high of 28 percent in the South South.

The average household size in Nigeria is 5.0 persons. The household size is slightly higher in rural areas than in urban areas ( 5.1 versus 4.7 persons). It is also higher in the north than the south.

Table 2.2 Household composition
Percent distribution of households by sex of head of household and household size, according to residence, Nigeria 2003

| Characteristic | Residence |  | Region |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Urban | Rural | North Central | North East | North West | South East | South South | South West |  |
| Sex of head of household |  |  |  |  |  |  |  |  |  |
| Male | 81.0 | 84.8 | 84.3 | 93.5 | 92.1 | 73.5 | 71.8 | 76.8 | 83.4 |
| Female | 19.0 | 15.2 | 15.7 | 6.5 | 7.9 | 26.5 | 28.2 | 23.2 | 16.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of usual members |  |  |  |  |  |  |  |  |  |
| 0 | 0.1 | 0.2 | 0.3 | 0.0 | 0.2 | 0.4 | 0.1 | 0.1 | 0.2 |
| 1 | 14.9 | 9.8 | 10.7 | 9.1 | 7.1 | 16.8 | 15.1 | 15.9 | 11.7 |
| 2 | 12.7 | 11.5 | 10.2 | 9.2 | 11.1 | 15.4 | 13.0 | 14.8 | 12.0 |
| 3 | 14.0 | 14.2 | 12.3 | 10.8 | 15.8 | 13.8 | 12.4 | 18.9 | 14.1 |
| 4 | 12.8 | 13.4 | 13.9 | 12.8 | 14.0 | 11.5 | 12.9 | 13.1 | 13.2 |
| 5 | 12.2 | 12.0 | 10.9 | 11.0 | 13.3 | 11.6 | 10.7 | 14.0 | 12.1 |
| 6 | 10.4 | 11.0 | 11.1 | 11.8 | 9.9 | 12.2 | 10.5 | 10.2 | 10.8 |
| 7 | 8.4 | 8.4 | 9.8 | 8.8 | 8.6 | 9.2 | 8.6 | 5.2 | 8.4 |
| 8 | 4.5 | 5.5 | 5.9 | 6.7 | 5.6 | 3.4 | 5.6 | 2.5 | 5.1 |
| 9+ | 10.0 | 14.0 | 14.9 | 19.9 | 14.4 | 5.7 | 11.0 | 5.3 | 12.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of households | 2,598 | 4,627 | 1,040 | 1,185 | 1,911 | 690 | 1,315 | 1,083 | 7,225 |
| Mean size | 4.7 | 5.1 | 5.4 | 5.9 | 5.2 | 4.1 | 4.7 | 4.0 | 5.0 |

Note: Table is based on de jure members, i.e., usual residents.

### 2.3 EdUCATIONAL Attainment

Educational attainment is perhaps the most important characteristic of household members. Many phenomena such as reproductive behaviour, use of contraception, children's health, and proper hygienic habits are related to the education of household members. Table 2.3 shows the classification of the household members by educational attainment, according to age group, residence, and geopolitical region for each sex. Although the majority of the household population age 6 and older has some education, 46 percent of females and 31 percent of males have never attended school.

With the exception of the youngest age group, some of whom will begin to attend school in the future, the proportion with no education increases with age. For example, the proportion of women who have never attended any formal schooling increases from 27 percent among those age 10-14 to 89 percent among those age 65 and above. For men, the proportion increases from 18 percent of those age 10-14 to 70 percent of those age 65 and older. Approximately one-quarter of women and one-third of men have attended at least some secondary schooling, however, the median number of years of schooling is 0.2 for females and 3.6 for males.

Educational attainment is higher in urban areas than in rural areas. The proportion of the population that has achieved any education varies among Nigeria's geopolitical regions. The North West and North East have the highest proportion of persons with no education-seven in ten women and half of men-while the South East has the lowest percentage who have never been to school among females (18 percent) and South South among males ( 9 percent).

| Percent distribution of the de facto female and male household populations age six and over by highest level of education attended or completed, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Highest level of schooling attended or completed |  |  |  |  |  |  |  |  |  |  |
| Background characteristic | No education | Some primary | Completed primary ${ }^{1}$ | Some secondary | Completed secondary ${ }^{2}$ | More than secondary | Don't know/ missing | Total | Number | Median number of years |
| FEMALE |  |  |  |  |  |  |  |  |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |
| 6-9 | 45.9 | 51.6 | 0.0 | 0.0 | 0.0 | 0.0 | 2.4 | 100.0 | 2,041 | 0.0 |
| 10-14 | 26.8 | 53.2 | 4.6 | 14.0 | 0.1 | 0.0 | 1.3 | 100.0 | 2,176 | 2.3 |
| 15-19 | 30.2 | 11.2 | 10.1 | 39.6 | 7.3 | 0.9 | 0.8 | 100.0 | 1,832 | 5.6 |
| 20-24 | 33.9 | 5.6 | 11.9 | 17.3 | 23.3 | 7.1 | 0.9 | 100.0 | 1,609 | 5.8 |
| 25-29 | 39.7 | 5.5 | 14.6 | 13.0 | 18.6 | 8.0 | 0.6 | 100.0 | 1,481 | 5.3 |
| 30-34 | 47.5 | 7.4 | 15.5 | 13.4 | 9.1 | 6.3 | 0.8 | 100.0 | 1,031 | 2.1 |
| 35-39 | 49.8 | 7.3 | 14.9 | 15.0 | 3.9 | 8.7 | 0.4 | 100.0 | 867 | 0.0 |
| 40-44 | 60.4 | 8.9 | 12.4 | 10.0 | 2.4 | 5.5 | 0.5 | 100.0 | 736 | 0.0 |
| 45-49 | 68.0 | 11.5 | 8.7 | 3.6 | 1.1 | 4.4 | 2.7 | 100.0 | 584 | 0.0 |
| 50-54 | 76.3 | 6.2 | 8.1 | 4.6 | 0.8 | 2.9 | 1.1 | 100.0 | 653 | 0.0 |
| 55-59 | 80.9 | 6.2 | 5.1 | 2.4 | 0.3 | 2.1 | 3.0 | 100.0 | 404 | 0.0 |
| 60-64 | 85.5 | 6.8 | 1.5 | 3.7 | 0.1 | 1.0 | 1.5 | 100.0 | 341 | 0.0 |
| $65+$ | 88.7 | 3.5 | 2.5 | 1.0 | 0.3 | 1.0 | 3.1 | 100.0 | 594 | 0.0 |
| Residence |  |  |  |  |  |  |  |  |  |  |
| Urban | 31.9 | 21.3 | 9.6 | 18.6 | 10.8 | 6.8 | 1.0 | 100.0 | 4,839 | 3.9 |
| Rural | 53.4 | 20.4 | 7.9 | 10.7 | 4.4 | 1.7 | 1.4 | 100.0 | 9,521 | 0.0 |
| Region |  |  |  |  |  |  |  |  |  |  |
| North Central | 40.9 | 27.2 | 9.7 | 13.4 | 5.3 | 2.5 | 1.1 | 100.0 | 2,248 | 0.9 |
| North East | 68.0 | 17.1 | 4.3 | 5.7 | 2.7 | 1.5 | 0.7 | 100.0 | 2,593 | 0.0 |
| North West | 72.2 | 13.6 | 4.2 | 4.1 | 2.5 | 1.5 | 2.0 | 100.0 | 3,823 | 0.0 |
| South East | 17.8 | 25.1 | 12.1 | 20.6 | 16.2 | 5.6 | 2.6 | 100.0 | 1,314 | 5.4 |
| South South | 20.6 | 27.5 | 12.5 | 23.6 | 9.4 | 5.4 | 0.9 | 100.0 | 2,559 | 5.1 |
| South West | 23.2 | 19.9 | 13.6 | 24.3 | 11.4 | 7.1 | 0.5 | 100.0 | 1,823 | 5.4 |
| Total | 46.1 | 20.7 | 8.5 | 13.4 | 6.6 | 3.4 | 1.3 | 100.0 | 14,360 | 0.2 |
| MALE |  |  |  |  |  |  |  |  |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |
| 6-9 | 41.1 | 56.1 | 0.0 | 0.0 | 0.0 | 0.0 | 2.8 | 100.0 | 2,175 | 0.0 |
| 10-14 | 18.2 | 62.1 | 3.1 | 15.4 | 0.1 | 0.0 | 1.2 | 100.0 | 2,144 | 2.7 |
| 15-19 | 15.4 | 15.6 | 8.9 | 51.2 | 7.4 | 0.8 | 0.9 | 100.0 | 1,736 | 6.7 |
| 20-24 | 16.2 | 6.4 | 13.2 | 27.9 | 24.7 | 10.0 | 1.5 | 100.0 | 1,473 | 8.7 |
| 25-29 | 20.6 | 4.3 | 16.7 | 15.5 | 27.4 | 14.2 | 1.3 | 100.0 | 1,195 | 8.6 |
| 30-34 | 23.7 | 5.9 | 14.4 | 19.3 | 18.1 | 17.5 | 1.0 | 100.0 | 1,029 | 8.3 |
| 35-39 | 27.2 | 7.0 | 15.8 | 18.3 | 12.9 | 17.7 | 1.0 | 100.0 | 796 | 6.4 |
| 40-44 | 35.7 | 8.9 | 15.7 | 15.5 | 6.1 | 17.6 | 0.5 | 100.0 | 724 | 5.5 |
| 45-49 | 38.7 | 12.1 | 15.9 | 12.6 | 4.2 | 15.9 | 0.6 | 100.0 | 613 | 5.3 |
| 50-54 | 47.0 | 14.1 | 16.0 | 10.0 | 2.8 | 8.1 | 2.1 | 100.0 | 550 | 1.5 |
| 55-59 | 52.8 | 14.3 | 12.2 | 6.8 | 2.9 | 9.3 | 1.8 | 100.0 | 372 | 0.0 |
| 60-64 | 66.0 | 9.3 | 11.1 | 6.6 | 1.1 | 4.0 | 1.8 | 100.0 | 411 | 0.0 |
| $65+$ | 70.4 | 9.9 | 6.9 | 5.7 | 1.2 | 3.8 | 2.1 | 100.0 | 760 | 0.0 |
| Residence |  |  |  |  |  |  |  |  |  |  |
| Urban | 19.9 | 24.0 | 9.3 | 21.5 | 12.3 | 11.9 | 1.1 | 100.0 | 4,971 | 5.6 |
| Rural | 36.3 | 25.2 | 9.6 | 15.9 | 6.7 | 4.6 | 1.6 | 100.0 | 9,028 | 2.0 |
| Region |  |  |  |  |  |  |  |  |  |  |
| North Central | 21.9 | 29.5 | 9.1 | 21.1 | 10.1 | 7.5 | 0.7 | 100.0 | 2,222 | 4.9 |
| North East | 50.2 | 22.9 | 4.6 | 11.8 | 4.9 | 4.9 | 0.8 | 100.0 | 2,626 | 0.0 |
| North West | 50.0 | 23.1 | 6.2 | 9.3 | 5.0 | 4.4 | 2.1 | 100.0 | 3,670 | 0.0 |
| South East | 14.0 | 23.6 | 16.0 | 20.2 | 11.5 | 10.8 | 4.0 | 100.0 | 1,124 | 5.6 |
| South South | 8.7 | 28.1 | 14.1 | 25.8 | 13.0 | 9.2 | 1.1 | 100.0 | 2,557 | 5.8 |
| South West | 13.9 | 21.0 | 13.4 | 27.7 | 12.5 | 10.7 | 0.8 | 100.0 | 1,800 | 5.9 |
| Total | 30.5 | 24.8 | 9.5 | 17.9 | 8.7 | 7.2 | 1.4 | 100.0 | 13,999 | 3.6 |
| Note: Totals include 10 women and 20 men with missing information on age. <br> ${ }^{1}$ Completed 6 years at the primary level <br> ${ }^{2}$ Completed 6 years at the secondary level |  |  |  |  |  |  |  |  |  |  |

## School Attendance Rates

Table 2.4 provides net attendance ratios (NAR) and gross attendance ratios (GAR) by sex, residence, geopolitical region, and household economic status according to school level. 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. The GAR for primary school is the total number of primary school students of any age, expressed as the percentage of the official primary school age population. The GAR for secondary school is the total number of secondary school students up to age 24, expressed as the percentage of the official secondary school age population. If there are significant numbers of over-age and under-age students at a given level of schooling, the GAR can exceed 100 percent. Children are considered to be attending school currently if they attended at any point during the current school year.

Table 2.4 shows that 60 percent of primary school age children in Nigeria are attending primary school. The NAR is higher in urban areas than in rural areas (70 and 56 percent, respectively), as is the GAR (100 and 82 percent, respectively). There is significant variation by region: the NARs in the North East and North West are just over half the ratios in the three southern regions. At the secondary school level, the NAR is 35 percent and the GAR is 61 percent. Regional disparities at the secondary school level are even more pronounced than at the primary school level: the NAR, for example, ranges from a low of 15 percent in the North West, to a high of 61 percent in the South West.

The Gender Parity Index (GPI) represents the ratio of the GAR for females to the GAR for males. It is presented for both the primary and secondary school levels and offers a summary measure to the extent to which there are gender differences in attendance rates. A GPI of less than 1 indicates that a smaller proportion of females than males attends school. The GPI for primary school is 0.86 and for secondary school is 0.77 . Although there is little urban-rural differential at the primary school level, there is significant difference at the secondary school level. Once again, regional differentials are significant; the data indicate that girls residing in the North West and North East are particularly disadvantaged. Gender disparities by age in school attendance at any level are shown in Figure 2.2.


Table 2.4 also shows school attendance ratios and GPIs by wealth quintile, an indicator of the economic status of households. The wealth index is a recently developed measure that has been tested in a number of countries in relation to inequities in household income, use of health services, and health outcomes (Rutstein, 2004; Rutstein et al., 2000). It is an indicator of the level of wealth that is consistent with expenditure and income measures (Rutstein, 1999). The wealth index was constructed using household asset data and principal components analysis. Asset information was collected in the 2003 NDHS Household Questionnaire and covers information on household ownership of a number of consumer items ranging from a television to a bicycle or car, as well as dwelling characteristics such as source of drinking water, type of sanitation facilities, and type of material used in flooring.

Each asset was assigned a weight (factor score) generated through principal component analysis, and the resulting asset scores were standardized in relation to a standard normal distribution with a mean of zero and standard deviation of one (Gwatkin et al., 2000). 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)

The data in Table 2.4 show that there is a high correlation between economic status of the household and school attendance. For example, the NAR at the primary school level is 40 percent for the poorest households and 83 percent for the most advantaged households. The data indicate that unless there is an effective policy on free education, many young Nigerians will continue to be denied educational opportunities.

Table 2.4 School attendance ratios

Net attendance ratios (NAR) and gross attendance ratios (GAR) for the de jure household population by level of schooling and sex, according to background characteristics, Nigeria 2003

| Background characteristic | Net attendance ratio ${ }^{1}$ |  |  | Gross attendance ratio ${ }^{2}$ |  |  | Gender parity index ${ }^{3}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Total | Male | Female | Total |  |
| PRIMARY SCHOOL |  |  |  |  |  |  |  |
| Residence |  |  |  |  |  |  |  |
| Urban | 71.0 | 68.0 | 69.5 | 105.5 | 93.8 | 99.8 | 0.89 |
| Rural | 60.2 | 51.1 | 55.7 | 89.4 | 75.3 | 82.4 | 0.84 |
| Region |  |  |  |  |  |  |  |
| North Central | 71.4 | 68.9 | 70.2 | 109.1 | 110.0 | 109.5 | 1.01 |
| North East | 49.5 | 39.1 | 44.4 | 71.1 | 51.8 | 61.6 | 0.73 |
| North West | 49.0 | 34.2 | 41.7 | 77.6 | 48.6 | 63.3 | 0.63 |
| South East | 82.4 | 78.3 | 80.2 | 124.5 | 117.0 | 120.4 | 0.94 |
| South South | 83.2 | 81.1 | 82.2 | 124.5 | 114.4 | 119.5 | 0.92 |
| South West | 81.2 | 84.6 | 82.8 | 104.6 | 114.9 | 109.4 | 1.10 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 45.0 | 35.7 | 40.4 | 71.5 | 57.1 | 64.4 | 0.80 |
| Second | 55.6 | 42.2 | 48.9 | 88.5 | 63.4 | 75.9 | 0.72 |
| Middle | 64.9 | 56.6 | 60.9 | 97.2 | 83.7 | 90.7 | 0.86 |
| Fourth | 75.4 | 72.7 | 74.1 | 111.8 | 106.0 | 109.0 | 0.95 |
| Highest | 82.9 | 82.8 | 82.9 | 108.4 | 103.8 | 106.0 | 0.96 |
| Total | 63.7 | 56.5 | 60.1 | 94.6 | 81.2 | 88.0 | 0.86 |
| SECONDARY SCHOOL |  |  |  |  |  |  |  |
| Residence |  |  |  |  |  |  |  |
| Urban | 47.2 | 45.3 | 46.3 | 75.6 | 67.2 | 71.6 | 0.89 |
| Rural | 31.7 | 25.9 | 28.7 | 65.0 | 45.9 | 55.3 | 0.71 |
| Region |  |  |  |  |  |  |  |
| North Central | 42.7 | 32.6 | 37.7 | 90.7 | 55.6 | 73.3 | 0.61 |
| North East | 22.9 | 14.9 | 19.1 | 41.6 | 23.1 | 32.9 | 0.55 |
| North West | 19.8 | 9.5 | 14.7 | 41.0 | 14.6 | 27.8 | 0.36 |
| South East | 44.9 | 51.4 | 48.5 | 84.7 | 93.7 | 89.8 | 1.11 |
| South South | 51.6 | 51.5 | 51.5 | 90.9 | 90.8 | 90.9 | 1.00 |
| South West | 62.2 | 59.9 | 61.0 | 94.1 | 80.2 | 87.0 | 0.85 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 17.5 | 12.0 | 14.6 | 40.9 | 23.8 | 32.1 | 0.58 |
| Second | 24.8 | 16.2 | 20.9 | 50.1 | 31.3 | 41.5 | 0.63 |
| Middle | 37.3 | 26.7 | 32.0 | 71.2 | 49.8 | 60.4 | 0.70 |
| Fourth | 43.5 | 40.1 | 41.8 | 84.5 | 63.1 | 73.9 | 0.75 |
| Highest | 62.6 | 64.9 | 63.8 | 95.0 | 94.2 | 94.6 | 0.99 |
| Total | 37.5 | 32.6 | 35.1 | 69.0 | 53.3 | 61.2 | 0.77 |

${ }^{1}$ 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 GAR for females to the GAR for males. The Gender Parity Index for secondary school is the ratio of the secondary school GAR for females to the GAR for males.

## Dropout and Repetition Rates

By asking about the grade or class that children were attending during the previous school year, it is possible to calculate dropout rates and repetition rates. These rates describe the flow of students through the school system. Repetition and dropout rates approach zero where students nearly always progress to the next grade at the end of the school year. Repetition and dropout rates often vary across grades, indicating points in the school system where students are not regularly promoted to the next grade or they decide to drop out of school.

Although an automatic promotion policy does not operate officially in Nigeria, very few primary school students repeat grades. Table 2.5 indicates that apart from first grade, which 4 percent are repeating, the rates for grades 2 to 6 are all below 3 percent. Dropout rates are also low (less than 2 percent) from grades 1 through 5. At the sixth grade, the dropout rate is 17 percent. The reason for the high dropout rate at grade 6 is probably because many of the pupils who attend primary school are unable to move

| Repetition and dropout rates for the de jure household population age 5-24 years by school grade, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Background characteristic | School grade |  |  |  |  |  |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
| REPETITION RATE ${ }^{1}$ |  |  |  |  |  |  |
| Sex |  |  |  |  |  |  |
| Male | 3.8 | 2.8 | 1.7 | 1.6 | 2.9 | 2.4 |
| Female | 4.0 | 1.8 | 3.5 | 1.9 | 1.8 | 1.9 |
| Residence |  |  |  |  |  |  |
| Urban | 4.5 | 0.9 | 1.7 | 2.3 | 4.4 | 2.9 |
| Rural | 3.5 | 3.2 | 3.0 | 1.4 | 1.2 | 1.5 |
| Region |  |  |  |  |  |  |
| North Central | 2.4 | 1.1 | 2.2 | 0.0 | 2.1 | 0.0 |
| North East | 1.1 | 0.7 | 1.1 | 0.0 | 0.0 | 4.0 |
| North West | 6.1 | 4.2 | 5.6 | 1.3 | 5.7 | (5.9) |
| South East | 0.8 | 6.9 | 2.0 | 1.3 | 2.0 | 3.1 |
| South South | 6.6 | 0.0 | 1.6 | 2.2 | 1.1 | 1.1 |
| South West | 2.4 | 3.3 | 0.9 | 5.1 | 3.5 | 2.2 |
| Total | 3.9 | 2.4 | 2.5 | 1.7 | 2.4 | 2.1 |
| DROPOUT RATE ${ }^{2}$ |  |  |  |  |  |  |
| Sex |  |  |  |  |  |  |
| Male | 0.0 | 0.4 | 0.8 | 0.0 | 2.0 | 15.8 |
| Female | 0.1 | 0.3 | 0.9 | 3.3 | 0.1 | 17.9 |
| Residence |  |  |  |  |  |  |
| Urban | 0.0 | 0.2 | 0.6 | 0.3 | 0.3 | 7.0 |
| Rural | 0.1 | 0.4 | 1.1 | 2.1 | 1.6 | 23.7 |
| Region |  |  |  |  |  |  |
| North Central | 0.0 | 0.3 | 1.0 | 1.1 | 0.0 | 24.9 |
| North East | 0.0 | 0.4 | 0.3 | 0.0 | 0.0 | 14.2 |
| North West | 0.0 | 0.6 | 0.4 | 0.0 | 2.3 | (26.8) |
| South East | 0.0 | 0.4 | 0.0 | 0.7 | 0.6 | 4.0 |
| South South | 0.2 | 0.0 | 2.5 | 4.3 | 2.5 | 21.3 |
| South West | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.4 |
| Total | 0.0 | 0.3 | 0.9 | 1.4 | 1.1 | 16.9 |

Note: Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ 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.
to the next educational level (i.e., secondary school). There is great variation by residence and region. For example, rural children are more than three times as likely as urban children to drop out of school at grade 6.

### 2.4 Household Characteristics

The 2003 NDHS gathered information on housing characteristics such as source of water, electricity, cooking fuel, type of toilet facilities, number of sleeping rooms in the house, and housing material. Table 2.6 presents this information by urban-rural residence and region. These characteristics are correlated with health and are also an indication of socioeconomic status.

About half of households in Nigeria have electricity. Electricity is much more common in urban areas than in rural areas (85 and 34 percent, respectively). Indeed, urban dwellers are more advantaged overall in terms of household characteristics than rural dwellers. Nonetheless, living conditions across the entire country are mixed, with a majority of Nigerians having no access to potable water and using traditional pit toilets.

The source of water and availability of sanitary facilities are important determinants of the health status of household members. Sources of water expected to be relatively free of disease are piped water and water drawn from protected wells and deep boreholes. Other sources, like unprotected wells and surface water (rivers, streams, ponds, and lakes), are more likely to carry disease-causing agents. The table shows that 42 percent of Nigerian households have access to clean water sources (17 percent from piped water, 24 percent from a protected well, and 1 percent from spring water).

Sources of drinking water differ considerably by place of residence. Thirty-three percent of urban households obtain water from pipes into dwelling/yard/plot or from public taps, compared with just 9 percent of rural households. It is notable that in rural areas, approximately one-fifth obtain drinking water from open public wells and 27 percent from a river or stream. A majority of Nigerians ( 56 percent) have access to water within 15 minutes. About two-thirds of urban households obtain water within 15 minutes, compared with about half of rural households. The median time to the source of drinking water is 5 minutes for the urban households and 10 minutes for the rural households.

The lack of availability of sanitary facilities poses a serious public health problem. Only 15 percent of households have a flush toilet, while the majority (57 percent) use traditional pit toilets, and onequarter have no facility. There are differences in the type of toilet facilities by both residence and region. Urban households are more than four times as likely to have a modern flush toilet as rural areas (29 and 7 percent, respectively). Households in the North West and North East are the least likely to have a flush toilet.

The type of material used for flooring is an indicator of the economic situation of households and therefore the potential exposure of household members to disease-causing agents. Forty-two percent of households live in dwellings with cement floors and 31 percent in dwellings with earth or sand floors. There are substantial differences in the flooring materials by urban-rural residence. Almost half of rural households have a floor made of earth, sand, or dung, compared with 10 percent of urban households.

Firewood and straw is the most common fuel used for cooking, reported by two-thirds of households. An additional 27 percent use kerosene. Rural households are twice as likely as urban households to use firewood or straw (84 and 41 percent, respectively).

| Table 2.6 Household characteristics |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of households by household characteristics, according to residence and region, Nigeria 2003 |  |  |  |  |  |  |  |  |  |
|  | Residence |  | Region |  |  |  |  |  |  |
| Household characteristic | Urban | Rural | North Central | North East | North West | South East | South South | South <br> West | Total |
| Electricity |  |  |  |  |  |  |  |  |  |
| Yes | 84.9 | 33.8 | 47.2 | 30.9 | 42.0 | 70.2 | 57.9 | 79.9 | 52.2 |
| No | 15.0 | 66.0 | 52.6 | 68.9 | 57.8 | 29.4 | 42.1 | 20.0 | 47.7 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Source of drinking water |  |  |  |  |  |  |  |  |  |
| Piped into dwelling/yard/plot | 14.4 | 2.3 | 7.8 | 4.6 | 10.2 | 8.3 | 3.2 | 4.6 | 6.6 |
| Public tap | 18.5 | 6.2 | 8.1 | 9.7 | 11.8 | 11.8 | 4.6 | 18.8 | 10.6 |
| Open well in dwelling/yard/plot | 9.4 | 14.2 | 12.6 | 15.1 | 22.9 | 1.8 | 3.3 | 9.2 | 12.5 |
| Open public well | 6.7 | 21.2 | 9.4 | 30.8 | 25.0 | 1.5 | 5.2 | 12.7 | 16.0 |
| Protected well in dwelling/ yard/plot | 6.7 | 3.7 | 5.5 | 1.8 | 3.3 | 10.8 | 7.0 | 3.5 | 4.8 |
| Protected public well | 24.4 | 16.3 | 11.5 | 5.3 | 12.1 | 33.1 | 35.8 | 25.6 | 19.2 |
| Spring | 0.6 | 1.3 | 1.5 | 0.2 | 0.5 | 4.8 | 0.5 | 1.2 | 1.1 |
| River/stream | 6.7 | 26.9 | 34.9 | 17.3 | 10.4 | 10.6 | 33.0 | 13.5 | 19.6 |
| Pond/lake/dam | 0.8 | 1.7 | 2.0 | 1.9 | 0.4 | 1.3 | 1.3 | 2.1 | 1.4 |
| Rainwater | 0.5 | 2.1 | 0.1 | 0.0 | 0.0 | 6.7 | 4.2 | 0.5 | 1.5 |
| Tanker truck | 5.9 | 1.9 | 5.9 | 4.4 | 0.6 | 7.3 | 1.4 | 4.2 | 3.3 |
| Other | 5.2 | 2.0 | 0.6 | 8.9 | 2.9 | 1.8 | 0.5 | 4.1 | 3.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Time to water source |  |  |  |  |  |  |  |  |  |
| Percentage $<15$ minutes | 64.9 | 51.4 | 51.1 | 58.2 | 62.1 | 59.4 | 45.8 | 59.4 | 56.3 |
| Median time to source | 4.6 | 9.9 | 10.0 | 9.4 | 6.5 | 4.9 | 14.8 | 9.2 | 9.4 |
| Sanitation facility |  |  |  |  |  |  |  |  |  |
| Flush toilet | 28.7 | 6.7 | 9.6 | 4.5 | 4.5 | 41.3 | 21.2 | 23.4 | 14.6 |
| Traditional pit toilet | 55.6 | 56.9 | 50.1 | 74.6 | 74.3 | 39.8 | 42.3 | 39.1 | 56.5 |
| Ventilated improved pit (vip) latrine | 5.5 | 1.9 | 1.9 | 0.5 | 1.6 | 0.9 | 8.5 | 5.5 | 3.2 |
| Bush/field | 9.7 | 31.6 | 38.0 | 20.1 | 19.2 | 17.6 | 19.7 | 30.7 | 23.7 |
| River | 0.3 | 2.7 | 0.4 | 0.3 | 0.3 | 0.1 | 8.2 | 1.2 | 1.9 |
| Other | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Flooring material |  |  |  |  |  |  |  |  |  |
| Earth/sand | 9.9 | 43.6 | 28.3 | 57.3 | 41.8 | 12.8 | 21.7 | 11.8 | 31.4 |
| Dung | 0.4 | 3.6 | 1.4 | 4.5 | 4.2 | 0.2 | 1.1 | 1.2 | 2.4 |
| Cement | 47.4 | 39.6 | 48.5 | 31.5 | 45.4 | 53.1 | 35.9 | 44.4 | 42.4 |
| Carpet | 39.0 | 12.1 | 20.8 | 6.2 | 7.4 | 27.8 | 38.4 | 40.9 | 21.8 |
| Other | 2.0 | 0.8 | 0.8 | 0.1 | 1.1 | 1.3 | 2.7 | 1.3 | 1.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Cooking fuel |  |  |  |  |  |  |  |  |  |
| Electricity | 0.5 | 0.1 | 0.5 | 0.4 | 0.2 | 0.1 | 0.1 | 0.4 | 0.3 |
| Kerosene | 53.4 | 12.1 | 16.1 | 4.8 | 10.3 | 51.0 | 36.2 | 64.2 | 26.9 |
| Firewood, straw | 41.1 | 84.4 | 79.5 | 92.6 | 83.8 | 45.0 | 61.1 | 30.7 | 68.8 |
| Dung | 0.1 | 0.8 | 0.5 | 0.1 | 1.5 | 0.0 | 0.1 | 0.0 | 0.5 |
| Other | 4.7 | 2.5 | 3.4 | 2.0 | 3.6 | 3.7 | 2.5 | 4.7 | 3.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Persons per sleeping room | 2.9 | 3.6 | 4.0 | 3.7 | 3.3 | 3.0 | 3.6 | 2.2 | 3.3 |
| Number of households | 2,598 | 4,627 | 1,040 | 1,185 | 1,911 | 690 | 1,315 | 1,083 | 7,225 |

Crowded conditions may affect health as well as the quality of life. The number of persons per sleeping room in the household is used as a measure of household room density. On average, there are 3.3 persons per sleeping room in Nigeria. Rural households have more people per sleeping room than urban households (3.6 and 2.9 percent, respectively).

## Household Durable Goods

The availability of durable consumer goods is an indicator of a household's socioeconomic status. Moreover, particular goods have specific advantages. For example, having access to a radio or a television exposes household members to innovative ideas, a refrigerator prolongs the wholesomeness of foods, and a means of transport allows greater access to services away from the local area.

Table 2.7 shows the availability of selected consumer goods by residence. Nationally, almost three-fourths of households own a radio, and almost one-third own a television. Fewer households own a refrigerator-just 18 percent. In each case, urban households are much more likely than rural households to own these goods. Indeed, urban households are more likely than rural households to own each of the items except for bicycles, work animals, and boats, which are more commonly owned in rural areas. Rural households are also disadvantaged in terms of communications. Less than 2 percent of the rural households have telephones or cell phones, compared with 12 percent of urban households.

The data presented in this chapter vividly portray the level of poverty in Nigeria. Less than half of Nigerians have access to potable water and just one-third of rural households have electricity. There is a need for vigorous policies to improve access to the basic necessities of life. Furthermore, the data on education illustrate the need for better schooling of the population, especially females.

| Table 2.7 Household durable goods |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of households possessing various durable consumer goods, by residence and region, Nigeria 2003 |  |  |  |  |  |  |  |  |  |
|  | Residence |  | Region |  |  |  |  |  | Total |
| Durable consumer goods | Urban | Rural | North Central | North East | North <br> West | South East | South <br> South | South <br> West |  |
| Radio | 85.3 | 65.8 | 75.0 | 60.8 | 72.5 | 87.7 | 69.4 | 79.1 | 72.8 |
| Television | 58.6 | 15.4 | 23.6 | 14.0 | 19.9 | 52.9 | 37.3 | 54.4 | 31.0 |
| Telephone/cell phone | 11.8 | 1.9 | 1.6 | 1.1 | 2.3 | 14.0 | 6.5 | 12.8 | 5.5 |
| Refrigerator | 36.1 | 7.9 | 13.6 | 9.2 | 8.9 | 35.4 | 24.8 | 28.8 | 18.0 |
| Gas cooker | 7.5 | 2.1 | 2.7 | 1.1 | 1.7 | 12.2 | 6.3 | 4.9 | 4.0 |
| Iron | 57.3 | 16.8 | 24.6 | 13.2 | 20.6 | 51.4 | 40.7 | 52.5 | 31.3 |
| Fan | 69.2 | 19.6 | 32.9 | 17.9 | 23.1 | 58.3 | 47.0 | 63.6 | 37.4 |
| Bicycle | 17.9 | 41.0 | 36.5 | 44.9 | 40.8 | 24.7 | 33.2 | 5.8 | 32.7 |
| Motorcycle/scooter | 17.5 | 13.8 | 23.3 | 13.9 | 14.9 | 14.2 | 14.4 | 10.4 | 15.1 |
| Car/truck | 17.8 | 4.9 | 8.4 | 6.3 | 4.9 | 21.3 | 9.7 | 15.0 | 9.6 |
| Donkey/horse/camel | 1.5 | 8.0 | 0.8 | 4.8 | 18.0 | 0.1 | 0.0 | 0.0 | 5.7 |
| Canoe/boat/ship | 1.2 | 7.1 | 3.9 | 1.2 | 7.5 | 0.1 | 12.2 | 0.2 | 5.0 |
| None of the above | 7.0 | 19.9 | 14.7 | 22.6 | 14.3 | 7.8 | 15.4 | 14.0 | 15.2 |
| Number of households | 2,598 | 4,627 | 1,040 | 1,185 | 1,911 | 690 | 1,315 | 1,083 | 7,225 |

## CHARACTERISTICS OF RESPONDENTS AND WOMEN'S STATUS

The purpose of this chapter is to provide a demographic and socioeconomic profile of individual female and male respondents. This information is essential for the interpretation of the findings presented later in the report and can provide an approximate indication of the representativeness of the survey.

The chapter begins by describing basic background characteristics, including age, marital status, residence, education, religion, ethnicity, and economic status of respondents' households. The chapter also includes more detailed information on education, employment, and indictors of women's status.

### 3.1 Characteristics of Survey Respondents

Table 3.1 shows the distribution of women age $15-49$ and men age $15-59$ by background characteristics. The proportions of women and men decline with increasing age, which reflects the young age structure of the Nigerian population.

A little more than two-thirds (68 percent) of all women are currently married, and an additional 2 percent are in informal unions ("living together"). One-quarter of women age 15-49 have never been married, while negligible proportions of women are divorced or separated (3 percent) or widowed (2 percent). Slightly more than half of men are currently married or living together, 45 percent have never been married, 2 percent are divorced or separated, and 1 percent widowed.

With regard to residence, the majority of women and men live in rural areas (approximately twothirds). Sixty percent of women and 58 percent of men are from the north, while 40 percent of women and 42 percent of men are from the south.

The majority of respondents have had some education, however, 42 percent of women and 22 percent of men have never attended school. One-fifth of women and one-quarter of men have attained primary education only, while 37 percent of women and 53 percent of men have attended secondary school or higher.

The table also shows that half of all respondents are Muslims, approximately one in seven respondents are Catholics, an additional one in seven are Protestants, and one in five say that they follow another Christian church. A negligible proportion belongs to other religions.

The ethnic composition of the sample indicates that the Hausa, Igbo, and Yoruba are the major ethnic groups in Nigeria. However, other ethnic groups constitute almost half of the total sample, underscoring the multiplicity of ethnic groups in Nigeria.

### 3.2 Educational Attainment by Background Characteristics

Table 3.2 provides an overview of the relationship between respondents' level of education and other background characteristics. The data show that younger respondents are more likely than older respondents to have some education. For example, more than twice as many of the oldest women than the youngest women report that they have no education (68 and 29 percent, respectively).

Table 3.1 Background characteristics of respondents
Percent distribution of women and men by background characteristics, Nigeria 2003

| Background characteristic | Weighted percent | Number of women |  | Weighted percent | Number of men |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Weighted | Unweighted |  | Weighted | Unweighted |
| Age |  |  |  |  |  |  |
| 15-19 | 22.5 | 1,716 | 1,749 | 19.3 | 453 | 453 |
| 20-24 | 19.6 | 1,494 | 1,464 | 18.2 | 426 | 441 |
| 25-29 | 18.1 | 1,382 | 1,356 | 14.0 | 328 | 336 |
| 30-34 | 12.4 | 941 | 940 | 12.8 | 299 | 280 |
| 35-39 | 10.7 | 816 | 798 | 9.4 | 220 | 203 |
| 40-44 | 9.0 | 688 | 695 | 8.8 | 208 | 206 |
| 45-49 | 7.7 | 583 | 618 | 6.8 | 159 | 167 |
| 50-54 | na | na | na | 5.7 | 133 | 134 |
| 55-59 | na | na | na | 5.1 | 120 | 126 |
| Marital status |  |  |  |  |  |  |
| Never married | 25.3 | 1,926 | 2,087 | 44.7 | 1,048 | 1,090 |
| Married | 68.0 | 5,182 | 4,991 | 50.8 | 1,191 | 1,141 |
| Living together | 2.0 | 154 | 166 | 2.3 | 54 | 55 |
| Divorced/separated | 2.9 | 219 | 209 | 1.8 | 42 | 47 |
| Widowed | 1.8 | 139 | 167 | 0.5 | 11 | 13 |
| Residence |  |  |  |  |  |  |
| Urban | 34.5 | 2,629 | 3,057 | 37.2 | 872 | 986 |
| Rural | 65.5 | 4,991 | 4,563 | 62.8 | 1,474 | 1,360 |
| Region |  |  |  |  |  |  |
| North Central | 14.7 | 1,121 | 1,256 | 14.9 | 348 | 416 |
| North East | 17.9 | 1,368 | 1,413 | 17.9 | 421 | 423 |
| North West | 27.5 | 2,095 | 1,791 | 25.7 | 602 | 547 |
| South East | 9.7 | 737 | 1,081 | 8.8 | 207 | 265 |
| South South | 17.6 | 1,342 | 938 | 19.0 | 445 | 313 |
| South West | 12.6 | 958 | 1,141 | 13.7 | 322 | 382 |
| Education |  |  |  |  |  |  |
| No education | 41.6 | 3,171 | 3,005 | 21.6 | 507 | 493 |
| Primary | 21.4 | 1,628 | 1,666 | 25.7 | 603 | 604 |
| Secondary | 31.1 | 2,370 | 2,462 | 40.9 | 960 | 966 |
| Higher | 5.9 | 451 | 487 | 11.8 | 276 | 283 |
| Religion |  |  |  |  |  |  |
| Catholic | 13.1 | 998 | 1,161 | 14.3 | 335 | 373 |
| Protestant | 15.2 | 1,162 | 1,300 | 14.7 | 345 | 373 |
| Other Christian | 19.6 | 1,494 | 1,423 | 19.5 | 457 | 436 |
| Muslim | 50.7 | 3,862 | 3,601 | 50.2 | 1,177 | 1,125 |
| Other | 1.4 | 104 | 135 | 1.3 | 32 | 39 |
| Ethnic group |  |  |  |  |  |  |
| Fulani | 6.1 | 463 | 484 | 5.9 | 139 | 132 |
| Hausa | 27.0 | 2,055 | 1,735 | 25.0 | 586 | 542 |
| Igbo | 13.6 | 1,037 | 1,390 | 13.4 | 315 | 382 |
| Kanuri | 3.0 | 232 | 187 | 2.5 | 59 | 47 |
| Tiv | 2.2 | 170 | 201 | 2.2 | 52 | 66 |
| Yoruba | 11.4 | 865 | 1,042 | 12.0 | 281 | 340 |
| Other | 36.7 | 2,797 | 2,581 | 38.9 | 914 | 837 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 18.6 | 1,414 | 1,479 | 18.0 | 423 | 423 |
| Second | 18.9 | 1,439 | 1,399 | 17.8 | 418 | 393 |
| Middle | 19.9 | 1,513 | 1,510 | 18.6 | 436 | 445 |
| Fourth | 20.0 | 1,526 | 1,544 | 21.6 | 507 | 527 |
| Highest | 22.7 | 1,728 | 1,688 | 24.0 | 563 | 558 |
| Total | 100.0 | 7,620 | 7,620 | 100.0 | 2,346 | 2,346 |

Note: Education categories refer to the highest level of education attended, whether or not that level was completed. The ethnic groups are the six largest in the sample and are listed in alphabetical order.
$\mathrm{na}=$ Not applicable

| Percent distribution of women and men by highest level of schooling attended or completed, and median number of years of schooling, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Background characteristic | Highest level of schooling attended or completed |  |  |  |  |  | Total | Number of respondents | Median years of schooling |
|  | No education | Some primary | Completed primary ${ }^{1}$ | Some secondary | Completed secondary ${ }^{2}$ | More than secondary |  |  |  |
| WOMEN |  |  |  |  |  |  |  |  |  |
| Age |  |  |  |  |  |  |  |  |  |
| 15-19 | 29.2 | 11.1 | 9.9 | 39.6 | 8.9 | 1.4 | 100.0 | 1,716 | 5.8 |
| 20-24 | 33.9 | 6.6 | 11.2 | 17.9 | 23.0 | 7.4 | 100.0 | 1,494 | 5.8 |
| 25-29 | 37.8 | 6.2 | 14.7 | 13.4 | 19.6 | 8.3 | 100.0 | 1,382 | 5.4 |
| 30-34 | 45.9 | 8.5 | 15.3 | 14.2 | 9.0 | 7.2 | 100.0 | 941 | 3.0 |
| 35-39 | 49.9 | 9.4 | 15.0 | 14.2 | 3.7 | 7.8 | 100.0 | 816 | 0.0 |
| 40-44 | 58.7 | 9.9 | 13.9 | 9.3 | 2.5 | 5.7 | 100.0 | 688 | 0.0 |
| 45-49 | 68.0 | 13.5 | 8.4 | 3.5 | 1.3 | 5.2 | 100.0 | 583 | 0.0 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 24.9 | 7.6 | 12.0 | 24.3 | 19.1 | 12.1 | 100.0 | 2,629 | 7.7 |
| Rural | 50.4 | 9.6 | 12.7 | 16.5 | 8.1 | 2.7 | 100.0 | 4,991 | 0.0 |
| Region |  |  |  |  |  |  |  |  |  |
| North Central | 35.9 | 12.9 | 17.1 | 20.5 | 9.4 | 4.2 | 100.0 | 1,121 | 5.1 |
| North East | 67.8 | 8.9 | 7.6 | 8.3 | 5.0 | 2.4 | 100.0 | 1,368 | 0.0 |
| North West | 75.0 | 5.7 | 6.1 | 6.1 | 4.8 | 2.2 | 100.0 | 2,095 | 0.0 |
| South East | 7.7 | 10.5 | 14.3 | 27.9 | 27.6 | 12.1 | 100.0 | 737 | 9.2 |
| South South | 8.1 | 12.5 | 17.8 | 34.5 | 17.5 | 9.7 | 100.0 | 1,342 | 7.6 |
| South West | 10.8 | 5.0 | 19.0 | 33.9 | 20.3 | 11.0 | 100.0 | 958 | 8.9 |
|  |  |  |  |  |  |  |  |  |  |
| Lowest | 68.7 | 10.8 | 10.1 | 8.7 | 1.7 | 0.1 | 100.0 | 1,414 | 0.0 |
| Second | 63.3 | 10.2 | 11.3 | 11.5 | 2.7 | 1.0 | 100.0 | 1,439 | 0.0 |
| Middle | 49.2 | 10.7 | 13.4 | 18.7 | 6.4 | 1.6 | 100.0 | 1,513 | 0.9 |
| Fourth | 29.2 | 10.3 | 15.9 | 24.2 | 16.3 | 4.1 | 100.0 | 1,526 | 5.7 |
| Highest | 5.8 | 3.4 | 11.5 | 30.4 | 28.8 | 20.1 | 100.0 | 1,728 | 10.9 |
| Total | 41.6 | 8.9 | 12.5 | 19.2 | 11.9 | 5.9 | 100.0 | 7,620 | 5.0 |
|  |  |  |  | MEN |  |  |  |  |  |
| Age |  |  |  |  |  |  |  |  |  |
| 15-19 | 10.4 | 18.2 | 6.9 | 56.3 | 7.8 | 0.5 | 100.0 | 453 | 7.0 |
| 20-24 | 12.4 | 7.6 | 12.1 | 30.0 | 27.6 | 10.3 | 100.0 | 426 | 8.9 |
| 25-29 | 15.6 | 7.1 | 18.0 | 18.0 | 22.8 | 18.5 | 100.0 | 328 | 8.4 |
| 30-34 | 15.3 | 8.0 | 18.5 | 24.4 | 16.9 | 17.0 | 100.0 | 299 | 8.3 |
| 35-39 | 23.9 | 12.2 | 18.2 | 17.7 | 11.7 | 16.4 | 100.0 | 220 | 6.2 |
| 40-44 | 34.9 | 9.5 | 13.3 | 19.0 | 4.9 | 18.4 | 100.0 | 208 | 5.7 |
| 45-49 | 39.7 | 19.3 | 9.9 | 12.4 | 3.2 | 15.5 | 100.0 | 159 | 4.8 |
| 50-54 | 44.3 | 17.0 | 16.1 | 8.6 | 6.6 | 7.4 | 100.0 | 133 | 2.3 |
| 55-59 | 52.8 | 12.9 | 19.9 | 4.9 | 1.2 | 8.2 | 100.0 | 120 | 0.0 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 11.2 | 9.7 | 13.3 | 29.7 | 17.6 | 18.5 | 100.0 | 872 | 9.1 |
| Rural | 27.8 | 13.1 | 14.2 | 25.2 | 12.0 | 7.8 | 100.0 | 1,474 | 5.7 |
| Region |  |  |  |  |  |  |  |  |  |
| North Central | 13.4 | 10.0 | 13.4 | 36.4 | 13.8 | 12.9 | 100.0 | 348 | 6.9 |
| North East | 41.9 | 12.2 | 10.2 | 17.6 | 7.8 | 10.2 | 100.0 | 421 | 4.7 |
| North West | 41.5 | 16.7 | 9.7 | 16.7 | 6.7 | 8.9 | 100.0 | 602 | 3.3 |
| South East | 2.5 | 8.4 | 17.7 | 33.4 | 20.7 | 17.3 | 100.0 | 207 | 9.2 |
| South South | 3.0 | 12.7 | 18.7 | 31.7 | 22.4 | 11.4 | 100.0 | 445 | 8.6 |
| South West | 4.8 | 5.2 | 17.9 | 36.8 | 20.5 | 14.9 | 100.0 | 322 | 10.1 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |
| Lowest | 42.6 | 17.8 | 14.6 | 16.5 | 7.9 | 0.6 | 100.0 | 423 | 2.8 |
| Second | 36.2 | 14.2 | 13.9 | 24.1 | 7.3 | 4.2 | 100.0 | 418 | 5.1 |
| Middle | 24.7 | 14.4 | 12.9 | 28.2 | 11.7 | 8.0 | 100.0 | 436 | 5.8 |
| Fourth | 11.0 | 12.6 | 16.3 | 29.4 | 17.0 | 13.7 | 100.0 | 507 | 8.0 |
| Highest | 2.2 | 2.8 | 11.8 | 33.4 | 22.8 | 27.0 | 100.0 | 563 | 11.0 |
| Total | 21.6 | 11.8 | 13.9 | 26.9 | 14.1 | 11.8 | 100.0 | 2,346 | 6.6 |
| ${ }^{1}$ Completed 6th grade at the primary level <br> ${ }^{2}$ Completed 6th grade at the secondary level |  |  |  |  |  |  |  |  |  |

Table 3.2 also shows that the level of education varies by residence. Women in rural areas are disadvantaged and far less likely to be educated than their urban counterparts. One-half of rural women have not attended school, which is twice the proportion of urban women (50 and 25 percent, respectively). The urban-rural difference is more pronounced at the level of secondary school or higher. For example, only 11 percent of women in rural areas have completed secondary school or gone on to postsecondary study, compared with 31 percent of women in urban areas. Among male respondents, those in urban areas also have higher levels of educational attainment. Only 11 percent of urban males compared with 28 percent of their rural counterparts have no formal education. While 36 percent of urban males have completed secondary or higher levels of education, only 20 percent of their rural counterparts have done so. Among both male and female respondents, the level of educational attainment is higher in the south relative to the north. For example, women in the North West are 10 times as likely as women in the South East and South West to say that they have no education.

Educational attainment increases as the economic status of the household increases. For example, 69 percent of the women in the poorest households have no formal education compared with just 6 percent of women in the most advantaged households. Half of women in the highest wealth quintile have completed secondary or higher levels of education, compared with just 2 percent of women in the lowest quintile. The pattern of men's educational attainment by economic status is similar.

## Literacy

The ability to read is an important personal asset allowing women and men increased opportunities in life. Knowing the distribution of the literate population can help programme planners know how best to reach women and men with their messages. In the 2003 NDHS, literacy was established by a respondent's ability to read all or part of a simple sentence in any of the major language groups of Nigeria. The test on literacy was only applied to respondents who had less than secondary education, and those with secondary or higher are assumed to be literate.

Table 3.3 shows that almost half ( 48 percent) of women are literate. The level of literacy is much higher for younger women than older women, ranging from a high of 61 percent for women age 15-19 to a low of 22 percent for women age 45-49. Urban women have a higher level of literacy than rural women ( 68 and 38 percent, respectively). Literacy levels also vary widely among the regions. Patterns of men's literacy are similar to women's, although a greater proportion of men are literate ( 73 percent compared with 48 percent).

Table 3.3 Literacy
Percent distribution of women and men by level of schooling attended and by level of literacy, and percent literate, according to background characteristics, Nigeria 2003

| Background characteristic | No schooling or primary school |  |  |  |  |  | Total | Number of respondents | Percent literate ${ }^{1}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Secondary school or higher | Can read whole sentence | Can read part of sentence | Cannot read at all | No card with required language | Missing |  |  |  |
| WOMEN |  |  |  |  |  |  |  |  |  |
| Age |  |  |  |  |  |  |  |  |  |
| 15-19 | 49.8 | 5.4 | 6.1 | 37.7 | 0.8 | 0.2 | 100.0 | 1,716 | 61.3 |
| 20-24 | 48.3 | 3.6 | 4.5 | 42.4 | 0.7 | 0.5 | 100.0 | 1,494 | 56.4 |
| 25-29 | 41.3 | 5.4 | 5.2 | 46.9 | 1.0 | 0.2 | 100.0 | 1,382 | 51.9 |
| 30-34 | 30.4 | 5.2 | 5.7 | 58.3 | 0.3 | 0.1 | 100.0 | 941 | 41.3 |
| 35-39 | 25.7 | 7.8 | 6.4 | 58.9 | 1.2 | 0.1 | 100.0 | 816 | 39.8 |
| 40-44 | 17.5 | 6.2 | 7.4 | 67.8 | 0.5 | 0.5 | 100.0 | 688 | 31.1 |
| 45-49 | 10.0 | 7.9 | 4.5 | 75.8 | 1.2 | 0.6 | 100.0 | 583 | 22.4 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 55.6 | 6.1 | 5.9 | 31.6 | 0.7 | 0.2 | 100.0 | 2,629 | 67.5 |
| Rural | 27.3 | 5.2 | 5.5 | 60.8 | 0.9 | 0.4 | 100.0 | 4,991 | 38.0 |
| Region |  |  |  |  |  |  |  |  |  |
| North Central | 34.1 | 4.9 | 4.4 | 55.2 | 1.1 | 0.3 | 100.0 | 1,121 | 43.4 |
| North East | 15.7 | 4.2 | 5.7 | 72.9 | 1.3 | 0.2 | 100.0 | 1,368 | 25.6 |
| North West | 13.1 | 3.1 | 4.7 | 78.6 | 0.1 | 0.5 | 100.0 | 2,095 | 20.9 |
| South East | 67.5 | 10.6 | 7.5 | 14.1 | 0.1 | 0.2 | 100.0 | 737 | 85.6 |
| South South | 61.7 | 7.3 | 6.0 | 22.6 | 1.9 | 0.6 | 100.0 | 1,342 | 75.0 |
| South West | 65.2 | 7.1 | 6.8 | 20.5 | 0.4 | 0.0 | 100.0 | 958 | 79.1 |
| Total | 37.0 | 5.5 | 5.6 | 50.7 | 0.8 | 0.3 | 100.0 | 7,620 | 48.2 |
| MEN |  |  |  |  |  |  |  |  |  |
| Age |  |  |  |  |  |  |  |  |  |
| 15-19 | 64.6 | 4.4 | 10.2 | 18.6 | 2.3 | 0.0 | 100.0 | 453 | 79.2 |
| 20-24 | 67.9 | 6.0 | 6.4 | 15.0 | 4.7 | 0.0 | 100.0 | 426 | 80.3 |
| 25-29 | 59.4 | 11.0 | 8.6 | 16.8 | 4.3 | 0.0 | 100.0 | 328 | 78.9 |
| 30-34 | 58.3 | 8.7 | 8.7 | 20.7 | 3.7 | 0.0 | 100.0 | 299 | 75.6 |
| 35-39 | 45.7 | 12.8 | 11.8 | 23.7 | 5.9 | 0.0 | 100.0 | 220 | 70.4 |
| 40-44 | 42.3 | 12.0 | 10.3 | 27.3 | 8.1 | 0.0 | 100.0 | 208 | 64.6 |
| 45-49 | 31.1 | 14.7 | 14.2 | 30.1 | 9.7 | 0.2 | 100.0 | 159 | 60.0 |
| 50-54 | 22.6 | 15.4 | 17.2 | 37.9 | 6.9 | 0.0 | 100.0 | 133 | 55.2 |
| 55-59 | 14.3 | 20.5 | 12.4 | 42.1 | 10.7 | 0.0 | 100.0 | 120 | 47.2 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 65.8 | 11.3 | 9.7 | 9.3 | 3.9 | 0.0 | 100.0 | 872 | 86.8 |
| Rural | 45.0 | 8.8 | 10.2 | 30.0 | 6.0 | 0.0 | 100.0 | 1,474 | 64.0 |
| Region |  |  |  |  |  |  |  |  |  |
| North Central | 63.1 | 6.9 | 5.2 | 24.6 | 0.2 | 0.0 | 100.0 | 348 | 75.2 |
| North East | 35.7 | 13.9 | 10.4 | 37.8 | 2.2 | 0.0 | 100.0 | 421 | 59.9 |
| North West | 32.2 | 8.0 | 15.5 | 27.2 | 17.1 | 0.0 | 100.0 | 602 | 55.7 |
| South East | 71.4 | 5.7 | 15.8 | 7.0 | 0.0 | 0.2 | 100.0 | 207 | 92.9 |
| South South | 65.6 | 6.7 | 8.2 | 18.1 | 1.4 | 0.0 | 100.0 | 445 | 80.5 |
| South West | 72.1 | 17.4 | 3.5 | 5.9 | 1.1 | 0.0 | 100.0 | 322 | 93.0 |
| Total | 52.7 | 9.7 | 10.0 | 22.3 | 5.2 | 0.0 | 100.0 | 2,346 | 72.5 |

[^1]
### 3.3 Access to Mass Media

The 2003 NDHS collected information on the exposure of respondents to common print and electronic media. Respondents were asked how often they read a newspaper, listen to the radio, or watch television. These data are important because they provide an indication of the extent to which Nigerians are regularly exposed to the mass media, which are often used to disseminate messages on family planning and other health topics.

Tables 3.4.1 and 3.4.2 show that slightly more than one-third of both women and men are not exposed to any media. However, a majority of all respondents listen to the radio at least once a week, and more than one-third watch television at least once a week. About one in ten respondents reads a newspaper weekly. As expected, women and men living in urban areas are much more likely to be exposed to mass media. The proportion of women who are exposed to any media at least once a week declines with age. Urban respondents are more likely than rural respondents to be exposed to all three types of media.

Among the regions, exposure to all three types of media is highest among those who live in the south compared with their northern counterparts. There is a positive relationship between the level of education and exposure to mass media. Similarly, wealth quintile is positively related to exposure to mass media. For instance, whereas 65 percent of women in the lowest quintile have no weekly exposure to any media source, just 6 percent of those in the highest quintile have no exposure. The corresponding figures for the male respondents are 59 and 13 percent, respectively.

Table 3.4.1 Exposure to mass media: women
Percentage of women who usually read a newspaper at least once a week, watch television at least once a week, and listen to the radio at least once a week, by background characteristics, Nigeria 2003

| Background characteristic | Type of mass media exposure |  |  |  | $\begin{gathered} \text { No } \\ \text { exposure } \\ \text { to } \\ \text { specified } \\ \text { media } \end{gathered}$ | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Reads a newspaper at least once a week | Watches television at least once a week | Listens to the radio at least once a week | All three specified media |  |  |
| Age |  |  |  |  |  |  |
| 15-19 | 12.2 | 41.3 | 58.4 | 10.3 | 34.4 | 1,716 |
| 20-24 | 17.7 | 40.9 | 65.0 | 14.7 | 28.9 | 1,494 |
| 25-29 | 12.8 | 39.4 | 61.5 | 10.3 | 30.8 | 1,382 |
| 30-34 | 10.6 | 31.2 | 57.7 | 9.5 | 38.3 | 941 |
| 35-39 | 9.8 | 33.2 | 59.7 | 7.7 | 37.5 | 816 |
| 40-44 | 7.6 | 24.8 | 51.7 | 6.1 | 45.0 | 688 |
| 45-49 | 6.2 | 23.8 | 51.1 | 5.3 | 45.4 | 583 |
| Residence |  |  |  |  |  |  |
| Urban | 21.1 | 63.1 | 73.0 | 18.6 | 18.4 | 2,629 |
| Rural | 7.3 | 21.6 | 51.8 | 5.5 | 44.2 | 4,991 |
| Region |  |  |  |  |  |  |
| North Central | 7.7 | 28.0 | 44.7 | 6.4 | 48.6 | 1,121 |
| North East | 4.8 | 15.9 | 34.1 | 3.0 | 61.0 | 1,368 |
| North West | 6.7 | 23.8 | 70.9 | 5.6 | 27.1 | 2,095 |
| South East | 25.9 | 50.9 | 69.4 | 21.4 | 24.2 | 737 |
| South South | 19.2 | 53.9 | 59.2 | 16.1 | 30.9 | 1,342 |
| South West | 18.5 | 63.5 | 78.3 | 16.5 | 15.6 | 958 |
| Education |  |  |  |  |  |  |
| No education | 0.1 | 12.0 | 47.2 | 0.1 | 50.2 | 3,171 |
| Primary | 3.7 | 32.0 | 54.5 | 2.7 | 39.2 | 1,628 |
| Secondary | 24.8 | 62.0 | 72.9 | 20.5 | 18.3 | 2,370 |
| Higher | 59.0 | 81.2 | 88.0 | 51.3 | 5.6 | 451 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 1.0 | 3.6 | 33.5 | 0.4 | 64.8 | 1,414 |
| Second | 3.2 | 8.0 | 45.0 | 2.1 | 53.0 | 1,439 |
| Middle | 5.2 | 17.8 | 57.7 | 2.9 | 39.7 | 1,513 |
| Fourth | 13.4 | 52.6 | 70.6 | 10.4 | 19.8 | 1,526 |
| Highest | 33.2 | 86.8 | 83.1 | 30.3 | 6.2 | 1,728 |
| Total | 12.1 | 35.9 | 59.2 | 10.0 | 35.3 | 7,620 |


| Table 3.4.2 Exposure to mass media: men |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of men who usually read a newspaper at least once a week, watch television at least once a week, and listen to the radio at least once a week, by background characteristics, Nigeria 2003 |  |  |  |  |  |  |
| Type of mass media exposure |  |  |  |  |  |  |
| Background characteristic | Reads a newspaper at least once a week | Watches television at least once a week | Listens to the radio at least once a week | All three specified media | No exposure to specified media | Number of men |
| Age |  |  |  |  |  |  |
| 15-19 | 10.6 | 39.6 | 61.4 | 6.9 | 32.0 | 453 |
| 20-24 | 12.8 | 37.7 | 60.9 | 8.9 | 33.8 | 426 |
| 25-29 | 14.6 | 35.8 | 57.7 | 12.2 | 37.9 | 328 |
| 30-34 | 11.7 | 42.3 | 63.1 | 10.5 | 33.0 | 299 |
| 35-39 | 6.1 | 29.6 | 51.7 | 5.7 | 45.7 | 220 |
| 40-44 | 13.3 | 32.9 | 53.4 | 12.2 | 39.8 | 208 |
| 45-49 | 13.3 | 37.1 | 56.8 | 9.2 | 37.4 | 159 |
| 50-54 | 6.0 | 41.4 | 58.3 | 5.2 | 33.1 | 133 |
| 55-59 | 10.4 | 30.0 | 51.9 | 8.7 | 42.6 | 120 |
| Residence |  |  |  |  |  |  |
| Urban | 19.8 | 59.0 | 72.1 | 15.4 | 20.3 | 872 |
| Rural | 6.5 | 24.0 | 50.3 | 5.2 | 45.6 | 1,474 |
| Region |  |  |  |  |  |  |
| North Central | 8.4 | 34.8 | 50.0 | 6.6 | 44.2 | 348 |
| North East | 3.1 | 13.5 | 31.8 | 1.8 | 65.6 | 421 |
| North West | 7.7 | 27.5 | 70.4 | 5.9 | 26.8 | 602 |
| South East | 22.3 | 46.6 | 72.5 | 19.3 | 25.0 | 207 |
| South South | 14.3 | 51.4 | 53.6 | 11.4 | 35.1 | 445 |
| South West | 21.5 | 61.7 | 77.5 | 16.7 | 15.8 | 322 |
| Education |  |  |  |  |  |  |
| No education | 4.9 | 16.3 | 48.9 | 4.0 | 48.5 | 507 |
| Primary | 9.1 | 32.1 | 54.1 | 6.9 | 39.6 | 603 |
| Secondary | 14.0 | 45.1 | 63.7 | 10.4 | 30.7 | 960 |
| Higher | 19.7 | 57.6 | 67.0 | 17.4 | 25.3 | 276 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 2.1 | 11.0 | 38.6 | 1.5 | 59.4 | 423 |
| Second | 3.8 | 13.0 | 43.2 | 1.7 | 53.1 | 418 |
| Middle | 6.1 | 23.2 | 56.7 | 4.3 | 39.5 | 436 |
| Fourth | 14.8 | 50.6 | 64.2 | 11.4 | 26.5 | 507 |
| Highest | 25.2 | 72.7 | 80.7 | 21.3 | 12.5 | 563 |
| Total | 11.4 | 37.0 | 58.4 | 9.0 | 36.2 | 2,346 |

### 3.4 EMPLOYMENT

Like education, employment can also be a source of empowerment for women, especially if it puts them in control of income. The measurement of women's employment, however, is difficult. The difficulty arises largely because some of the work that women do, especially work on family farms, family businesses, or in the informal sector, is often not perceived by women themselves as employment, and hence not reported as such. To avoid underestimating women's employment, the NDHS survey asked women several questions to probe for their employment status and to ensure complete coverage of employment in any sector, formal or informal. Employed women are those who say that they are currently working and those who worked at any time during the 12 months preceding to the survey. Additional information was also obtained on the type of work women were doing, whether they worked continuously throughout the year, whom they worked for, and the form in which they received their earnings. Men were also asked about employment.

Tables 3.5.1 and 3.5.2 show the percent distribution of women and men by employment status, according to background characteristics. Fifty-six percent of women reported being currently employed and additional 2 percent worked during the 12 months prior to the survey. About two in five women ( 42 percent) did not work at all in the 12 months preceding the survey. Seventy percent of men are currently employed, while an additional 3 percent were employed in the 12 months preceding the survey. Figure 3.1 shows the distribution of women and men by current employment status.

| Table 3.5.1 Employment status: women |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of women by employment status, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |
|  | Employed in the 12 months preceding the survey |  | Not employed in the 12 months preceding the survey | Missing | Total | Number <br> of women |
| Background characteristic | Currently employed | Not currently employed |  |  |  |  |
| Age |  |  |  |  |  |  |
| 15-19 | 24.8 | 2.0 | 73.1 | 0.1 | 100.0 | 1,716 |
| 20-24 | 47.0 | 2.8 | 50.1 | 0.1 | 100.0 | 1,494 |
| 25-29 | 63.4 | 2.0 | 34.7 | 0.0 | 100.0 | 1,382 |
| 30-34 | 70.7 | 2.4 | 26.9 | 0.1 | 100.0 | 941 |
| 35-39 | 78.2 | 1.8 | 20.0 | 0.0 | 100.0 | 816 |
| 40-44 | 75.4 | 1.5 | 23.0 | 0.0 | 100.0 | 688 |
| 45-49 | 77.4 | 2.5 | 20.1 | 0.0 | 100.0 | 583 |
| Marital status |  |  |  |  |  |  |
| Never married | 30.6 | 2.4 | 67.0 | 0.0 | 100.0 | 1,926 |
| Married or living together | 64.4 | 2.1 | 33.4 | 0.1 | 100.0 | 5,336 |
| Divorced/separated/widowed | 70.7 | 1.7 | 27.6 | 0.0 | 100.0 | 358 |
| Number of living children |  |  |  |  |  |  |
| 0 | 34.4 | 2.8 | 62.8 | 0.0 | 100.0 | 2,499 |
| 1-2 | 57.3 | 1.7 | 40.8 | 0.1 | 100.0 | 2,009 |
| 3-4 | 69.0 | 1.9 | 29.0 | 0.1 | 100.0 | 1,526 |
| $5+$ | 76.5 | 2.0 | 21.5 | 0.0 | 100.0 | 1,586 |
| Residence |  |  |  |  |  |  |
| Urban | 57.8 | 2.2 | 40.0 | 0.0 | 100.0 | 2,629 |
| Rural | 55.3 | 2.2 | 42.5 | 0.1 | 100.0 | 4,991 |
| Region |  |  |  |  |  |  |
| North Central | 63.2 | 1.8 | 35.0 | 0.0 | 100.0 | 1,121 |
| North East | 50.0 | 4.7 | 45.1 | 0.2 | 100.0 | 1,368 |
| North West | 51.5 | 1.4 | 47.1 | 0.0 | 100.0 | 2,095 |
| South East | 57.0 | 1.9 | 41.0 | 0.0 | 100.0 | 737 |
| South South | 55.0 | 1.8 | 43.2 | 0.0 | 100.0 | 1,342 |
| South West | 67.8 | 1.5 | 30.8 | 0.0 | 100.0 | 958 |
| Education |  |  |  |  |  |  |
| No education | 56.4 | 2.2 | 41.2 | 0.1 | 100.0 | 3,171 |
| Primary | 65.9 | 2.1 | 32.0 | 0.0 | 100.0 | 1,628 |
| Secondary | 48.0 | 2.1 | 49.9 | 0.0 | 100.0 | 2,370 |
| Higher | 61.7 | 2.0 | 36.3 | 0.0 | 100.0 | 451 |
| Total | 56.1 | 2.2 | 41.6 | 0.1 | 100.0 | 7,620 |

Tables 3.5.1 and 3.5.2 show that current employment increases with age of respondents for both men and women, although the percentage of men employed declines among the oldest age group. Women who are divorced, separated, or widowed are most likely to be employed ( 71 percent), followed by those who are married or living together ( 64 percent), while never-married women are the least likely to be employed ( 31 percent). Also, 94 percent of men who are currently or formerly married are employed, compared with 40 percent of never-married men. Table 3.5 . 1 shows that as the number of living children a woman has increases, the proportion who work also increases. Women with no living children are the least likely to be employed ( 34 percent). Similarly, twice as many men with one or more living children are employed than men with no children.

| Table 3.5.2 Employment status: men |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of men by employment status, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |
|  | Employed in the 12 months preceding the survey |  | Not employed in the 12 months preceding the survey | Missing | Total | Number of men |
| Background characteristic | Currently employed | Not currently employed |  |  |  |  |
| Age |  |  |  |  |  |  |
| 15-19 | 25.4 | 2.6 | 68.3 | 3.7 | 100.0 | 453 |
| 20-24 | 49.6 | 6.6 | 43.4 | 0.5 | 100.0 | 426 |
| 25-29 | 73.4 | 4.3 | 21.8 | 0.5 | 100.0 | 328 |
| 30-34 | 90.6 | 2.5 | 6.9 | 0.0 | 100.0 | 299 |
| 35-39 | 95.1 | 2.4 | 1.6 | 0.9 | 100.0 | 220 |
| 40-44 | 96.9 | 1.9 | 1.2 | 0.0 | 100.0 | 208 |
| 45-49 | 97.0 | 0.9 | 2.1 | 0.0 | 100.0 | 159 |
| 50-54 | 96.6 | 0.0 | 3.4 | 0.0 | 100.0 | 133 |
| 55-59 | 88.4 | 0.0 | 11.4 | 0.2 | 100.0 | 120 |
| Marital status |  |  |  |  |  |  |
| Never married | 39.9 | 4.6 | 53.6 | 1.9 | 100.0 | 1,048 |
| Married or living together | 94.0 | 1.9 | 4.0 | 0.2 | 100.0 | 1,245 |
| Divorced/separated/widowed | 93.8 | 1.8 | 4.4 | 0.0 | 100.0 | 53 |
| Number of living children |  |  |  |  |  |  |
| 0 | 46.0 | 4.2 | 48.1 | 1.7 | 100.0 | 1,168 |
| 1-2 | 90.7 | 3.0 | 6.3 | 0.0 | 100.0 | 379 |
| 3-4 | 93.4 | 2.4 | 3.5 | 0.6 | 100.0 | 316 |
| $5+$ | 95.5 | 1.0 | 3.4 | 0.1 | 100.0 | 482 |
| Residence |  |  |  |  |  |  |
| Urban | 64.8 | 2.8 | 31.6 | 0.8 | 100.0 | 872 |
| Rural | 72.7 | 3.2 | 22.9 | 1.1 | 100.0 | 1,474 |
| Region |  |  |  |  |  |  |
| North Central | 61.8 | 2.0 | 36.0 | 0.2 | 100.0 | 348 |
| North East | 84.9 | 3.6 | 11.1 | 0.5 | 100.0 | 421 |
| North West | 80.6 | 4.5 | 13.6 | 1.3 | 100.0 | 602 |
| South East | 67.9 | 3.2 | 28.0 | 0.9 | 100.0 | 207 |
| South South | 51.8 | 2.9 | 42.8 | 2.4 | 100.0 | 445 |
| South West | 64.4 | 1.2 | 34.5 | 0.0 | 100.0 | 322 |
| Education |  |  |  |  |  |  |
| No education | 96.3 | 1.2 | 2.1 | 0.4 | 100.0 | 507 |
| Primary | 80.2 | 2.1 | 16.8 | 0.9 | 100.0 | 603 |
| Secondary | 51.1 | 4.1 | 43.3 | 1.5 | 100.0 | 960 |
| Higher | 63.3 | 5.1 | 31.2 | 0.4 | 100.0 | 276 |
| Total | 69.8 | 3.1 | 26.2 | 1.0 | 100.0 | 2,346 |

Figure 3.1 Employment Status of Women and Men


Note: Totals May not add to 100 because of missing cases.
NDHS 2003

The percentage of men currently employed is significantly higher in rural areas than in urban areas (73 and 65 percent, respectively). Women’s employment does not vary greatly by urban-rural residence. There is significant difference, however, in levels of employment by region of residence. For example, employment among women ranges from a low of 50 percent in the North East to a high of 68 percent in the South West. Among men, employment ranges from a low of 52 percent in the South South to a high of 85 percent in the North East. There is no uniform pattern of employment status by level of education.

## Occupation

Respondents who are currently employed or worked within the year before the survey were asked to state their occupation.

Table 3.6.1 shows that the sales and services sector employs more than half ( 56 percent) of working women. In addition, 21 percent of working women are in agriculture, 10 percent work at skilled manual jobs, and 8 percent are engaged in professional, technical, and managerial work. Negligible proportions of working women are engaged in unskilled manual labour (3 percent), clerical jobs (2 percent), or domestic service ( 1 percent). Table 3.6 .2 shows that the highest proportion of men work in agriculture ( 38 percent), followed by skilled manual occupations ( 21 percent) and sales and services (19 percent). Twice as many men as women are employed in the professional, technical, or managerial sector (16 and 8 percent, respectively).

The majority of women are employed in sales and services regardless of urban-rural residence. Urban women, however, are more likely than rural women to be employed in either the skilled manual or professional sectors, while rural women are more likely to be in agriculture. More than half of rural men work in agriculture; eight in ten urban men are working in the professional, sales and services, or skilled manual sectors. There is considerable variation by geopolitical region. For example, men in the north are more likely to be in agriculture compared with those in the south. In general, southern women and men are more likely to be in professional/technical/managerial occupations than their northern counterparts, perhaps reflecting differential levels of education.

| Table 3.6.1 Occupation: women |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of women employed in the 12 months preceding the survey by occupation, according to backround characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |
| Background characteristic | Professional/ technical/ managerial | Clerical | Sales <br> and services | Skilled manual | Unskilled manual | Domestic service | Agriculture | Total | Number of women |
| Age |  |  |  |  |  |  |  |  |  |
| 15-19 | 2.5 | 1.7 | 53.3 | 9.6 | 5.5 | 4.6 | 22.8 | 100.0 | 459 |
| 20-24 | 7.3 | 2.1 | 53.8 | 13.9 | 3.8 | 1.5 | 17.5 | 100.0 | 744 |
| 25-29 | 7.7 | 1.8 | 57.3 | 14.6 | 2.0 | 0.5 | 16.1 | 100.0 | 903 |
| 30-34 | 7.8 | 1.7 | 56.6 | 11.2 | 2.1 | 1.1 | 19.6 | 100.0 | 688 |
| 35-39 | 9.9 | 2.0 | 60.7 | 6.5 | 2.0 | 1.1 | 17.8 | 100.0 | 653 |
| 40-44 | 11.2 | 1.3 | 54.4 | 3.0 | 1.7 | 1.3 | 26.7 | 100.0 | 530 |
| 45-49 | 9.0 | 0.5 | 55.4 | 2.0 | 1.8 | 0.3 | 30.9 | 100.0 | 466 |
| Marital status |  |  |  |  |  |  |  |  |  |
| Never married | 11.8 | 4.8 | 44.2 | 13.0 | 5.6 | 3.3 | 17.2 | 100.0 | 635 |
| Married or living together | 7.2 | 1.0 | 58.7 | 9.2 | 2.2 | 1.0 | 20.7 | 100.0 | 3,548 |
| Divorced/separated/ widowed | 10.0 | 2.7 | 49.5 | 6.4 | 1.4 | 2.0 | 28.0 | 100.0 | 259 |
| Number of living children |  |  |  |  |  |  |  |  |  |
| 0 | 9.8 | 3.7 | 49.7 | 12.2 | 4.9 | 3.1 | 16.6 | 100.0 | 930 |
| 1-2 | 8.0 | 1.3 | 54.8 | 13.8 | 2.4 | 1.0 | 18.7 | 100.0 | 1,186 |
| 3-4 | 6.5 | 1.0 | 61.4 | 8.0 | 1.9 | 0.9 | 20.4 | 100.0 | 1,082 |
| $5+$ | 8.0 | 1.1 | 57.6 | 4.9 | 1.8 | 0.8 | 25.6 | 100.0 | 1,245 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 13.2 | 3.4 | 58.0 | 13.3 | 3.5 | 1.6 | 7.0 | 100.0 | 1,576 |
| Rural | 5.1 | 0.7 | 55.1 | 7.5 | 2.1 | 1.2 | 28.1 | 100.0 | 2,867 |
| Region |  |  |  |  |  |  |  |  |  |
| North Central | 7.0 | 0.6 | 45.2 | 6.5 | 2.2 | 1.8 | 36.7 | 100.0 | 728 |
| North East | 4.6 | 1.2 | 63.5 | 11.4 | 1.1 | 2.0 | 16.2 | 100.0 | 749 |
| North West | 3.3 | 0.4 | 68.3 | 12.9 | 4.3 | 1.4 | 9.4 | 100.0 | 1,107 |
| South East | 15.2 | 3.7 | 45.1 | 8.1 | 2.1 | 0.3 | 25.5 | 100.0 | 434 |
| South South | 12.0 | 2.9 | 42.8 | 8.1 | 3.3 | 0.7 | 30.0 | 100.0 | 761 |
| South West | 11.5 | 2.7 | 61.9 | 7.8 | 1.7 | 1.6 | 12.7 | 100.0 | 663 |
| Education |  |  |  |  |  |  |  |  |  |
| No education | 0.7 | 0.1 | 64.3 | 8.6 | 2.4 | 1.6 | 22.4 | 100.0 | 1,860 |
| Primary | 3.3 | 0.8 | 53.7 | 8.3 | 2.4 | 1.2 | 30.1 | 100.0 | 1,108 |
| Secondary | 11.3 | 3.5 | 54.2 | 12.6 | 3.6 | 1.2 | 13.6 | 100.0 | 1,188 |
| Higher | 59.9 | 8.0 | 20.1 | 8.0 | 1.4 | 1.1 | 1.6 | 100.0 | 287 |
| Total | 8.0 | 1.7 | 56.1 | 9.5 | 2.6 | 1.4 | 20.6 | 100.0 | 4,443 |
| Note: Percentages may not add to 100 due to missing cases (no more than 0.3 percent of cases in any category). |  |  |  |  |  |  |  |  |  |


| Table 3.6.2 Occupation: men |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of men employed in the 12 months preceding the survey by occupation, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |
| Background characteristic | Professional/ technical/ managerial | Clerical | Sales and services | Skilled manual | Unskilled manual | Domestic service | Agriculture | Total | Number of men |
| Age |  |  |  |  |  |  |  |  |  |
| 15-19 | 0.0 | 0.0 | 12.1 | 29.9 | 7.7 | 0.3 | 50.0 | 100.0 | 127 |
| 20-24 | 5.0 | 0.5 | 22.9 | 26.7 | 11.4 | 0.0 | 33.4 | 100.0 | 239 |
| 25-29 | 13.3 | 1.5 | 26.7 | 22.3 | 3.2 | 0.9 | 32.0 | 100.0 | 255 |
| 30-34 | 18.6 | 0.7 | 20.9 | 22.3 | 5.0 | 0.2 | 32.4 | 100.0 | 279 |
| 35-39 | 25.2 | 0.0 | 20.5 | 12.9 | 5.1 | 0.0 | 36.3 | 100.0 | 215 |
| 40-44 | 23.3 | 3.4 | 15.0 | 18.0 | 2.8 | 0.0 | 37.4 | 100.0 | 205 |
| 45-49 | 23.5 | 2.4 | 8.8 | 23.1 | 3.0 | 0.0 | 39.2 | 100.0 | 156 |
| 50-54 | 15.4 | 2.7 | 13.9 | 16.5 | 4.0 | 0.0 | 47.4 | 100.0 | 128 |
| 55-59 | 14.5 | 0.4 | 12.7 | 12.0 | 3.5 | 0.0 | 56.9 | 100.0 | 106 |
| Marital status |  |  |  |  |  |  |  |  |  |
| Never married | 9.5 | 0.9 | 21.2 | 29.1 | 7.7 | 0.6 | 31.0 | 100.0 | 466 |
| Married or living together | 18.4 | 1.4 | 17.4 | 17.4 | 4.2 | 0.0 | 41.1 | 100.0 | 1,193 |
| Divorced/separated/ widowed | 14.5 | 0.0 | 19.9 | 23.3 | 7.1 | 0.0 | 35.2 | 100.0 | 50 |
| Number of living children |  |  |  |  |  |  |  |  |  |
| 0 | 12.6 | 0.7 | 22.5 | 24.8 | 7.8 | 0.5 | 31.1 | 100.0 | 586 |
| 1-2 | 14.5 | 1.0 | 21.4 | 20.0 | 6.4 | 0.1 | 36.6 | 100.0 | 355 |
| 3-4 | 19.0 | 2.2 | 15.0 | 21.1 | 3.3 | 0.0 | 39.3 | 100.0 | 303 |
| 5+ | 19.1 | 1.4 | 13.5 | 16.2 | 2.4 | 0.0 | 47.5 | 100.0 | 465 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 23.3 | 2.0 | 26.5 | 32.0 | 6.3 | 0.5 | 9.4 | 100.0 | 590 |
| Rural | 12.0 | 0.9 | 14.3 | 14.9 | 4.7 | 0.0 | 53.3 | 100.0 | 1,120 |
| Region |  |  |  |  |  |  |  |  |  |
| North Central | 17.3 | 1.2 | 14.1 | 21.2 | 3.8 | 0.2 | 42.1 | 100.0 | 222 |
| North East | 15.9 | 1.0 | 19.0 | 18.4 | 2.8 | 0.0 | 43.0 | 100.0 | 372 |
| North West | 8.3 | 0.5 | 17.5 | 13.1 | 7.9 | 0.0 | 52.7 | 100.0 | 513 |
| South East | 22.4 | 0.3 | 30.4 | 25.2 | 10.2 | 0.0 | 11.5 | 100.0 | 147 |
| South South | 21.1 | 4.3 | 18.6 | 23.7 | 1.6 | 1.1 | 29.5 | 100.0 | 244 |
| South West | 22.4 | 0.7 | 16.0 | 36.9 | 5.3 | 0.0 | 18.7 | 100.0 | 211 |
| Education |  |  |  |  |  |  |  |  |  |
| No education | 3.8 | 0.0 | 11.8 | 13.8 | 3.0 | 0.0 | 67.6 | 100.0 | 494 |
| Primary | 6.7 | 1.3 | 16.5 | 31.8 | 4.1 | 0.0 | 39.7 | 100.0 | 496 |
| Secondary | 13.3 | 2.5 | 29.7 | 23.4 | 8.9 | 0.6 | 21.7 | 100.0 | 530 |
| Higher | 79.0 | 1.0 | 9.9 | 3.1 | 3.8 | 0.0 | 3.3 | 100.0 | 189 |
| Total | 15.9 | 1.3 | 18.5 | 20.8 | 5.2 | 0.2 | 38.1 | 100.0 | 1,709 |

## Earnings, Employers, and Continuity of Employment

Table 3.7.1 presents information on women's employment status, the form of earnings, and the continuity of employment. The table takes into account whether women are involved in agricultural or nonagricultural occupations, since all of the employment variables shown in the table are strongly influenced by the sector in which a woman is employed.

| Table 3.7.1 Type of employment: women |  |  |  |
| :---: | :---: | :---: | :---: |
| Percent distribution of women 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 nonagricultural), Nigeria 2003 |  |  |  |
| Employment characteristic | Agricultural work | Nonagricultural work | Total |
| Type of earnings |  |  |  |
| Cash only | 24.5 | 88.5 | 75.3 |
| Cash and in-kind | 21.6 | 5.7 | 9.0 |
| In-kind only | 8.8 | 0.7 | 2.4 |
| Not paid | 45.0 | 4.4 | 12.8 |
| Missing | 0.2 | 0.7 | 0.6 |
| Total | 100.0 | 100.0 | 100.0 |
| Type of employer |  |  |  |
| Employed by family member | 25.6 | 8.5 | 12.0 |
| Employed by nonfamily member | 2.0 | 15.1 | 12.4 |
| Self-employed | 72.4 | 75.7 | 75.0 |
| Missing | 0.0 | 0.8 | 0.6 |
| Total | 100.0 | 100.0 | 100.0 |
| Continuity of employment |  |  |  |
| All year | 38.3 | 77.0 | 69.0 |
| Seasonal | 59.3 | 14.3 | 23.6 |
| Occasional | 2.1 | 7.9 | 6.7 |
| Missing | 0.3 | 0.8 | 0.7 |
| Total | 100.0 | 100.0 | 100.0 |
| Number of women | 916 | 3,525 | 4,443 |
| Note: Total includes 2 women with missing information on type of employment who are not shown separately |  |  |  |

The data show that almost half of women employed in agricultural work are not paid (45 percent). A majority of women in this sector report that they are self-employed (72 percent) and that they work seasonally (59 percent). Among women employed in nonagricultural work, most earn cash only (89 percent), say that they are self-employed ( 76 percent) and work all year (77 percent).

Information was also collected on men's earnings (Table 3.7.2 and Figure 3.2). Similar to women, the majority of men in agriculture (53 percent) state that they are not paid for their work, while 85 percent of those in nonagricultural jobs state they earn cash only.

| Table 3.7.2 Type of employment: men |  |  |  |
| :---: | :---: | :---: | :---: |
| Percent distribution of men employed in the 12 months preceding the survey by type of earnings, according to type of employment (agricultural or nonagricultural), Nigeria 2003 |  |  |  |
| Employment characteristic | Agricultural work | Nonagricultural work | Total |
| Type of earnings |  |  |  |
| Cash only | 18.6 | 84.9 | 59.6 |
| Cash and in-kind | 19.5 | 6.2 | 11.3 |
| In-kind only | 8.6 | 1.7 | 4.3 |
| Not paid | 53.3 | 4.7 | 23.3 |
| Missing | 0.0 | 2.5 | 1.5 |
| Total | 100.0 | 100.0 | 100.0 |
| Number of men | 652 | 1,057 | 1,709 |

ing the survey by ment (agricultural or nonagricultural), Nigeria 2003

Figure 3.2 Type of Earnings of Employed Women and Men


### 3.5 Measures of Women's Empowerment

## Decision on Use of Earnings

As means of assessing women's autonomy, respondents in the 2003 NDHS who had received cash earnings for work in the 12 months before the survey were asked who mainly decides how these earnings will be used. This information allows the assessment of women's control over their own earnings. In addition, they were asked about the proportion of household expenditures supported by their earnings. This information not only allows an evaluation of the relative importance of women's earnings in the household economy, but has implications for the empowerment of women. It is expected that employment and earnings are more likely to empower women if their earnings are important for meeting the needs of their households.

Table 3.8 shows women's degree of control over the use of their earnings and the extent to which the earnings of women meet household expenditures by background characteristics. Almost three-quarters of women who receive cash earnings report that they alone decide how their earnings are used, and an additional 16 percent say that they decide jointly with their husband or someone else. Only 10 percent of women report that someone else decides how their earnings will be used.

Women age 15-19 are more likely than older women to report that someone else decides how their earnings are to be used. Almost all women who are divorced, separated, or widowed say that they alone are responsible for deciding how to use their earnings. Among currently married women, seven out of ten report that they alone decide how their earnings are used, while one-fifth say that such decisions are made jointly with their husbands or someone else. More than three-quarters of never-married women make independent decisions on how to use their earnings. The data suggest that the proportion of women who make joint decisions with their husbands or someone else increases with parity.

More urban women than rural women report that they alone decide how to spend their earnings, although the difference is not great ( 78 and 71 percent, respectively). Among the geopolitical regions, women in North West and South West are most likely to decide on how to use their earnings relative to women in other regions. Surprisingly, there is no difference by level of education.

Table 3.8 Decision on use of earnings and contribution of earnings to household expenditures
Percent distribution of women employed in the 12 months preceding the survey receiving cash earnings by person who decides how earnings are to be used and by proportion of household expenditures met by earnings, according to background characteristics, Nigeria 2003

| Background characteristic | Person who decides how earnings are used |  |  |  | Total | Proportion of household expenditures met by earnings |  |  |  |  | Total | Number <br> of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Self only | Jointly ${ }^{1}$ | Someone else only ${ }^{2}$ | Missing |  | Almost none/ none | Less than half | $\begin{aligned} & \text { Half } \\ & \text { or } \\ & \text { more } \end{aligned}$ | All | Missing |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 62.8 | 14.7 | 22.1 | 0.4 | 100.0 | 41.2 | 31.2 | 23.3 | 2.7 | 1.6 | 100.0 | 330 |
| 20-24 | 77.7 | 10.4 | 11.9 | 0.0 | 100.0 | 32.9 | 31.9 | 28.6 | 6.4 | 0.2 | 100.0 | 591 |
| 25-29 | 74.1 | 17.1 | 8.5 | 0.3 | 100.0 | 27.5 | 36.1 | 28.8 | 7.6 | 0.0 | 100.0 | 801 |
| 30-34 | 75.1 | 16.2 | 8.6 | 0.1 | 100.0 | 19.4 | 33.7 | 38.2 | 8.6 | 0.1 | 100.0 | 605 |
| 35-39 | 72.5 | 18.2 | 9.3 | 0.0 | 100.0 | 17.8 | 38.1 | 36.8 | 7.3 | 0.0 | 100.0 | 589 |
| 40-44 | 69.8 | 21.5 | 8.7 | 0.0 | 100.0 | 13.9 | 26.5 | 42.9 | 16.3 | 0.4 | 100.0 | 441 |
| 45-49 | 77.0 | 17.8 | 5.1 | 0.1 | 100.0 | 15.9 | 32.2 | 37.7 | 13.8 | 0.4 | 100.0 | 388 |
| Marital status |  |  |  |  |  |  |  |  |  |  |  |  |
| Never married | 78.0 | 7.2 | 14.8 | 0.0 | 100.0 | 33.8 | 22.5 | 31.9 | 11.5 | 0.3 | 100.0 | 462 |
| Married or living together | 71.0 | 19.0 | 9.9 | 0.1 | 100.0 | 23.1 | 36.7 | 34.2 | 5.8 | 0.3 | 100.0 | 3,062 |
| Divorced/separated/ widowed | 97.4 | 0.4 | 2.1 | 0.2 | 100.0 | 14.3 | 11.1 | 30.0 | 44.2 | 0.4 | 100.0 | 220 |
| Number of living children |  |  |  |  |  |  |  |  |  |  |  |  |
| 0 | 73.8 | 11.2 | 14.8 | 0.2 | 100.0 | 37.9 | 26.0 | 28.1 | 7.8 | 0.2 | 100.0 | 704 |
| 1-2 | 75.0 | 15.4 | 9.6 | 0.0 | 100.0 | 23.6 | 34.8 | 32.7 | 8.2 | 0.6 | 100.0 | 1,015 |
| 3-4 | 75.2 | 16.4 | 8.0 | 0.3 | 100.0 | 22.0 | 36.0 | 32.9 | 9.0 | 0.1 | 100.0 | 966 |
| $5+$ | 69.9 | 20.9 | 9.2 | 0.0 | 100.0 | 16.7 | 34.7 | 38.9 | 9.6 | 0.1 | 100.0 | 1,059 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 77.8 | 14.2 | 8.0 | 0.0 | 100.0 | 22.2 | 31.9 | 35.5 | 10.4 | 0.0 | 100.0 | 1,414 |
| Rural | 70.7 | 17.8 | 11.3 | 0.2 | 100.0 | 24.9 | 34.4 | 32.6 | 7.8 | 0.4 | 100.0 | 2,331 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 64.9 | 14.9 | 19.8 | 0.5 | 100.0 | 23.6 | 31.2 | 39.1 | 6.1 | 0.0 | 100.0 | 515 |
| North East | 71.0 | 18.8 | 10.1 | 0.1 | 100.0 | 43.7 | 31.2 | 22.0 | 2.9 | 0.3 | 100.0 | 656 |
| North West | 80.6 | 14.0 | 5.3 | 0.1 | 100.0 | 25.6 | 44.4 | 26.7 | 2.7 | 0.7 | 100.0 | 1,053 |
| South East | 74.5 | 18.4 | 7.1 | 0.1 | 100.0 | 17.9 | 38.3 | 33.8 | 9.8 | 0.3 | 100.0 | 296 |
| South South | 63.5 | 23.3 | 13.2 | 0.0 | 100.0 | 8.3 | 23.0 | 43.6 | 25.0 | 0.0 | 100.0 | 617 |
| South West | 80.2 | 11.6 | 8.2 | 0.0 | 100.0 | 18.8 | 26.9 | 43.4 | 11.0 | 0.0 | 100.0 | 607 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |
| No education | 74.9 | 16.2 | 8.6 | 0.3 | 100.0 | 29.9 | 37.1 | 27.4 | 5.1 | 0.5 | 100.0 | 1,612 |
| Primary | 71.1 | 17.3 | 11.6 | 0.0 | 100.0 | 18.0 | 31.5 | 38.1 | 12.3 | 0.1 | 100.0 | 886 |
| Secondary | 72.6 | 15.8 | 11.6 | 0.0 | 100.0 | 21.2 | 31.6 | 37.1 | 9.9 | 0.1 | 100.0 | 972 |
| Higher | 74.6 | 17.0 | 8.4 | 0.0 | 100.0 | 17.5 | 24.1 | 44.0 | 14.4 | 0.0 | 100.0 | 274 |
| Total | 73.4 | 16.4 | 10.1 | 0.1 | 100.0 | 23.9 | 33.4 | 33.7 | 8.7 | 0.3 | 100.0 | 3,744 |

${ }^{1}$ With husband or someone else
${ }^{2}$ Includes husband

Table 3.8 also shows the proportion of household expenditures met by earnings. More than half of women who receive cash earnings say that less than half or none of their household expenditures are met by their earnings. One-third of the women say their earnings contribute to half or more of their household expenditures. Only 9 percent of the women say that their earnings meet all household expenditures. Younger women are more likely to contribute nothing or almost nothing, while older women are more likely to meet all household expenditures. Divorced, separated, and widowed women are more
likely to meet all household expenditures with their earnings, compared with never married or currently married women.

Table 3.9 shows the relationship between women's control over earnings and their contribution to household expenditures based on marital status. Seventy-one percent of women who are currently married or living together with their partner, decide by themselves how their earnings are used, while almost onefifth decide jointly with their husband or partner. One in ten women says that her husband alone decides. Eighty-four percent of unmarried women report that they alone decide how their earnings are used, while 11 percent report that someone else only makes the decision. The greater a woman's contribution to household expenditures, the more likely she is to decide jointly with her husband how earnings are used. It is notable that one in ten women who contribute at least half of the money used for household expenditures say that their husband alone decides how their money is used.

In addition to information on women's education, employment status, and earnings control, the 2003 NDHS also obtained information from both women and men on other measures of women's empowerment and status. Specifically, questions were asked on women's participation in household decisionmaking, on acceptance of wife-beating, and on opinions about when a wife should be able to refuse to have sex with her husband. These data provide insights into women's control over their environment and their attitudes toward gender roles; both factors are relevant to understanding women's health behaviours and outcomes.

Table 3.9 Women's control over earnings
Percent distribution of women who received cash earnings for work in the past 12 months by person who decides how earnings are used, according to marital status, and the proportion of household expenditures met by earnings, Nigeria 2003

| Contribution to household expenditures | Currently married or living together |  |  |  |  |  | Number of women | Not married ${ }^{1}$ |  |  |  | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Self only | Jointly with husband | Jointly with someone else | Husband only | Someone else only | Total |  | Self only | Jointly with someone else | Someone else only | Total |  |
| Almost none/none | 84.3 | 8.5 | 0.5 | 5.7 | 0.6 | 100.0 | 708 | 83.2 | 4.2 | 12.6 | 100.0 | 188 |
| Less than half | 73.2 | 16.0 | 1.2 | 9.1 | 0.4 | 100.0 | 1,122 | 77.8 | 6.0 | 16.3 | 100.0 | 129 |
| Half or more | 63.2 | 23.5 | 0.6 | 11.5 | 1.1 | 100.0 | 1,047 | 83.7 | 6.5 | 9.7 | 100.0 | 213 |
| All | 49.4 | 39.7 | 0.3 | 10.4 | 0.3 | 100.0 | 177 | 92.6 | 2.2 | 5.2 | 100.0 | 150 |
| Total | 71.0 | 18.2 | 0.8 | 9.2 | 0.7 | 100.0 | 3,062 | 84.2 | 5.0 | 10.7 | 100.0 | 682 |

Note: Totals include 8 currently married women and 2 unmarried women with missing information on contribution to household expenditures. Percentages for currently married women may not add to 100 due to missing cases (no more than 0.3 percent of cases in any category).
${ }^{1}$ Never-married, divorced, separated, or widowed women

## Household Decisionmaking

To assess women's decisionmaking autonomy, information was collected on women's participation in seven different types of decisions: the respondent's own health care, making large household purchases, making household purchases for daily needs, visits to family or friends, what food should be cooked each day, and children's health care and education. The ability of women to make decisions that affect the circumstances of their own lives is an essential aspect of empowerment. Table 3.10 shows the percent distribution of women according to who in the household usually has the final say on each one of the different types of decisions.

Among married women, decisionmaking is highly dominated by husbands. For each specified decision, the majority of women state that their husband has the final say. At least two-thirds of women state that their husband alone makes decisions regarding the children's health care and education, large household purchases, and even the respondent's own health care. Women are most likely to have a final say in what food to cook each day-46 percent state that they alone or jointly decide what to cookfollowed by visits to friends and relatives ( 38 percent), and daily household purchases ( 33 percent). Among unmarried women, the majority also report that, when applicable, someone else has the final say in each of the specified decisions.

| Percent distribution of women by person who has the final say in making specific decisions, according to current marital status and type of decision, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Currently married or living together |  |  |  |  |  |  | Not married ${ }^{1}$ |  |  |  |  |  |  |
| Decision | Self only | Jointly <br> with <br> hus- <br> band | Jointly with someone else | Husband only | Some- <br> one else only | Decision not made/not applicable | Total | Number of women | Self only | Jointly with someone else | Some- <br> one <br> else <br> only | Decision <br> not made/not applicable | Total | Number of women |
| Own health care | 12.8 | 10.3 | 0.1 | 73.4 | 3.1 | 0.1 | 100.0 | 5,336 | 22.5 | 4.7 | 67.0 | 5.7 | 100.0 | 2,284 |
| Large household purchases | 7.1 | 12.4 | 0.1 | 77.5 | 2.6 | 0.2 | 100.0 | 5,336 | 16.4 | 5.4 | 65.2 | 13.0 | 100.0 | 2,284 |
| Daily household purchases | 19.0 | 13.9 | 0.2 | 64.5 | 2.4 | 0.0 | 100.0 | 5,336 | 18.4 | 5.3 | 64.0 | 12.1 | 100.0 | 2,284 |
| Visits to family or relatives | 17.7 | 20.4 | 0.2 | 59.7 | 1.7 | 0.2 | 100.0 | 5,336 | 23.1 | 6.1 | 62.1 | 8.6 | 100.0 | 2,284 |
| What food to cook each day | 33.5 | 11.7 | 0.8 | 51.0 | 2.9 | 0.0 | 100.0 | 5,336 | 19.8 | 6.0 | 62.8 | 11.3 | 100.0 | 2,284 |
| Children's health care | 9.3 | 17.3 | 0.3 | 66.8 | 2.1 | 4.1 | 100.0 | 5,336 | 13.8 | 4.3 | 36.2 | 45.6 | 100.0 | 2,284 |
| Children's education | 4.8 | 16.5 | 0.3 | 67.7 | 2.0 | 8.6 | 100.0 | 5,336 | 13.3 | 4.6 | 35.3 | 46.7 | 100.0 | 2,284 |

[^2]Table 3.11 .1 and Figure 3.3 show how participation in decisionmaking varies by background characteristics. Women are considered to participate in a decision if they alone or jointly with a husband or someone else have the final say in that decision. The results indicate that just 14 percent of women participate in all of the five specified decisions, while 46 percent of women report that they do not participate in any of the decisions. The table shows that women's involvement in all the specified decisions increases with age, from a low of 5 percent among women age $15-19$ to a high of 31 percent among women age 4549. Divorced, separated, or widowed women are much more likely to be involved in all types of decisions than currently married women and never-married women ( 56,13 , and 11 percent, respectively). Women who have no living children, no education, those living in rural areas and in the north, and those who are not employed are the least likely to participate in all the specified decisions.

| Percentage of women who say that they alone or jointly have the final say in specific decisions, by background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Alone or jointly has final say in: |  |  |  |  | All specified decisions | None of the specified decisions | Number of women |
| Background characteristic | Own health care | Making large purchases | Making daily purchases | Visits to family or relatives | What food to cook each day |  |  |  |
| Age |  |  |  |  |  |  |  |  |
| 15-19 | 9.7 | 6.3 | 8.3 | 16.1 | 15.5 | 4.6 | 73.8 | 1,716 |
| 20-24 | 19.7 | 13.3 | 21.0 | 27.1 | 31.2 | 8.8 | 53.4 | 1,494 |
| 25-29 | 25.2 | 20.6 | 35.8 | 39.6 | 45.5 | 13.7 | 37.7 | 1,382 |
| 30-34 | 29.9 | 25.9 | 38.6 | 45.4 | 50.6 | 19.0 | 34.3 | 941 |
| 35-39 | 33.1 | 31.2 | 44.1 | 47.4 | 55.2 | 22.6 | 32.3 | 816 |
| 40-44 | 34.6 | 32.9 | 46.9 | 46.3 | 54.3 | 22.8 | 33.2 | 688 |
| 45-49 | 45.8 | 39.3 | 52.5 | 59.4 | 65.0 | 30.8 | 22.9 | 583 |
| Marital status |  |  |  |  |  |  |  |  |
| Never married | 20.1 | 14.2 | 16.4 | 21.2 | 18.2 | 10.8 | 68.8 | 1,926 |
| Married or living together | 23.3 | 19.6 | 33.0 | 38.3 | 46.0 | 13.0 | 40.0 | 5,336 |
| Divorced/separated/ widowed | 65.7 | 62.8 | 63.6 | 72.1 | 66.3 | 56.0 | 20.6 | 358 |
| Number of living children |  |  |  |  |  |  |  |  |
| 0 | 17.2 | 12.7 | 16.3 | 22.8 | 21.2 | 9.0 | 65.6 | 2,499 |
| 1-2 | 25.0 | 19.9 | 31.2 | 36.4 | 43.5 | 14.7 | 41.8 | 2,009 |
| 3-4 | 27.5 | 23.1 | 37.2 | 42.8 | 49.0 | 16.1 | 36.8 | 1,526 |
| 5+ | 32.4 | 30.1 | 44.2 | 47.7 | 56.1 | 21.1 | 31.1 | 1,586 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 30.3 | 24.4 | 36.3 | 40.3 | 44.6 | 17.9 | 41.1 | 2,629 |
| Rural | 21.4 | 18.1 | 27.0 | 33.0 | 37.4 | 12.6 | 49.1 | 4,991 |
| Region |  |  |  |  |  |  |  |  |
| North Central | 21.3 | 12.7 | 26.1 | 23.2 | 39.5 | 8.8 | 50.6 | 1,121 |
| North East | 12.4 | 11.4 | 15.3 | 39.8 | 38.8 | 6.8 | 46.9 | 1,368 |
| North West | 13.1 | 11.7 | 16.8 | 28.0 | 26.4 | 8.4 | 57.5 | 2,095 |
| South East | 48.9 | 42.9 | 59.0 | 57.1 | 57.6 | 34.9 | 30.9 | 737 |
| South South | 32.7 | 31.2 | 44.4 | 36.7 | 47.6 | 21.4 | 41.2 | 1,342 |
| South West | 39.8 | 28.0 | 43.8 | 42.3 | 47.2 | 19.7 | 35.4 | 958 |
| Education |  |  |  |  |  |  |  |  |
| No education | 17.5 | 14.6 | 20.7 | 32.7 | 34.8 | 10.2 | 50.5 | 3,171 |
| Primary | 30.1 | 28.4 | 41.8 | 40.7 | 49.7 | 19.7 | 39.1 | 1,628 |
| Secondary | 26.1 | 19.9 | 31.2 | 32.4 | 37.1 | 14.2 | 49.4 | 2,370 |
| Higher | 44.7 | 33.3 | 50.1 | 53.5 | 55.4 | 26.8 | 28.0 | 451 |
| Employment |  |  |  |  |  |  |  |  |
| Not employed | 12.4 | 8.6 | 12.3 | 21.3 | 22.2 | 6.2 | 66.5 | 3,326 |
| Employed for cash | 35.4 | 30.6 | 44.8 | 48.1 | 53.7 | 22.0 | 30.0 | 3,630 |
| Employed, not for cash | 25.5 | 22.9 | 41.9 | 37.3 | 54.3 | 15.4 | 34.8 | 622 |
| Total | 24.5 | 20.3 | 30.2 | 35.5 | 39.9 | 14.4 | 46.4 | 7,620 |

Note: Total includes 42 cases with missing information on employment.

Figure 3.3 Number of Decisions in Which Women Participate in the Final Say


The 2003 NDHS also sought men's opinions concerning women's participation in decisionmaking in five specified areas. Table 3.11 .2 shows that only 5 percent of men said a wife should participate in all decisions either alone or jointly, while 42 percent said that she should not participate in any decision. Among the five specified decisions, men were most likely to think that women should participate in the decision on how many children to have (44 percent), followed by visits to family or relatives and how to spend her money (31 and 26 percent, respectively).

More rural men (46 percent) disapprove of wives' participation in any of the specified decisions than urban men ( 36 percent). There is significant variation by region with the South West, South East, and North Central having lower proportions of men who believe wives should not participate in any decisions. The data indicate that men with higher education are more likely to support their wives participation in all specified decisions than men with no education (11 and 2 percent, respectively).

Table 3.11.2 Women's participation in decisionmaking by background characteristics: men
Percentage of men who say that the wife alone or jointly should have the final say in specific decisions, by background characteristics, Nigeria 2003

| Background characteristic | Wife alone or jointly should have final say in: |  |  |  |  | Allspecified decisions | None of the specified decisions | Number of men |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Making large purchases | Making daily purchases | Visits to family or relatives | What to do with the money she earns | How many children to have |  |  |  |
| Age |  |  |  |  |  |  |  |  |
| 15-19 | 13.8 | 51.5 | 32.8 | 52.5 | 42.7 | 8.1 | 23.8 | 453 |
| 20-24 | 16.7 | 48.0 | 34.8 | 59.8 | 53.3 | 8.9 | 19.4 | 426 |
| 25-29 | 14.5 | 52.9 | 32.0 | 43.3 | 43.7 | 5.4 | 25.0 | 328 |
| 30-34 | 21.1 | 49.8 | 36.6 | 58.3 | 54.9 | 11.4 | 23.7 | 299 |
| 35-39 | 13.5 | 40.9 | 30.7 | 59.6 | 45.3 | 8.7 | 21.7 | 220 |
| 40-44 | 21.0 | 42.6 | 31.7 | 58.9 | 47.5 | 7.5 | 21.9 | 208 |
| 45-49 | 13.2 | 44.4 | 33.9 | 53.7 | 45.0 | 5.7 | 25.5 | 159 |
| 50-54 | 11.4 | 50.9 | 33.8 | 60.1 | 45.2 | 5.4 | 18.9 | 133 |
| 55-59 | 10.8 | 38.9 | 34.1 | 54.4 | 38.8 | 3.8 | 25.1 | 120 |
| Marital status |  |  |  |  |  |  |  |  |
| Never married | 16.1 | 57.2 | 37.8 | 57.2 | 50.0 | 9.2 | 17.5 | 1,048 |
| Married or living together | 15.6 | 40.7 | 30.0 | 52.8 | 44.4 | 6.6 | 27.2 | 1,245 |
| Divorced/separated/ widowed | 7.1 | 33.7 | 26.9 | 70.5 | 51.1 | 6.6 | 19.9 | 53 |
| Number of living children |  |  |  |  |  |  |  |  |
| 0 | 17.5 | 53.6 | 37.1 | 56.5 | 49.0 | 9.7 | 19.3 | 1,168 |
| 1-2 | 13.1 | 40.0 | 31.6 | 56.0 | 49.8 | 5.5 | 25.1 | 379 |
| 3-4 | 15.1 | 43.3 | 30.5 | 52.7 | 43.1 | 6.2 | 27.5 | 316 |
| $5+$ | 13.5 | 43.5 | 28.1 | 52.8 | 43.0 | 5.8 | 25.9 | 482 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 18.0 | 50.5 | 38.9 | 65.0 | 51.8 | 9.0 | 14.9 | 872 |
| Rural | 14.2 | 46.4 | 30.2 | 49.3 | 44.3 | 7.0 | 27.4 | 1,474 |
| Region |  |  |  |  |  |  |  |  |
| North Central | 20.3 | 75.1 | 46.4 | 63.2 | 52.3 | 10.6 | 11.8 | 348 |
| North East | 1.9 | 15.2 | 12.2 | 32.2 | 36.0 | 0.5 | 51.1 | 421 |
| North West | 5.2 | 12.3 | 16.8 | 58.2 | 42.8 | 0.5 | 32.5 | 602 |
| South East | 39.0 | 62.3 | 56.7 | 55.3 | 57.4 | 13.2 | 10.1 | 207 |
| South South | 17.3 | 83.9 | 37.5 | 49.3 | 45.4 | 10.6 | 10.9 | 445 |
| South West | 30.6 | 68.8 | 57.8 | 78.7 | 59.6 | 20.3 | 3.6 | 322 |
| Education |  |  |  |  |  |  |  |  |
| No education | 4.8 | 17.4 | 15.8 | 44.7 | 33.6 | 1.5 | 43.1 | 507 |
| Primary | 14.6 | 46.1 | 31.5 | 51.4 | 41.7 | 7.2 | 27.1 | 603 |
| Secondary | 18.8 | 61.9 | 40.3 | 58.9 | 53.7 | 9.1 | 12.8 | 960 |
| Higher | 26.7 | 58.9 | 46.3 | 69.5 | 60.7 | 16.0 | 10.2 | 276 |
| Employment |  |  |  |  |  |  |  |  |
| Not employed | 18.8 | 61.5 | 37.0 | 57.1 | 48.5 | 11.0 | 15.0 | 703 |
| Employed for cash | 17.4 | 52.0 | 39.5 | 61.0 | 52.7 | 8.3 | 16.6 | 1,179 |
| Employed, not for cash | 5.1 | 16.9 | 11.3 | 36.3 | 29.6 | 1.5 | 50.8 | 450 |
| Missing | 48.1 | 15.3 | 51.2 | 71.9 | 60.2 | 0.0 | 24.5 | 14 |
| Total | 15.6 | 47.9 | 33.4 | 55.1 | 47.1 | 7.8 | 22.7 | 2,346 |

Note: Total includes 14 cases with missing information on employment.

## Women's Agreement with Reasons for Wife Beating

The 2003 NDHS gathered information on women's attitudes toward wife beating, a proxy for women's perception of their status. Women who believe that a husband is justified in hitting or beating his wife for any reason at all may also believe themselves to be of low status both absolutely and relative to men. Such perceptions by women could act as a barrier to accessing health care for themselves and their children, could affect their attitude toward contraceptive use, and could impact their general wellbeing. Women were asked whether a husband is justified in beating his wife under a series of circumstances. Possible reasons that justified a man beating his wife included her burning the food, her not having the food prepared on time, her arguing with him, her going out without telling him, her neglecting the children, and her refusing sexual relations. The results are summarized in Table 3.12.1.

Approximately two-thirds (65 percent) of women believe that a husband is justified in beating his wife for at least one of the specified reasons. More than half of women believe that a husband is justified in beating his wife if she goes out without telling him, and about half agree that she should be beaten if she neglects the children. Slightly smaller percentages agree if a woman argues with her husband ( 44 percent) or refuses to have sex with her husband (38 percent). Approximately one-third feel that a husband is justified in beating his wife if the food is not cooked on time or if she burns the food.

There is little variation in these beliefs by age. Women who are married, have at least one child, or who reside in rural areas are the most likely to agree with at least one of these reasons. There are large variations by geopolitical region. Almost all women in the North East agree with at least one reason for wife-beating ( 90 percent), compared with less than one-third of women in the South East ( 31 percent). Differences are also notable by level of education. Agreement with at least one reason ranges from a high of 78 percent among women with no education to a low of 31 percent among women with higher education. Women who participate in more household decisions are less likely to feel that wife beating is justified for any reason.

Table 3.12.2 presents the percentage of men who agree that a husband is justified in beating his wife for specific reasons by background characteristics. Sixty-one percent of men agree with at least one specified reason for wife beating, a proportion similar to women ( 65 percent). The most prevalent reasons given for wife beating include, going out without telling the husband (50 percent), neglecting the children (47 percent), arguing with the husband (40 percent), and refusing to have sex with him (34 percent).

Men who are divorced, separated, or widowed are more likely than currently married or never married men to agree with at least one specified reason for wife beating ( 75 percent compared with 63 percent and 59 percent). Men in rural areas are more likely to agree with at least one specified reason for wife beating than those in urban areas ( 66 and 54 percent, respectively). Similar to women, men's beliefs vary greatly by region. Men who have no education and who are employed but do not earn cash are also more likely to agree with at least one specified reason. The table shows that men who support women's participation in decisionmaking are less likely to agree with any of the reasons justifying wife beating.

Table 3.12.1 Women's attitude toward wife beating
Percentage of women who agree that a husband is justified in hitting or beating his wife for specific reasons, according to background characteristics, Nigeria 2003

|  | Husband is justified in hitting or beating his wife if she: |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

[^3]| Table 3.12.2 Men's attitude toward wife beating |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of men who agree that a husband is justified in hitting or beating his wife for specific reasons, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |
|  | Husband is justified in hitting or beating his wife if she: |  |  |  |  |  | Percentage who agree with at least one specified reason | Number of men |
| Background characteristic | Burns the food | Doesn't cook food on time | Argues with him | Goes out without telling him | Neglects the children | Refuses to have sex with him |  |  |
| Age |  |  |  |  |  |  |  |  |
| 15-19 | 21.9 | 23.3 | 35.4 | 50.0 | 43.6 | 31.9 | 60.1 | 453 |
| 20-24 | 17.7 | 21.7 | 40.9 | 49.2 | 47.9 | 33.8 | 59.4 | 426 |
| 25-29 | 14.9 | 15.9 | 42.1 | 45.5 | 46.9 | 31.4 | 60.2 | 328 |
| 30-34 | 10.2 | 12.0 | 39.6 | 51.3 | 47.4 | 31.1 | 62.5 | 299 |
| 35-39 | 13.8 | 12.5 | 45.1 | 54.5 | 48.9 | 36.1 | 68.8 | 220 |
| 40-44 | 13.3 | 14.3 | 37.4 | 49.0 | 44.6 | 31.5 | 58.0 | 208 |
| 45-49 | 12.9 | 16.2 | 43.0 | 50.8 | 47.4 | 38.9 | 61.5 | 159 |
| 50-54 | 13.3 | 14.8 | 49.8 | 53.4 | 50.5 | 44.4 | 69.2 | 133 |
| 55-59 | 10.3 | 11.7 | 30.6 | 48.3 | 41.6 | 29.7 | 55.1 | 120 |
| Marital status |  |  |  |  |  |  |  |  |
| Never married | 17.4 | 19.9 | 37.2 | 46.3 | 44.1 | 29.3 | 58.7 | 1,048 |
| Married or living together | 13.6 | 14.4 | 41.9 | 52.8 | 47.8 | 36.7 | 62.8 | 1,245 |
| Divorced/separated/widowed | 19.5 | 27.8 | 52.0 | 51.9 | 62.4 | 41.7 | 75.2 | 53 |
| Number of living children |  |  |  |  |  |  |  |  |
| 0 0 | 17.3 | 19.4 | 38.0 | 47.3 | 44.3 | 29.7 | 59.0 | 1,168 |
| 1-2 | 13.3 | 14.3 | 39.3 | 52.5 | 46.0 | 35.8 | 61.7 | 379 |
| 3-4 | 13.2 | 14.3 | 43.0 | 50.0 | 47.5 | 35.4 | 64.8 | 316 |
| 5+ | 14.3 | 15.9 | 43.6 | 53.9 | 51.5 | 39.6 | 64.2 | 482 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 8.9 | 10.7 | 29.8 | 38.9 | 36.9 | 24.4 | 53.7 | 872 |
| Rural | 19.3 | 21.0 | 46.1 | 56.3 | 52.1 | 38.9 | 65.8 | 1,474 |
| Region |  |  |  |  |  |  |  |  |
| North Central | 13.8 | 21.5 | 33.2 | 37.1 | 42.4 | 22.4 | 50.7 | 348 |
| North East | 30.2 | 28.9 | 74.9 | 74.5 | 74.7 | 69.3 | 82.0 | 421 |
| North West | 14.0 | 14.6 | 35.2 | 66.3 | 45.1 | 43.9 | 70.8 | 602 |
| South East | 9.0 | 9.0 | 15.0 | 28.3 | 25.3 | 4.2 | 36.6 | 207 |
| South South | 12.9 | 13.7 | 40.8 | 45.6 | 45.0 | 25.6 | 60.5 | 445 |
| South West | 8.4 | 11.9 | 26.0 | 20.4 | 32.2 | 9.1 | 44.8 | 322 |
| Education |  |  |  |  |  |  |  |  |
| No education | 21.1 | 20.8 | 49.9 | 65.4 | 55.5 | 51.8 | 73.5 | 507 |
| Primary | 15.2 | 18.6 | 41.2 | 51.6 | 46.7 | 31.7 | 61.0 | 603 |
| Secondary | 14.8 | 17.3 | 35.9 | 42.4 | 41.8 | 26.7 | 56.0 | 960 |
| Higher | 8.0 | 6.9 | 34.0 | 43.6 | 45.6 | 27.6 | 57.8 | 276 |
| Employment |  |  |  |  |  |  |  |  |
| Not employed | 16.6 | 19.2 | 34.1 | 43.9 | 44.8 | 28.1 | 57.8 | 703 |
| Employed for cash | 11.4 | 13.0 | 41.8 | 48.6 | 46.2 | 31.4 | 59.9 | 1,179 |
| Employed, not for cash | 24.2 | 24.9 | 45.7 | 62.9 | 51.1 | 48.1 | 71.0 | 450 |
| Number of decisions in which woman should have final say ${ }^{1}$ |  |  |  |  |  |  |  |  |
| 0 | 28.9 | 25.8 | 50.8 | 60.9 | 55.4 | 47.4 | 69.3 | 533 |
| 1-2 | 15.5 | 18.2 | 38.5 | 53.9 | 45.9 | 35.0 | 62.4 | 979 |
| 3-4 | 7.9 | 12.3 | 35.7 | 38.0 | 40.3 | 24.0 | 54.2 | 652 |
| 5 | 3.3 | 3.6 | 32.3 | 38.5 | 45.4 | 18.7 | 56.9 | 182 |
| Total | 15.5 | 17.2 | 40.0 | 49.9 | 46.5 | 33.5 | 61.3 | 2,346 |

Note: Total includes 14 cases with missing information on employment.
${ }^{1}$ Either by herself or jointly with others

## Women's Attitude Toward Refusing Sex with Husband

The extent of control women have over when and with whom they have sex has important implications for demographic and health outcomes. The 2003 NDHS asked respondents if a woman would be justified in refusing sex with her husband in each of the following four situations: if she knows husband has a sexually transmitted infection; if she knows her husband has sex with women other than herself (or his wives); if she has recently given birth; and if she is tired or not in the mood.

Table 3.13.1 shows that a majority of women agree with each specified reason for refusing to have sex. Women are most likely to agree that a woman can refuse to have sex with her husband if she knows he has a sexually transmitted infection ( 84 percent), although more than two-thirds believe that a woman can refuse sex if she has recently given birth or if she knows her husband has sex with other women. Less than half of women ( 44 percent) agree with all of the specified reasons for refusing sex and 12 percent agree with none of the specified reasons.

Although there is little difference by urban-rural residence in the reasons women agree justify refusing to have sex with their husbands, there are substantial variations by region. Interestingly, nevermarried women are twice as likely as currently or formerly married women to agree that there is no reason for refusing sex with a husband. Table 3.13 .2 shows that male respondents are more likely to agree with each specified reason. Approximately half of men agree with all reasons.

| Percentage of women who believe that a wife is justified in refusing to have sex with her husband for specific reasons, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wife is justified in refusing sex with her husband if she: |  |  |  |  |  |  |  |
| Background characteristic | Knows husband has a sexually transmitted infection | Knows husband has sex with women other than wife/wives | Has recently given birth | 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 of women |
| Age |  |  |  |  |  |  |  |
| 15-19 | 73.5 | 61.4 | 60.1 | 50.7 | 40.8 | 21.2 | 1,716 |
| 20-24 | 84.1 | 70.1 | 71.3 | 56.7 | 44.5 | 11.2 | 1,494 |
| 25-29 | 88.3 | 69.7 | 74.3 | 57.7 | 45.3 | 7.4 | 1,382 |
| 30-34 | 87.2 | 72.0 | 72.2 | 54.7 | 45.1 | 7.8 | 941 |
| 35-39 | 86.8 | 70.5 | 68.5 | 54.9 | 44.4 | 9.7 | 816 |
| 40-44 | 86.0 | 70.3 | 69.0 | 53.9 | 44.0 | 11.4 | 688 |
| 45-49 | 85.8 | 68.3 | 72.1 | 54.2 | 44.6 | 11.5 | 583 |
| Marital status |  |  |  |  |  |  |  |
| Never married | 75.3 | 61.1 | 65.4 | 59.8 | 45.4 | 20.3 | 1,926 |
| Married or living together | 86.0 | 70.5 | 69.6 | 52.7 | 43.4 | 9.5 | 5,336 |
| Divorced/separated/ widowed | 89.1 | 72.6 | 78.3 | 55.6 | 42.5 | 9.7 | 358 |
| Number of living children |  |  |  |  |  |  |  |
| 0 | 77.2 | 62.5 | 64.5 | 55.1 | 42.4 | 18.1 | 2,499 |
| 1-2 | 87.4 | 72.4 | 72.9 | 56.9 | 46.1 | 8.2 | 2,009 |
| 3-4 | 85.7 | 68.4 | 69.8 | 51.1 | 41.4 | 9.8 | 1,526 |
| 5+ | 86.1 | 71.8 | 70.2 | 54.4 | 45.8 | 10.4 | 1,586 |
| Residence |  |  |  |  |  |  |  |
| Urban | 86.3 | 68.4 | 71.2 | 58.5 | 44.7 | 10.1 | 2,629 |
| Rural | 82.0 | 68.1 | 67.8 | 52.6 | 43.4 | 13.3 | 4,991 |
| Region |  |  |  |  |  |  |  |
| North Central | 77.1 | 62.4 | 68.4 | 58.2 | 49.2 | 19.5 | 1,121 |
| North East | 90.1 | 78.0 | 73.3 | 55.0 | 49.1 | 7.6 | 1,368 |
| North West | 83.6 | 71.4 | 58.0 | 35.2 | 32.1 | 11.5 | 2,095 |
| South East | 71.5 | 54.3 | 58.6 | 52.1 | 40.5 | 24.7 | 737 |
| South South | 86.2 | 66.9 | 81.2 | 67.9 | 47.0 | 7.2 | 1,342 |
| South West | 86.3 | 66.8 | 78.2 | 75.6 | 54.2 | 9.3 | 958 |
| Education |  |  |  |  |  |  |  |
| No education | 83.1 | 69.4 | 65.9 | 44.6 | 38.8 | 12.2 | 3,171 |
| Primary | 81.5 | 66.9 | 68.4 | 59.4 | 48.1 | 14.8 | 1,628 |
| Secondary | 83.3 | 66.9 | 71.7 | 63.0 | 47.4 | 11.9 | 2,370 |
| Higher | 93.9 | 71.9 | 77.8 | 64.1 | 45.7 | 4.4 | 451 |
| Employment |  |  |  |  |  |  |  |
| Not employed | 79.3 | 62.7 | 62.5 | 48.3 | 38.1 | 16.2 | 3,326 |
| Employed for cash | 87.3 | 73.2 | 73.8 | 59.0 | 47.8 | 8.8 | 3,630 |
| Employed, not for cash | 85.2 | 69.5 | 75.9 | 64.5 | 52.9 | 10.9 | 622 |
| Number of decisions in which woman has final say ${ }^{1}$ |  |  |  |  |  |  |  |
| 0 | 80.0 | 65.5 | 65.4 | 52.0 | 42.8 | 15.7 | 3,534 |
| 1-2 | 87.9 | 73.3 | 69.8 | 53.5 | 42.8 | 7.1 | 2,160 |
| 3-4 | 88.1 | 66.4 | 75.0 | 60.8 | 43.7 | 7.3 | 825 |
| 5 | 82.5 | 68.6 | 74.4 | 60.7 | 49.3 | 14.9 | 1,100 |
| Number of reasons wife beating is justified |  |  |  |  |  |  |  |
| 0 | 74.4 | 58.1 | 61.0 | 51.3 | 40.1 | 22.3 | 2,704 |
| 1-2 | 89.4 | 65.8 | 69.1 | 48.1 | 37.4 | 6.7 | 1,563 |
| 3-4 | 89.2 | 74.0 | 74.4 | 57.4 | 43.3 | 5.5 | 1,250 |
| 5-6 | 87.2 | 79.6 | 75.9 | 62.1 | 53.8 | 7.4 | 2,104 |
| Total | 83.5 | 68.2 | 69.0 | 54.6 | 43.9 | 12.2 | 7,620 |
| Note: Total includes 42 cases with missing information on employment. ${ }^{1}$ Either by herself or jointly with others |  |  |  |  |  |  |  |

Table 3.13.2 Men's attitude toward wife refusing sex with husband
Percentage of men who believe that a wife is justified in refusing to have sex with her husband for specific reasons, according to background characteristics, Nigeria 2003

| Background characteristic | Wife is justified in refusing sex 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 men |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Knows husband has a sexually transmitted infection | Knows husband has sex with women other than wife/wives | Has recently given birth | Is tired or not in the mood |  |  |  |
| Age |  |  |  |  |  |  |  |
| 15-19 | 80.9 | 62.8 | 73.5 | 51.5 | 39.7 | 14.9 | 453 |
| 20-24 | 90.8 | 69.8 | 79.8 | 61.4 | 49.2 | 7.2 | 426 |
| 25-29 | 93.5 | 74.4 | 85.3 | 65.8 | 53.2 | 3.5 | 328 |
| 30-34 | 97.4 | 82.2 | 87.4 | 75.1 | 62.2 | 0.5 | 299 |
| 35-39 | 96.1 | 79.6 | 86.3 | 66.4 | 52.1 | 1.2 | 220 |
| 40-44 | 92.9 | 74.8 | 84.0 | 58.2 | 43.9 | 1.6 | 208 |
| 45-49 | 96.0 | 79.4 | 86.1 | 64.3 | 50.6 | 1.0 | 159 |
| 50-54 | 91.6 | 76.3 | 82.3 | 70.4 | 51.1 | 4.0 | 133 |
| 55-59 | 91.9 | 67.2 | 84.2 | 60.9 | 45.1 | 3.0 | 120 |
| Marital status |  |  |  |  |  |  |  |
| Never married | 86.9 | 68.4 | 78.9 | 60.5 | 48.5 | 9.9 | 1,048 |
| Married or living together | 94.8 | 77.2 | 84.3 | 64.8 | 50.8 | 1.8 | 1,245 |
| Divorced/separated/widowed | d 94.1 | 60.0 | 94.3 | 58.0 | 33.1 | 2.5 | 53 |
| Number of living children |  |  |  |  |  |  |  |
| 0 | 88.1 | 69.2 | 80.4 | 61.2 | 48.6 | 8.9 | 1,168 |
| 1-2 | 94.8 | 72.7 | 84.3 | 63.6 | 49.6 | 2.3 | 379 |
| 3-4 | 95.0 | 79.8 | 85.5 | 60.6 | 49.1 | 1.4 | 316 |
| $5+$ | 93.6 | 77.6 | 82.3 | 67.1 | 51.3 | 2.2 | 482 |
| Residence |  |  |  |  |  |  |  |
| Urban | 93.2 | 70.0 | 82.0 | 64.8 | 48.8 | 4.9 | 872 |
| Rural | 90.1 | 74.7 | 82.2 | 61.5 | 49.7 | 5.8 | 1,474 |
| Region |  |  |  |  |  |  |  |
| North Central | 93.4 | 84.2 | 93.1 | 79.6 | 70.4 | 3.0 | 348 |
| North East | 96.3 | 74.0 | 83.5 | 55.6 | 40.0 | 1.4 | 421 |
| North West | 93.1 | 70.7 | 69.9 | 42.6 | 32.1 | 3.5 | 602 |
| South East | 94.1 | 77.1 | 84.8 | 76.3 | 61.7 | 5.1 | 207 |
| South South | 78.9 | 66.8 | 78.4 | 59.3 | 50.1 | 16.2 | 445 |
| South West | 94.1 | 69.2 | 94.7 | 87.4 | 62.3 | 2.3 | 322 |
| Education |  |  |  |  |  |  |  |
| No education | 92.2 | 74.4 | 76.6 | 50.8 | 37.5 | 2.9 | 507 |
| Primary | 88.5 | 71.4 | 78.6 | 59.9 | 46.3 | 7.3 | 603 |
| Secondary | 91.6 | 71.6 | 84.9 | 67.1 | 53.4 | 6.1 | 960 |
| Higher | 94.3 | 78.1 | 90.0 | 75.6 | 63.8 | 3.8 | 276 |
| Employment |  |  |  |  |  |  |  |
| Not employed | 84.3 | 68.5 | 77.0 | 61.8 | 50.2 | 12.2 | 703 |
| Employed for cash | 95.2 | 74.0 | 88.2 | 68.1 | 52.2 | 1.8 | 1,179 |
| Employed, not for cash | 91.7 | 76.5 | 74.1 | 49.9 | 40.2 | 4.6 | 450 |
| Number of decisions in which woman has final say ${ }^{1}$ |  |  |  |  |  |  |  |
| 0 | 85.3 | 73.2 | 71.9 | 52.1 | 41.2 | 10.8 | 533 |
| 1-2 | 92.5 | 69.2 | 80.4 | 57.0 | 41.7 | 3.5 | 979 |
| 3-4 | 93.8 | 75.9 | 90.4 | 73.6 | 60.3 | 3.9 | 652 |
| 5 | 93.1 | 81.4 | 91.4 | 85.4 | 75.6 | 5.8 | 182 |
| Number of reasons wife beating is justified |  |  |  |  |  |  |  |
| 0 | 91.1 | 69.3 | 80.4 | 61.3 | 49.5 | 6.7 | 1,353 |
| 1-2 | 92.5 | 76.2 | 86.1 | 64.0 | 47.8 | 2.7 | 469 |
| 3-4 | 89.6 | 79.4 | 85.0 | 68.3 | 50.6 | 5.1 | 304 |
| 5-6 | 91.7 | 79.1 | 79.8 | 61.2 | 50.3 | 4.1 | 220 |
| Total | 91.2 | 72.9 | 82.1 | 62.7 | 49.4 | 5.5 | 2,346 |
| Note: Total includes 14 cases with missing information on employment. ${ }^{1}$ Either by herself or jointly with others |  |  |  |  |  |  |  |

This chapter looks at a number of fertility indicators, including levels, patterns, and trends in both current and cumulative fertility; the length of birth intervals; and the age at which women initiate childbearing. Data on fertility were collected in the 2003 NDHS in several ways. First, each woman was asked a series of questions on the number of sons and daughters who were living with her, the number living elsewhere, and the number who had died. Next, a complete history of all of the women's births was obtained, including the month and year each child was born; the name and sex; if deceased, the age at death; and if alive, the current age and whether the child was living with the mother. The information from those questions was used to calculate measures of current and completed fertility, i.e., the number of children ever born.

### 4.1 Current Fertility

Measures of current fertility presented in this chapter include age-specific fertility rates (ASFRs), the total fertility rate (TFR), the general fertility rate (GFR), and the crude birth rate (CBR). These rates are generally presented for the three-year period preceding the survey. The threeyear period was chosen as a compromise among three criteria: to get the most current information, to reduce sampling error, and to avoid problems noted in the 1999 NDHS of the displacement of births from five to six years before the survey.

ASFRs are useful in understanding the age pattern of fertility. Table 4.1 shows that Nigerian women experience their prime reproductive years during their twenties and early thirties. At every age, rural women bear more children than urban women. The rural ASFRs rise sharply from age $15-19$ years to age $20-24$, peak at age $25-29$ and then decline. On the other hand, the urban ASFRs assume a more gradual pattern, an indication both of delayed marriage and some deliberate attempt to postpone or terminate births by urban women. Figure 4.1 shows that whereas the urban ASFR pattern depicts a narrow peak at age 25-29, the rural ASFR depicts a broad peak that extends from age 20-24 to 30-34.

The total fertility rate is a useful measure for

Table 4.1 Current fertility
Age-specific and cumulative fertility rates, the general fertility rate, and the crude birth rate for the three years preceding the survey, by urban-rural residence, Nigeria 2003

|  | Residence |  |  |
| :--- | ---: | ---: | ---: |
| Age group | Urban | Rural | Total |
| $15-19$ | 88 | 146 | 126 |
| $20-24$ | 186 | 252 | 229 |
| $25-29$ | 258 | 282 | 274 |
| $30-34$ | 222 | 257 | 244 |
| $35-39$ | 156 | 174 | 168 |
| $40-44$ | 51 | 81 | 72 |
| $45-49$ | 12 | 22 | 18 |
| TFR | 4.9 | 6.1 | 5.7 |
| GFR | 164 | 204 | 190 |
| CBR | 36.3 | 44.5 | 41.7 |

Note: Rates are for the period 1-36 months preceding the survey. Rates for age group 45-49 may be slightly biased due to truncation. TFR: Total fertility rate for ages 15-49, expressed per woman
GFR: General fertility rate (births divided by number of women age 15-44) expressed per 1,000 women
CBR: Crude birth rate expressed per 1,000 population examining the overall level of fertility. It is interpreted as the number of children the average woman would bear in her lifetime if she experienced the currently-observed age-specific fertility rates throughout her reproductive years. According to the results of the 2003 NDHS, the total fertility rate for Nigeria is 5.7. As expected, the TFR for rural women is significantly higher than that of urban women. On average, rural women will give birth to one more child during their reproductive years than urban women (6.1 and 4.9 , respectively).

## Figure 4.1 Age-Specific Fertility Rates, by Residence



The TFR of 5.7 computed in the 2003 NDHS is significantly higher than the 1999 NDHS rate of 5.2. This confirms the analysis in the Data Quality Chapter of the 1999 NDHS final report that detailed evidence of an underreporting of births during the five years preceding the survey. Indeed, the results of that analysis indicated that the TFR was closer to 6.0 (NPC, 2000). On the other hand, there is no evidence of omission or transference of births in the 2003 NDHS (see Table C.4).

The crude birth rate in Nigeria is 42 births per 1,000 population. As with the TFR, there is a clear differential in this rate by residence: 45 births per 1,000 in rural areas versus 36 births per 1,000 in urban areas. The GFR of 190 indicates that 1,000 women age 15-44 would have 190 live births per year and also indicates a significant urban-rural difference. Higher rural than urban fertility has been explained with respect to the underlying socioeconomic differences and the changing proximate determinants of fertility, especially delayed marriage and higher use of modern contraceptives in urban areas (Isiugo Abanihe, 1996).

### 4.2 Fertility Differentials

Table 4.2 shows total fertility rates, the percentage of women who are currently pregnant, and the mean number of children ever born (CEB) to women age 40-49, by residence, region, education, and wealth quintile.

The large urban-rural differentials in fertility have already been noted. Region of residence also shows considerable variation in fertility. Table 4.2 shows a pattern of lower rates in the south and higher rates in the north. The TFR is lowest in the South West and South East (4.1), followed closely by the South South (4.6). The North Central shows a rate corresponding to the national average of 5.7. The rates for the North West and North East are significantly higher at 6.7 and 7.0, respectively (Figure 4.2).

| Table 4.2 Fertility by background characteristics |  |  |  |
| :---: | :---: | :---: | :---: |
| Total fertility rate for the three years preceding the survey, percentage of women 15-49 currently pregnant, and mean number of children ever born to women age 40-49, by background characteristics, Nigeria 2003 |  |  |  |
| Background characteristic | Total fertility rate ${ }^{~}$ | Percentage currently pregnant ${ }^{1}$ | Mean number of children ever born to women age 40-49 |
| Residence |  |  |  |
| Urban | 4.9 | 9.4 | 6.2 |
| Rural | 6.1 | 12.4 | 7.1 |
| Region |  |  |  |
| North Central | 5.7 | 9.4 | 7.4 |
| North East | 7.0 | 14.2 | 7.4 |
| North West | 6.7 | 16.2 | 6.7 |
| South East | 4.1 | 6.8 | 6.6 |
| South South | 4.6 | 9.0 | 6.9 |
| South West | 4.1 | 6.0 | 5.5 |
| Education |  |  |  |
| No education | 6.7 | 14.8 | 7.1 |
| Primary | 6.3 | 11.0 | 7.1 |
| Secondary | 4.7 | 8.1 | 5.5 |
| Higher | 2.8 | 6.2 | 4.3 |
| Wealth quintile |  |  |  |
| Lowest | 6.5 | 12.8 | 7.2 |
| Second | 6.3 | 13.8 | 7.2 |
| Middle | 5.7 | 13.2 | 6.7 |
| Fourth | 5.9 | 10.2 | 7.0 |
| Highest | 4.2 | 7.8 | 5.5 |
| Total | 5.7 | 11.4 | 6.8 |
| ${ }^{1}$ Rate for women age 15-49 years |  |  |  |

Fertility is also strongly correlated with education and wealth quintile. The higher a woman's educational attainment and the more economically advantaged her household, the lower her fertility. There is a monotonic decline in fertility with educational attainment. Eleven percent of the women interviewed reported that they were pregnant at the time of the interview. Variations in this proportion follow the same general patterns as the TFRs.

Table 4.2 also shows the mean number of live births for women age 40-49. This figure is an indicator of completed fertility or cumulative fertility of women approaching the end of their childbearing years. A comparison of the TFR (5.7) and cumulative fertility (6.8) gives an indication of fertility over time. The data indicate fertility decline among women in all groups, with the exception of women in the North West region.

Figure 4.2 Total Fertility Rates by Region


### 4.3 Fertility Trends

One method of understanding fertility trends is to examine the ASFRs over time. Because women age 50 and older were not interviewed in the survey, the rates are successively truncated as the number of years before the survey increases. The ASFR data shown in Table 4.3 indicate that over the last 20 years there has been a steady decline in fertility among women of all ages in Nigeria. As has been alluded to previously, the declining fertility observed here can be interpreted in light of rising age at marriage and increasing contraceptive use.

| Age-specific fertility rates for five-year periods preceding survey, by mother's age at the time of the birth, Nigeria 2003 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Number of years preceding the survey |  |  |  |
| at birth | 0-4 | 5-9 | 10-14 | 15-19 |
| 15-19 | 126 | 147 | 167 | 197 |
| 20-24 | 246 | 265 | 285 | 307 |
| 25-29 | 272 | 315 | 305 | 312 |
| 30-34 | 237 | 254 | 270 | [282] |
| 35-39 | 171 | 173 | [200] | - |
| 40-44 | 69 | [89] | - | - |
| 45-49 | [25] | - | - | - |

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated.

Figure 4.3 presents the trend in the TFR over the years from different Nigerian data sets. Overall, these data indicate a modest decline in fertility at the national level over the years, from a TFR of 6.3 in the 1981-82 National Fertility Survey (NFS) to 5.7 in the 2003 NDHS.

Figure 4.3 Trends in Total Fertility Rates


### 4.4 CHILDREN EVER BORN AND LIVING

Table 4.4 shows all women and currently married women by number of children ever born. Data on the number of children ever born reflect the accumulation of births over the past 30 years and therefore have limited relevance to current fertility levels, particularly when the country has experienced a decline in fertility.

Approximately seven in ten women reported having given birth. As expected, currently married women have had more births than all women in all age groups; 90 percent of married women report that they have given birth. The reason is undoubtedly that currently married women are more consistently exposed to the risk of pregnancy.

The percentage of women in their forties who have never had children provides an indicator of the level of primary infertility-the proportion of women who are unable to bear children at all. Since voluntary childlessness is rare in Nigeria, it is likely that married women with no births are unable to bear children. The 2003 NDHS results suggest that primary infertility is low: less than 3 percent of married women age 45-49 report that they have had no children. It should be noted that this estimate of primary infertility does not include women who may have had one or more births but who are unable to have more (secondary infertility).

The mean number of children ever born (CEB) for all women is 3.1 and for currently married women is 4.1. As expected the mean CEB increases with age. Comparing the CEB column with that of the mean number of living children reveals substantial experience of child loss among Nigerian women.

| Table 4.4 Children ever born and living |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of all women and currently married women by number of children ever born, and mean number of children ever born and mean number of living children, according to age group, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Number of children ever born |  |  |  |  |  |  |  |  |  |  |  | Number of women | Mean number of children ever born | Mean number of living children |
| Age | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | $10+$ | Total |  |  |  |
| ALL WOMEN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 79.0 | 16.7 | 3.2 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 1,716 | 0.26 | 0.22 |
| 20-24 | 41.6 | 24.0 | 17.6 | 10.6 | 4.9 | 1.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 1,494 | 1.18 | 0.97 |
| 25-29 | 16.8 | 13.5 | 16.0 | 17.6 | 17.0 | 10.7 | 5.2 | 2.1 | 0.5 | 0.2 | 0.2 | 100.0 | 1,382 | 2.74 | 2.23 |
| 30-34 | 8.0 | 6.6 | 9.8 | 11.5 | 14.9 | 15.7 | 12.8 | 11.2 | 5.8 | 2.4 | 1.2 | 100.0 | 941 | 4.35 | 3.41 |
| 35-39 | 2.5 | 4.1 | 5.6 | 8.8 | 12.2 | 10.2 | 12.4 | 12.4 | 12.2 | 9.8 | 9.8 | 100.0 | 816 | 5.93 | 4.54 |
| 40-44 | 5.5 | 3.3 | 3.7 | 4.2 | 6.7 | 10.9 | 11.8 | 12.0 | 11.1 | 11.9 | 18.9 | 100.0 | 688 | 6.62 | 4.91 |
| 45-49 | 3.3 | 3.4 | 4.3 | 2.6 | 8.8 | 9.9 | 10.4 | 9.2 | 11.1 | 10.9 | 26.1 | 100.0 | 583 | 7.03 | 5.05 |
| Total | 31.0 | 12.7 | 9.6 | 8.4 | 8.5 | 6.9 | 5.8 | 4.9 | 4.0 | 3.3 | 4.9 | 100.0 | 7,620 | 3.09 | 2.38 |
| CURRENTLY MARRIED WOMEN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 44.8 | 41.9 | 10.0 | 3.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 545 | 0.72 | 0.61 |
| 20-24 | 13.5 | 32.3 | 27.4 | 16.6 | 8.0 | 1.8 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 911 | 1.80 | 1.48 |
| 25-29 | 7.1 | 12.9 | 17.8 | 20.2 | 19.4 | 12.8 | 6.1 | 2.6 | 0.6 | 0.2 | 0.3 | 100.0 | 1,146 | 3.15 | 2.56 |
| 30-34 | 3.9 | 6.3 | 9.2 | 11.9 | 15.5 | 16.8 | 13.8 | 12.2 | 6.4 | 2.7 | 1.4 | 100.0 | 848 | 4.63 | 3.63 |
| 35-39 | 1.5 | 3.3 | 5.7 | 8.6 | 12.7 | 10.5 | 12.1 | 12.2 | 12.6 | 10.4 | 10.3 | 100.0 | 763 | 6.07 | 4.63 |
| 40-44 | 5.1 | 2.8 | 3.5 | 3.7 | 6.9 | 11.1 | 12.0 | 11.3 | 10.8 | 12.6 | 20.2 | 100.0 | 619 | 6.76 | 5.00 |
| 45-49 | 2.5 | 2.7 | 4.2 | 2.6 | 8.6 | 10.3 | 9.9 | 9.2 | 11.4 | 11.3 | 27.1 | 100.0 | 504 | 7.17 | 5.13 |
| Total | 10.1 | 14.6 | 12.6 | 11.3 | 11.4 | 9.5 | 7.6 | 6.4 | 5.3 | 4.5 | 6.7 | 100.0 | 5,336 | 4.12 | 3.17 |

### 4.5 BIRTH INTERVALS

A birth interval is defined as the length of time between two successive live births. Information on birth intervals provides insight into birth spacing patterns, which affect fertility as well as infant and childhood mortality. Research has shown that children born too soon after the previous birth are at increased risk of dying at an early age.

Table 4.5 presents the percent distribution of non-first births in the five years preceding the survey, by number of months since preceding birth. The median birth interval in Nigeria is 31 months. The median number of months since preceding birth increases significantly with age, from a low of 26 among mothers age 15-19 to a high of 39 among mothers age 40-49.

Studies have shown that the death of a preceding birth should lead to a shorter birth interval compared with when a child survives. Indeed, the table indicates that the death of a preceding birth shortens the birth interval by about six months.

According to the 2003 NDHS data, living in a rural or an urban area does not make any difference in birth intervals in Nigeria. There is a ten-month difference between women in the South West, who have the longest birth interval, and those in the South East, who have the shortest birth interval (37 months and 27 months, respectively).

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, according to background characteristics, Nigeria 2003

| Background characteristic | Number of 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+ |  |  |  |
| Age |  |  |  |  |  |  |  |  |
| 15-19 | 21.1 | 22.8 | 44.1 | 9.5 | 2.6 | 100.0 | 91 | 26.1 |
| 20-29 | 10.4 | 17.8 | 43.9 | 18.1 | 9.8 | 100.0 | 2,302 | 29.1 |
| 30-39 | 7.9 | 12.7 | 37.2 | 20.8 | 21.4 | 100.0 | 1,979 | 33.3 |
| 40-49 | 8.0 | 9.0 | 28.8 | 19.1 | 35.0 | 100.0 | 564 | 38.7 |
| Birth order |  |  |  |  |  |  |  |  |
| 2-3 | 9.5 | 15.6 | 42.0 | 18.0 | 14.9 | 100.0 | 1,904 | 30.5 |
| 4-6 | 8.4 | 14.7 | 40.5 | 19.4 | 17.0 | 100.0 | 1,837 | 31.3 |
| $7+$ | 10.6 | 13.8 | 34.0 | 20.6 | 21.0 | 100.0 | 1,195 | 32.4 |


| Sex of preceding birth |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Male | 10.1 | 15.5 | 39.7 | 18.5 | 16.2 | 100.0 | 2,468 | 30.7 |
| Female | 8.6 | 14.2 | 39.2 | 19.8 | 18.2 | 100.0 | 2,468 | 31.9 |
| Survival of preceding birth |  |  |  |  |  |  |  |  |
| Living | 5.8 | 13.9 | 41.5 | 20.0 | 18.8 | 100.0 | 3,900 | 32.3 |
| Dead | 22.7 | 18.5 | 31.7 | 16.0 | 11.1 | 100.0 | 1,036 | 26.4 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 7.8 | 14.9 | 38.1 | 19.4 | 19.8 | 100.0 | 1,383 | 31.7 |
| Rural | 10.0 | 14.8 | 40.0 | 19.0 | 16.2 | 100.0 | 3,554 | 31.1 |
| Region |  |  |  |  |  |  |  |  |
| North Central | 7.4 | 12.9 | 37.9 | 20.4 | 21.4 | 100.0 | 704 | 33.2 |
| North East | 11.0 | 17.1 | 42.2 | 19.1 | 10.6 | 100.0 | 1,220 | 29.4 |
| North West | 9.3 | 15.2 | 39.7 | 20.1 | 15.7 | 100.0 | 1,757 | 31.3 |
| South East | 11.5 | 23.2 | 35.5 | 14.5 | 15.2 | 100.0 | 282 | 27.2 |
| South South | 10.2 | 10.5 | 40.9 | 15.5 | 23.0 | 100.0 | 591 | 30.9 |
| South West | 5.2 | 9.8 | 33.8 | 21.4 | 29.9 | 100.0 | 383 | 36.5 |
| Education |  |  |  |  |  |  |  |  |
| No education | 10.2 | 15.3 | 38.9 | 19.5 | 16.0 | 100.0 | 2,678 | 31.1 |
| Primary | 8.5 | 13.3 | 38.9 | 19.5 | 19.9 | 100.0 | 1,212 | 32.0 |
| Secondary | 8.8 | 14.7 | 42.6 | 18.0 | 15.9 | 100.0 | 888 | 30.6 |
| Higher | 5.9 | 19.4 | 36.0 | 15.8 | 22.9 | 100.0 | 158 | 32.2 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 9.8 | 16.2 | 38.9 | 19.4 | 15.7 | 100.0 | 1,163 | 30.8 |
| Second | 11.2 | 14.0 | 39.1 | 19.5 | 16.3 | 100.0 | 1,131 | 31.1 |
| Middle | 10.2 | 14.3 | 38.3 | 21.2 | 15.9 | 100.0 | 991 | 31.6 |
| Fourth | 6.8 | 13.8 | 42.7 | 18.3 | 18.4 | 100.0 | 902 | 31.2 |
| Highest | 7.9 | 15.8 | 38.7 | 16.6 | 21.0 | 100.0 | 749 | 31.4 |
| Total | 9.4 | 14.8 | 39.5 | 19.1 | 17.2 | 100.0 | 4,936 | 31.2 |

Note: First-order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth.

### 4.6 Age at First Birth

The age at which childbearing begins influences the number of children a woman bears throughout her reproductive period in the absence of any active control. Table 4.6 shows the percent distribution of women by age at first birth, according to age at the time of the survey. For women age 25 and older, the median age at first birth is presented in the last column of the table.

The data indicate that the age at first birth in Nigeria is increasing. For example, the median age at first birth is 20.3 years for women age 25-29, whereas it is less than 19 years among women 35 years and older. Also the percentage of women who gave birth before age 15 and 18 generally shows some postponement of first births by younger cohorts of mothers. For example, only 3 percent of women 15-19 had given birth by age 15 compared with at least 15 percent of those age 30 or older.

## Table 4.6 Age at first birth

Percentage of women who gave birth by specific exact ages, and median age at first birth, by current age, Nigeria 2003

| Current age | Percentage who gave birth by exact age: |  |  |  |  | Percentage who have never given birth | Number of women | Median age at first birth |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 15 | 18 | 20 | 22 | 25 |  |  |  |
| 15-19 | 3.4 | na | na | na | na | 79.0 | 1,716 | a |
| 20-24 | 6.6 | 28.0 | 45.7 | na | na | 41.6 | 1,494 | a |
| 25-29 | 8.3 | 31.5 | 47.4 | 61.9 | 77.0 | 16.8 | 1,382 | 20.3 |
| 30-34 | 15.1 | 39.2 | 57.5 | 70.9 | 82.2 | 8.0 | 941 | 19.2 |
| 35-39 | 15.6 | 46.6 | 61.6 | 74.3 | 86.3 | 2.5 | 816 | 18.4 |
| 40-44 | 16.2 | 43.1 | 59.1 | 71.2 | 82.1 | 5.5 | 688 | 18.8 |
| 45-49 | 15.0 | 46.7 | 62.0 | 73.6 | 83.7 | 3.3 | 583 | 18.5 |

na $=$ Not applicable
${ }^{\text {a }}$ Omitted because less than 50 percent of women had a birth before reaching the beginning of the age group

Table 4.7 shows the median age at first birth among women age 25-49 by background characteristics. Women in urban areas initiate childbearing almost 2 years later than their counterparts in rural areas. Among the six geopolitical regions, childbearing is started several years later in South East and South West than in the North East and North West. Median age at first birth increases steadily with educational attainment from 18 among women with no education to 25 among women with higher educa-tion-a five-year difference. There is also a positive correlation by wealth quintile.

| Table 4.7 Median age at first birth by background characteristics |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Median age at first birth among women age 20-49, by current age and background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |
|  | Current age |  |  |  |  |  | $\begin{gathered} \text { Women } \\ \text { age } \\ 20-49 \end{gathered}$ | Women age 25-49 |
| characteristic | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 |  |  |
| Residence |  |  |  |  |  |  |  |  |
| Urban | a | 22.1 | 20.2 | 18.9 | 20.0 | 18.8 | a | 20.4 |
| Rural | 19.6 | 19.3 | 18.8 | 18.3 | 18.4 | 18.1 | 19.0 | 18.7 |
| Region |  |  |  |  |  |  |  |  |
| North Central | a | 20.4 | 19.8 | 18.9 | 18.9 | 18.9 | 20.0 | 19.7 |
| North East | 18.3 | 18.1 | 17.3 | 18.0 | 17.2 | 18.2 | 18.0 | 17.8 |
| North West | 18.0 | 18.3 | 17.5 | 16.9 | 18.1 | 17.8 | 17.9 | 17.8 |
| South East | a | a | 22.5 | 22.0 | 20.8 | 19.5 | a | 22.7 |
| South South | a | 22.2 | 20.2 | 17.9 | 18.4 | 17.2 | a | 19.8 |
| South West | a | 23.7 | 22.4 | 21.4 | 21.0 | 20.5 | a | 22.1 |
| Education |  |  |  |  |  |  |  |  |
| No education | 17.7 | 18.0 | 17.4 | 17.4 | 17.7 | 18.3 | 17.7 | 17.8 |
| Primary | 19.2 | 19.5 | 19.0 | 18.6 | 19.1 | 17.6 | 19.0 | 18.9 |
| Secondary | a | 22.9 | 21.7 | 21.2 | 21.3 | 23.4 | a | 22.3 |
| Higher | a | a | 26.1 | 22.7 | 23.3 | 20.4 | a | 24.9 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 18.4 | 17.7 | 18.5 | 17.6 | 17.1 | 18.8 | 18.0 | 17.9 |
| Second | 19.0 | 18.5 | 17.5 | 18.0 | 18.5 | 17.9 | 18.4 | 18.2 |
| Middle | 19.4 | 18.8 | 18.4 | 18.1 | 19.0 | 17.8 | 18.7 | 18.5 |
| Fourth | a | 21.2 | 19.7 | 17.3 | 19.2 | 18.6 | 19.9 | 19.5 |
| Highest | a | 24.4 | 22.1 | 21.9 | 20.5 | 19.6 | a | 22.5 |
| Total | a | 20.3 | 19.2 | 18.4 | 18.8 | 18.5 | 19.6 | 19.3 |
| ${ }^{\text {a }}$ Omitted because less than 50 percent of the women had a birth before the beginning of the age group |  |  |  |  |  |  |  |  |

### 4.7 Teenage Pregnancy and Motherhood

Early childbearing, particularly among teenagers (those under 20 years of age) has negative demographic, socioeconomic, and sociocultural consequences. Teenage mothers are more likely to suffer from severe complications during delivery, which result in higher morbidity and mortality for both themselves and their children. In addition, the socioeconomic advancement of teenage mothers in the areas of educational attainment and accessibility to job opportunities may be curtailed.

Table 4.8 shows the percentage of women age $15-19$ who are mothers or pregnant with their first child by background characteristics. One in five teenage women in Nigeria is a mother and another 4 percent are pregnant with their first child. Thus, 25 percent of teenage women have begun childbearing. As expected, the percentage who have begun childbearing increases with age from 8 percent of women age 15 to 40 percent of women age 19 .

Clearly, early childbearing is more of a rural phenomenon, with 30 percent of rural women age 15-19 having begun childbearing compared with 17 percent of urban women. Adolescent fertility is lowest in the South West and South East, high in the South South and North Central, and highest in the North East and North West. This pattern follows the educational attainment gradient among the regions, with regions having the lowest levels of schooling among adolescents also having the highest levels of childbearing among them.

Table 4.8 shows that whereas more than half of women age 15-19 who have no formal education have begun childbearing ( 54 percent), 9 percent of those with secondary education have done so. Thus, initiation of childbearing is delayed among those who stay in school.

The wealth index shows that as the socioeconomic status of households increases, the likelihood of teenage childbearing decreases. That is, women living in less advantaged households are more likely to initiate childbearing before age 20 than those living in relatively more advantaged households.

| Table 4.8 Teenage pregnancy and motherhood |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Percentage of women age 15-19 who are mothers or pregnant with their first child, by background characteristics, Nigeria 2003 |  |  |  |  |
|  | Percentage who are: |  | Percentage who have begun childbearing | Number of women |
| Background characteristic | Mothers | Pregnant with first child |  |  |
| Age |  |  |  |  |
| 15 | 3.8 | 3.7 | 7.5 | 391 |
| 16 | 9.4 | 4.6 | 13.9 | 273 |
| 17 | 26.9 | 4.2 | 31.1 | 324 |
| 18 | 29.2 | 5.0 | 34.2 | 429 |
| 19 | 35.8 | 3.7 | 39.5 | 299 |
| Residence |  |  |  |  |
| Urban | 13.6 | 3.1 | 16.7 | 580 |
| Rural | 24.8 | 4.8 | 29.6 | 1,136 |
| Region |  |  |  |  |
| North Central | 13.8 | 2.6 | 16.4 | 242 |
| North East | 38.1 | 6.3 | 44.4 | 294 |
| North West | 36.9 | 8.3 | 45.2 | 420 |
| South East | 5.3 | 0.8 | 6.2 | 180 |
| South South | 11.3 | 3.0 | 14.3 | 362 |
| South West | 4.1 | 0.6 | 4.7 | 218 |
| Education |  |  |  |  |
| No education | 44.5 | 9.5 | 53.9 | 501 |
| Primary | 20.5 | 3.0 | 23.5 | 360 |
| Secondary | 7.6 | 1.8 | 9.4 | 831 |
| Higher | * | * | * | 23 |
| Wealth quintile |  |  |  |  |
| Lowest | 27.4 | 4.8 | 32.2 | 270 |
| Second | 30.2 | 5.4 | 35.6 | 299 |
| Middle | 22.8 | 5.6 | 28.4 | 375 |
| Fourth | 18.0 | 4.7 | 22.8 | 404 |
| Highest | 10.1 | 1.0 | 11.2 | 367 |
| Total | 21.0 | 4.3 | 25.2 | 1,716 |
| Note: An asterisk indicates that a figure is based on fewer than 25 un weighted cases and has been suppressed. |  |  |  |  |

## FAMILY PLANNING

This chapter presents the 2003 NDHS results on contraceptive knowledge, use, sources, and attitudes. Although the focus is on women of reproductive age (15-49 years), some results from the men's survey will also be presented since men play an important role in the realization of reproductive goals.

### 5.1 Knowledge of Contraceptive Methods

Knowledge of contraceptive methods is a key variable in any discussion of fertility regulation and in the evaluation of family planning programmes. Acquiring knowledge about fertility control is an important step toward gaining access to and then using a suitable contraceptive method in a timely and effective manner. Information on knowledge of contraception was collected by asking respondents a series of questions combining spontaneous recall and prompting. First, respondents were asked to name the ways or methods by which couples could delay or avoid pregnancy. If the respondent failed to mention a particular method spontaneously, the interviewer described the method and asked whether the respondent recognized it. Using this approach, information was collected for 12 modern family planning methods: female and male sterilization, the pill, the IUD, injectables, implants, male and female condoms, the diaphragm, foam or jelly, the lactational amenorrhoea method (LAM), and emergency contraception. Information was also collected on two traditional methods: periodic abstinence (safe period or rhythm method) and withdrawal. Other traditional or "folk" methods mentioned by the respondents, such as herbs or amulets, were also recorded.

Table 5.1.1 shows the level of knowledge of contraceptive methods among all women, currently married women, sexually active and inactive unmarried women, and for women who have never had any sexual experience, by specific method. The 2003 NDHS finds that 79 percent of all women age 15-49 know at least one method of family planning and 77 percent know a modern method. Knowledge of any modern method is higher among sexually active unmarried women ( 91 percent) than currently married women ( 76 percent) and unmarried women who never had sex (66 percent). Modern methods are more widely known than traditional methods ( 77 percent versus 43 percent). The most widely known modern contraceptive methods among all women are the pill (60 percent), the male condom ( 59 percent), injectables (57 percent), and female sterilization (37 percent). The diaphragm and foam/jelly are the least widely known (each reported by 9 percent of women), along with implants ( 10 percent) and male sterilization (11 percent).

The mean number of methods known is a rough indicator of the breadth of knowledge of family planning methods. On average all women and currently married women know four methods each, while sexually active unmarried women know six methods.

Knowledge of contraception among men is higher than among women. Knowledge of any method or any modern method for all men is almost universal, with 9 out of every 10 men knowing at least one method (Table 5.1.2). The most well known modern method is the male condom (87 percent), followed by the pill ( 57 percent). The mean number of methods known by all men is five, while currently married men and sexually active unmarried men know an average of close to six.

Table 5.1.1 Knowledge of contraceptive methods: women
Percentage of all women, currently married women, sexually active unmarried women, sexually inactive unmarried women, and women with no sexual experience who know any contraceptive method, by specific method, Nigeria 2003

| Contraceptive method | All women | Currently married women | Unmarried women who ever had sex |  | Unmarried women who never had sex |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Sexually active ${ }^{1}$ | Not sexually active $^{2}$ |  |
| Any method | 78.5 | 78.4 | 91.2 | 89.4 | 66.2 |
| Any modern method | 76.7 | 76.2 | 91.2 | 88.3 | 65.6 |
| Female sterilization | 37.2 | 39.6 | 44.0 | 42.5 | 19.2 |
| Male sterilization | 10.6 | 10.3 | 19.4 | 13.2 | 6.9 |
| Pill | 60.4 | 63.0 | 72.0 | 63.4 | 41.1 |
| IUD | 27.1 | 29.2 | 33.4 | 32.1 | 11.0 |
| Injectables | 57.1 | 61.0 | 69.1 | 59.7 | 32.2 |
| Implants | 10.4 | 10.4 | 18.6 | 13.7 | 5.4 |
| Male condom | 59.2 | 54.3 | 87.2 | 78.5 | 59.1 |
| Female condom | 12.7 | 11.5 | 23.6 | 20.4 | 9.0 |
| Diaphragm | 8.8 | 8.6 | 13.8 | 11.5 | 5.7 |
| Foam/jelly | 8.7 | 7.9 | 16.5 | 13.2 | 6.2 |
| Lactational amenorrhoea method (LAM) | 19.5 | 21.1 | 22.0 | 23.8 | 7.9 |
| Emergency contraception | 15.7 | 13.7 | 37.4 | 27.5 | 9.5 |
| Any traditional method | 42.8 | 43.1 | 67.3 | 57.2 | 22.2 |
| Periodic abstinence | 28.0 | 25.7 | 55.7 | 44.9 | 17.4 |
| Withdrawal | 25.6 | 23.6 | 58.7 | 40.0 | 13.8 |
| Other method | 16.2 | 18.9 | 19.0 | 13.5 | 4.2 |
| Mean number of methods known | 4.0 | 4.0 | 5.9 | 5.0 | 2.5 |
| Number of women | 7,620 | 5,336 | 362 | 833 | 1,090 |

[^4]${ }^{2}$ Did not have sexual intercourse in the month preceding the survey

| Table 5.1.2 Knowledge of contraceptive methods: men |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of all men, currently married men, sexually active unmarried men, sexually inactive unmarried men, and men with no sexual experience who know any contraceptive method, by specific method, Nigeria 2003 |  |  |  |  |  |
|  |  | Unmarried men who ever had sex |  |  | Unmarried men who never had sex |
| Contraceptive method | All men | Currently married men | Sexually active ${ }^{1}$ | Not sexually active ${ }^{2}$ |  |
| Any method | 90.2 | 90.0 | 99.9 | 95.0 | 83.8 |
| Any modern method | 89.5 | 88.9 | 99.6 | 94.6 | 83.8 |
| Female sterilization | 37.9 | 44.7 | 39.1 | 32.2 | 25.5 |
| Male sterilization | 20.7 | 24.7 | 17.9 | 18.0 | 14.6 |
| Pill | 57.3 | 63.2 | 69.8 | 54.6 | 40.5 |
| IUD | 25.0 | 32.3 | 14.0 | 14.1 | 19.3 |
| Injectables | 52.9 | 60.1 | 60.3 | 46.5 | 37.3 |
| Implants | 16.9 | 20.9 | 8.2 | 10.9 | 15.0 |
| Male condom | 86.8 | 85.4 | 99.1 | 93.6 | 81.1 |
| Female condom | 19.5 | 22.5 | 21.5 | 24.0 | 9.7 |
| Diaphragm | 10.3 | 11.9 | 12.4 | 12.2 | 5.1 |
| Foam/jelly | 14.5 | 18.3 | 17.1 | 12.6 | 6.0 |
| Lactational amenorrhoea method (LAM) | 18.5 | 25.9 | 14.8 | 10.5 | 7.9 |
| Emergency contraception | 27.9 | 30.1 | 44.0 | 29.9 | 15.0 |
| Any traditional method | 59.2 | 68.9 | 76.5 | 60.4 | 29.6 |
| Periodic abstinence | 43.8 | 53.6 | 51.6 | 43.9 | 18.6 |
| Withdrawal | 49.4 | 57.9 | 65.9 | 50.6 | 23.2 |
| Other method | 10.2 | 13.8 | 14.0 | 5.0 | 3.3 |
| Mean number of methods known | 4.9 | 5.7 | 5.5 | 4.6 | 3.2 |
| Number of men | 2,346 | 1,245 | 230 | 312 | 559 |
| ${ }^{1}$ Had sexual intercourse in the month preceding the survey <br> ${ }^{2}$ Did not have sexual intercourse in the month preceding the survey |  |  |  |  |  |

## Knowledge of Contraceptive Methods by Background Characteristics

Table 5.2 shows that knowledge of at least one contraceptive method and at least one modern method is almost universal in urban areas among currently married women and men. Knowledge is lower in rural areas. Knowledge of any family planning method among married women ranges from a low of 64 percent in the North East to a high of 97 percent in the South West. The same pattern is evident regarding knowledge of any modern method, from a low of 61 percent in the North East to a high of 97 percent in the South West. Men's knowledge varies similarly by region, although differentials are not as great. Women age 25-39 and women with secondary or higher education are more likely to know a method than the oldest and youngest women and those with no education.

| Percentage of currently married women and men who know at least one contraceptive method and who know at least one modern method, by background characteristics, Nigeria 2003 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Women |  |  | Men |  |  |
| Background characteristic | Knows any method | Knows any modern method ${ }^{1}$ | Number |  | Knows any modern method ${ }^{1}$ | Number |
| Age |  |  |  |  |  |  |
| 15-19 | 64.9 | 61.6 | 545 | * | * | 5 |
| 20-24 | 76.8 | 74.2 | 911 | 84.8 | 82.8 | 60 |
| 25-29 | 85.9 | 83.4 | 1,146 | 93.2 | 92.6 | 142 |
| 30-34 | 80.6 | 78.1 | 848 | 93.7 | 93.7 | 243 |
| 35-39 | 83.2 | 82.3 | 763 | 96.5 | 96.5 | 204 |
| 40-44 | 75.7 | 72.8 | 619 | 89.3 | 88.2 | 197 |
| 45-49 | 71.6 | 70.6 | 504 | 86.1 | 83.8 | 155 |
| 50-54 | na | na | na | 81.9 | 80.7 | 124 |
| 55-59 | na | na | na | 85.0 | 81.4 | 116 |
| Residence |  |  |  |  |  |  |
| Urban | 91.0 | 90.7 | 1,633 | 95.6 | 95.2 | 401 |
| Rural | 72.9 | 69.8 | 3,703 | 87.3 | 85.9 | 844 |
| Region |  |  |  |  |  |  |
| North Central | 77.4 | 75.9 | 754 | 93.2 | 92.7 | 174 |
| North East | 63.5 | 60.8 | 1,122 | 73.2 | 72.2 | 283 |
| North West | 75.1 | 71.8 | 1,880 | 95.2 | 93.2 | 372 |
| South East | 87.1 | 84.5 | 368 | 97.2 | 97.0 | 99 |
| South South | 94.2 | 93.3 | 664 | 91.2 | 90.2 | 172 |
| South West | 97.0 | 96.5 | 548 | 99.1 | 98.7 | 145 |
| Education |  |  |  |  |  |  |
| No education | 66.5 | 63.3 | 2,877 | 75.9 | 72.8 | 399 |
| Primary | 87.0 | 85.2 | 1,175 | 92.8 | 92.5 | 366 |
| Secondary | 96.8 | 95.9 | 1,046 | 99.3 | 99.3 | 325 |
| Higher | 99.8 | 99.8 | 238 | 100.0 | 100.0 | 155 |
| Total | 78.4 | 76.2 | 5,336 | 90.0 | 88.9 | 1,245 |
| Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. <br> na $=$ Not applicable <br> ${ }^{1}$ Female sterilization, male sterilization, pill, IUD, injectables, implants, male condom, female condom, diaphragm, foam or jelly, lactational amenorrhoea method (LAM), and emergency contraception |  |  |  |  |  |  |

### 5.2 Ever Use Of Contraception

The 2003 NDHS collected data on the level of ever use of family planning methods, which is defined as the use of a contraceptive method at any time during a woman's reproductive years. Respondents who said that they had heard of a contraceptive method were asked if they had ever used that method.

Table 5.3.1 shows the percent distribution of all women, currently married women, and sexually active unmarried women who have ever used any contraceptive method by specific method and age.

Twenty-nine percent of all women, 31 percent of currently married women, and 65 percent of sexually active unmarried women reported having used a method. The majority of women in each category used a modern method. The male condom is the most common modern method ever used among all women (10 percent) and sexually active married women (46 percent). The pill and the male condom are the most common modern methods ever used among currently married women ( 8 percent each).

| Percentage of all women, currently married women, and sexually active unmarried women who have ever used any contraceptive method, by specific method and age, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Modern method |  |  |  |  |  |  |  |  |  |  |  | Traditional method |  |  |  | Number of women |
| Age | Any method | Any modern method | Female steri-lization | Pill | IUD | In-jectables | Implants | Male condom | Female condom | Diaphragm | Foam/ jelly | LAM | Emergency contraception | Any traditional method | Periodic abstinence | Withdrawal | Other method |  |
| ALL WOMEN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 11.2 | 9.2 | 0.0 | 2.2 | 0.0 | 1.3 | 0.0 | 6.5 | 0.1 | 0.0 | 0.0 | 0.6 | 2.0 | 5.4 | 3.3 | 2.9 | 1.0 | 1,716 |
| 20-24 | 30.3 | 22.8 | 0.0 | 6.5 | 0.3 | 3.5 | 0.1 | 14.8 | 0.2 | 0.1 | 0.4 | 2.2 | 4.2 | 17.5 | 10.0 | 9.5 | 3.5 | 1,494 |
| 25-29 | 39.2 | 30.0 | 0.1 | 10.1 | 1.6 | 5.1 | 0.0 | 15.5 | 0.2 | 0.1 | 0.5 | 6.1 | 3.9 | 21.9 | 12.5 | 12.0 | 5.1 | 1,382 |
| 30-34 | 36.7 | 28.2 | 0.0 | 10.0 | 1.6 | 8.9 | 0.0 | 9.6 | 0.1 | 0.4 | 0.6 | 6.5 | 2.3 | 17.1 | 9.6 | 8.4 | 4.3 | 941 |
| 35-39 | 39.8 | 30.6 | 0.6 | 11.7 | 3.1 | 10.0 | 0.1 | 8.2 | 0.1 | 0.2 | 0.4 | 7.1 | 3.6 | 18.9 | 12.7 | 10.0 | 4.3 | 816 |
| 40-44 | 31.8 | 24.6 | 0.2 | 10.6 | 3.8 | 9.4 | 0.4 | 6.0 | 0.0 | 0.1 | 0.3 | 5.1 | 0.7 | 15.9 | 9.7 | 7.6 | 4.8 | 688 |
| 45-49 | 28.8 | 22.5 | 0.7 | 9.1 | 5.0 | 6.9 | 0.1 | 4.4 | 0.0 | 0.3 | 0.9 | 4.4 | 1.0 | 12.4 | 7.7 | 4.8 | 2.7 | 583 |
| Total | 29.4 | 22.7 | 0.2 | 7.7 | 1.6 | 5.5 | 0.1 | 10.1 | 0.1 | 0.1 | 0.4 | 4.0 | 2.8 | 15.1 | 9.0 | 7.8 | 3.5 | 7,620 |
| CURRENTLY MARRIED WOMEN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 9.2 | 7.9 | 0.0 | 2.9 | 0.0 | 1.5 | 0.0 | 3.1 | 0.0 | 0.0 | 0.0 | 1.5 | 1.0 | 2.8 | 1.6 | 1.8 | 0.3 | 545 |
| 20-24 | 24.3 | 16.8 | 0.0 | 5.4 | 0.5 | 3.6 | 0.0 | 7.8 | 0.1 | 0.0 | 0.3 | 3.0 | 1.3 | 13.1 | 6.8 | 5.2 | 3.2 | 911 |
| 25-29 | 37.4 | 27.6 | 0.1 | 9.2 | 1.9 | 5.2 | 0.0 | 12.9 | 0.3 | 0.2 | 0.6 | 6.6 | 2.3 | 20.0 | 11.7 | 9.7 | 4.8 | 1,146 |
| 30-34 | 35.9 | 26.8 | 0.0 | 9.2 | 1.6 | 8.9 | 0.0 | 7.9 | 0.1 | 0.5 | 0.6 | 7.2 | 1.9 | 17.1 | 9.6 | 7.9 | 4.5 | 848 |
| 35-39 | 39.8 | 30.4 | 0.7 | 11.9 | 3.1 | 10.1 | 0.1 | 7.5 | 0.1 | 0.2 | 0.4 | 7.5 | 3.8 | 18.4 | 12.1 | 9.6 | 4.5 | 763 |
| 40-44 | 31.5 | 24.3 | 0.3 | 10.0 | 3.8 | 9.6 | 0.4 | 5.4 | 0.0 | 0.1 | 0.3 | 5.3 | 0.5 | 14.9 | 8.7 | 8.0 | 4.8 | 619 |
| 45-49 | 27.1 | 21.4 | 0.6 | 9.2 | 4.0 | 6.9 | 0.1 | 4.6 | 0.0 | 0.3 | 1.1 | 3.9 | 0.9 | 11.3 | 6.6 | 4.7 | 2.3 | 504 |
| Total | 30.7 | 23.1 | 0.2 | 8.4 | 2.0 | 6.5 | 0.1 | 7.8 | 0.1 | 0.2 | 0.5 | 5.3 | 1.8 | 15.0 | 8.7 | 7.2 | 3.7 | 5,336 |
|  |  |  |  |  |  |  | SEXUA | LLY AC | CTIVE U | UNMARR | RIED W | OMEN |  |  |  |  |  |  |
| Total | 64.9 | 57.0 | 0.3 | 18.4 | 1.5 | 10.2 | 0.3 | 45.7 | 0.0 | 0.0 | 0.4 | 1.6 | 13.8 | 41.8 | 24.9 | 30.6 | 8.6 | 362 |
| LAM = Lactational amenorrhoea method <br> ${ }^{1}$ Women who had sexual intercourse in the month preceding the survey |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Among currently married women, ever use of a method is highest among women age 35-39 (40 percent). Married women younger than 25 are the least likely to have ever used a method of contraception. Experience using LAM is reported by 5 percent of currently married women. LAM is one of the four most common modern methods of contraception used by currently married women in the prime reproductive years of $25-39$. Periodic abstinence is the most commonly used traditional method across all age groups of married women.

Men were also asked about ever use of methods that require men's active participation to use, specifically male sterilization, male condom, periodic abstinence, and withdrawal. Approximately onethird of married men and three-fourths of sexually active unmarried men have ever used a method (Table 5.3.2). The male condom is the most common method, with 23 percent of currently married men and 69 percent of sexually active unmarried men reporting ever use. Use of periodic abstinence and withdrawal is also common. This is of particularly concern regarding sexually active unmarried men because periodic abstinence and withdrawal do not prevent transmission of sexually transmitted infections.

Table 5.3.2 Ever use of contraception: men
Percentage of all men, currently married men, and sexually active unmarried men who have ever used any contraceptive method, by specific method and age, Nigeria 2003

| Age | Any method | Modern method |  |  | Traditional method |  |  |  | Number of men |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Any modern method | Male sterilization | Male condom | Any traditional method | Periodic abstinence | Withdrawal | Other method |  |
| ALL MEN |  |  |  |  |  |  |  |  |  |
| 15-19 | 12.1 | 9.8 | 0.0 | 9.8 | 4.7 | 1.8 | 3.8 | 0.0 | 453 |
| 20-24 | 34.5 | 30.2 | 0.4 | 30.0 | 13.5 | 7.5 | 8.9 | 0.6 | 426 |
| 25-29 | 48.2 | 42.0 | 0.2 | 42.0 | 33.5 | 23.1 | 24.9 | 1.6 | 328 |
| 30-34 | 50.7 | 35.2 | 0.3 | 34.9 | 38.6 | 25.0 | 25.9 | 2.7 | 299 |
| 35-39 | 36.7 | 24.7 | 0.0 | 24.7 | 24.6 | 17.1 | 18.1 | 2.1 | 220 |
| 40-44 | 34.8 | 27.0 | 0.0 | 27.0 | 28.3 | 19.0 | 17.8 | 0.9 | 208 |
| 45-49 | 37.5 | 21.0 | 1.2 | 21.0 | 32.9 | 21.1 | 21.3 | 1.7 | 159 |
| 50-54 | 29.2 | 13.2 | 0.0 | 13.2 | 24.6 | 18.9 | 12.5 | 4.3 | 133 |
| 55-59 | 25.4 | 10.9 | 0.0 | 10.9 | 20.3 | 14.5 | 12.8 | 0.7 | 120 |
| Total | 33.8 | 25.2 | 0.2 | 25.1 | 22.4 | 14.7 | 15.2 | 1.3 | 2,346 |
| CURRENTLY MARRIED MEN |  |  |  |  |  |  |  |  |  |
| 15-19 | * | * | * | * | * | * | * | * | 5 |
| 20-24 | 21.2 | 14.9 | 0.0 | 14.9 | 11.2 | 5.0 | 7.8 | 2.5 | 60 |
| 25-29 | 33.8 | 27.4 | 0.0 | 27.4 | 27.2 | 20.0 | 18.0 | 0.7 | 142 |
| 30-34 | 48.2 | 31.6 | 0.4 | 31.2 | 36.8 | 25.0 | 22.6 | 3.0 | 243 |
| 35-39 | 36.1 | 24.0 | 0.0 | 24.0 | 23.4 | 16.7 | 16.7 | 2.2 | 204 |
| 40-44 | 34.5 | 27.6 | 0.0 | 27.6 | 27.6 | 18.6 | 17.1 | 0.9 | 197 |
| 45-49 | 37.1 | 20.8 | 1.3 | 20.8 | 32.3 | 20.2 | 21.1 | 1.7 | 155 |
| 50-54 | 29.4 | 12.6 | 0.0 | 12.6 | 26.1 | 20.0 | 13.3 | 4.6 | 124 |
| 55-59 | 24.9 | 11.3 | 0.0 | 11.3 | 19.6 | 13.5 | 13.3 | 0.8 | 116 |
| Total | 35.6 | 23.2 | 0.2 | 23.1 | 27.5 | 18.9 | 17.5 | 2.0 | 1,245 |
| SEXUALLY ACTIVE UNMARRIED MEN ${ }^{1}$ |  |  |  |  |  |  |  |  |  |
| Total | 76.1 | 69.4 | 0.3 | 69.4 | 40.8 | 22.6 | 34.3 | 2.7 | 230 |

Note: Male respondents were not asked about methods that are female controlled, such as the pill or the IUD. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
${ }^{1}$ Men who had sexual intercourse in the month preceding the survey

### 5.3 Current Use of Contraception

The data on the current use of family planning are among the most important information collected in the 2003 NDHS, because they provide insight into one of the principal determinants of fertility among women, and they serve as a key measure for assessing the success of the national family planning programme. This section focuses on contraceptive use among currently married women since they are the most likely to be regularly exposed to the risk of pregnancy.

Table 5.4 shows the percent distribution of women by current use of specific family planning methods according to age. The 2003 NDHS results indicate that while 13 percent of currently married women are using a method of family planning, only 8 percent are using a modern method. These data indicate that there has been no significant change in levels of contraceptive use since 1999 ( 15 percent versus 16 percent).

Table 5.4 Current use of contraception
Percent distribution of all women, currently married women, and sexually active unmarried women by contraceptive method currently used, according to age, Nigeria 2003

| Age | Any method | Modern method |  |  |  |  |  |  |  | Traditional method |  |  |  |  | Total | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Any modern method | Female steri-lization | Pill | IUD | In-jectables | Male condom | LAM | Emergency contraception | Any traditional method | Periodic abstinence | Withdrawal | Other method | Not currently using |  |  |
| ALL WOMEN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 6.6 | 4.7 | 0.0 | 1.1 | 0.0 | 0.4 | 2.6 | 0.4 | 0.1 | 1.9 | 0.9 | 0.7 | 0.3 | 93.4 | 100.0 | 1,716 |
| 20-24 | 15.7 | 10.9 | 0.0 | 2.7 | 0.2 | 1.1 | 6.0 | 0.8 | 0.1 | 4.8 | 2.4 | 1.2 | 1.3 | 84.3 | 100.0 | 1,494 |
| 25-29 | 18.1 | 11.7 | 0.1 | 3.0 | 0.5 | 1.4 | 5.0 | 1.6 | 0.1 | 6.4 | 2.9 | 1.8 | 1.7 | 81.9 | 100.0 | 1,382 |
| 30-34 | 14.2 | 10.3 | 0.0 | 1.9 | 0.8 | 2.5 | 2.6 | 2.0 | 0.2 | 3.9 | 2.0 | 1.1 | 0.8 | 85.8 | 100.0 | 941 |
| 35-39 | 16.4 | 11.2 | 0.6 | 2.3 | 1.6 | 3.2 | 2.1 | 1.0 | 0.2 | 5.2 | 2.5 | 1.9 | 0.8 | 83.6 | 100.0 | 816 |
| 40-44 | 14.6 | 8.6 | 0.2 | 1.6 | 1.3 | 3.0 | 1.7 | 0.7 | 0.1 | 6.1 | 4.0 | 1.2 | 0.9 | 85.4 | 100.0 | 688 |
| 45-49 | 7.9 | 4.9 | 0.7 | 0.9 | 1.0 | 1.5 | 0.8 | 0.0 | 0.0 | 3.0 | 0.9 | 1.4 | 0.7 | 92.1 | 100.0 | 583 |
| Total | 13.3 | 8.9 | 0.2 | 2.0 | 0.6 | 1.6 | 3.4 | 1.0 | 0.1 | 4.4 | 2.1 | 1.3 | 0.9 | 86.7 | 100.0 | 7,620 |
| CURRENTLY MARRIED WOMEN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 4.3 | 3.8 | 0.0 | 1.7 | 0.0 | 0.4 | 0.3 | 1.4 | 0.0 | 0.5 | 0.0 | 0.3 | 0.2 | 95.7 | 100.0 | 545 |
| 20-24 | 9.4 | 6.6 | 0.0 | 1.4 | 0.2 | 1.1 | 2.2 | 1.4 | 0.1 | 2.9 | 1.0 | 0.5 | 1.3 | 90.6 | 100.0 | 911 |
| 25-29 | 16.1 | 10.0 | 0.1 | 2.3 | 0.6 | 1.5 | 3.4 | 1.9 | 0.0 | 6.1 | 2.9 | 1.8 | 1.5 | 83.9 | 100.0 | 1,146 |
| 30-34 | 13.6 | 9.5 | 0.0 | 1.8 | 0.7 | 2.4 | 1.9 | 2.2 | 0.3 | 4.1 | 2.1 | 1.2 | 0.9 | 86.4 | 100.0 | 848 |
| 35-39 | 16.3 | 10.9 | 0.7 | 2.4 | 1.6 | 3.3 | 1.5 | 1.0 | 0.2 | 5.5 | 2.7 | 1.9 | 0.9 | 83.7 | 100.0 | 763 |
| 40-44 | 15.1 | 8.8 | 0.3 | 1.6 | 1.2 | 3.4 | 1.8 | 0.7 | 0.0 | 6.3 | 4.1 | 1.3 | 0.9 | 84.9 | 100.0 | 619 |
| 45-49 | 8.9 | 5.4 | 0.6 | 1.0 | 1.1 | 1.8 | 0.8 | 0.0 | 0.0 | 3.5 | 1.1 | 1.6 | 0.8 | 91.1 | 100.0 | 504 |
| Total | 12.6 | 8.2 | 0.2 | 1.8 | 0.7 | 2.0 | 1.9 | 1.4 | 0.1 | 4.3 | 2.1 | 1.3 | 1.0 | 87.4 | 100.0 | 5,336 |
| SEXUALLY ACTIVE UNMARRIED WOMEN ${ }^{1}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 49.9 | 38.6 | 0.3 | 9.5 | 1.0 | 3.4 | 23.8 | 0.0 | 0.7 | 11.3 | 4.0 | 4.2 | 3.1 | 50.1 | 100.0 | 362 |

Note: If more than one method is used, only the most effective method is considered in this tabulation.
LAM = Lactational amenorrhoea method
${ }^{1}$ Women who had sexual intercourse in the month preceding the survey

The most commonly used methods among currently married women are injectables, male condoms, pill, and periodic abstinence, all in the range of 2 percent. The use of modern contraceptive methods varies by age. Current use of any modern method is 4 percent among currently married women age $15-19$, rising to 11 percent among women age $35-39$, and then dropping to 5 percent among the oldest women. Most of the women who are sterilized are age 35 or older. LAM is the most common method among the age group 25-34. The male condom is favoured among sexually active unmarried women (24 percent).

## Current Use of Contraception by Background Characteristics

Table 5.5 and Figure 5.1 show that there is substantial variation in the current use of contraceptive methods according to background characteristics. Contraceptive use varies with residence, region, level of education, number of living children, and economic status of the household. Married women in urban areas are twice as likely to use a family planning method as their rural counterparts ( 20 percent versus 9 percent). The same pattern is evident for current use of any modern method (14 percent urban and 6 percent rural). Contraceptive use varies significantly by region. For example, one-third of married women in the South West use contraception-the majority using a modern method-compared with just 4 percent of women in the North East.

Table 5.5 Current use of contraception by background characteristics
Percent distribution of currently married women by contraceptive method currently used, according to background characteristics, Nigeria 2003

| Background characteristic | Any method | Modern method |  |  |  |  |  |  |  | Traditional method |  |  |  |  | Total | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Any modern method | Female steri-lization | Pill | IUD | In-jectables | Male con- <br> dom | LAM | Emergency contraception | Any traditional method | Periodic abstinence | Withdrawal | Other method | Not currently using |  |  |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 20.2 | 13.9 | 0.3 | 3.3 | 1.9 | 2.3 | 4.0 | 1.7 | 0.3 | 6.3 | 2.9 | 2.8 | 0.6 | 79.8 | 100.0 | 1,633 |
| Rural | 9.2 | 5.7 | 0.1 | 1.1 | 0.2 | 1.8 | 1.0 | 1.2 | 0.0 | 3.5 | 1.7 | 0.6 | 1.2 | 90.8 | 100.0 | 3,703 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 13.3 | 10.3 | 0.8 | 2.2 | 0.1 | 4.1 | 1.5 | 1.2 | 0.0 | 3.0 | 1.9 | 0.6 | 0.4 | 86.7 | 100.0 | 754 |
| North East | 4.2 | 3.0 | 0.0 | 0.7 | 0.2 | 0.9 | 0.2 | 0.9 | 0.0 | 1.2 | 0.6 | 0.2 | 0.4 | 95.8 | 100.0 | 1,122 |
| North West | 4.9 | 3.3 | 0.1 | 0.6 | 0.1 | 0.8 | 0.1 | 1.7 | 0.0 | 1.6 | 0.2 | 0.0 | 1.4 | 95.1 | 100.0 | 1,880 |
| South East | 22.5 | 13.0 | 0.1 | 1.5 | 0.7 | 0.6 | 8.9 | 0.8 | 0.0 | 9.5 | 3.3 | 5.0 | 1.2 | 77.5 | 100.0 | 368 |
| South South | 25.4 | 13.8 | 0.4 | 4.0 | 0.7 | 4.7 | 2.4 | 1.5 | 0.0 | 11.6 | 7.3 | 2.9 | 1.5 | 74.6 | 100.0 | 664 |
| South West | 32.7 | 23.1 | 0.0 | 5.2 | 4.9 | 2.9 | 7.4 | 1.7 | 1.0 | 9.7 | 4.4 | 4.1 | 1.1 | 67.3 | 100.0 | 548 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| No education | 4.0 | 2.3 | 0.1 | 0.3 | 0.2 | 0.7 | 0.2 | 0.8 | 0.0 | 1.7 | 0.4 | 0.2 | 1.0 | 96.0 | 100.0 | 2,877 |
| Primary | 16.7 | 11.2 | 0.4 | 3.0 | 1.1 | 2.7 | 1.9 | 1.6 | 0.2 | 5.5 | 2.8 | 1.6 | 1.1 | 83.3 | 100.0 | 1,175 |
| Secondary | 26.1 | 18.3 | 0.3 | 4.0 | 1.3 | 4.0 | 5.8 | 2.5 | 0.3 | 7.8 | 4.4 | 2.5 | 0.9 | 73.9 | 100.0 | 1,046 |
| Higher | 36.9 | 21.7 | 0.5 | 4.2 | 2.8 | 4.8 | 6.7 | 2.0 | 0.0 | 15.2 | 7.8 | 7.0 | 0.5 | 63.1 | 100.0 | 238 |
| Number of living children |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0 | 1.7 | 1.4 | 0.0 | 0.6 | 0.1 | 0.0 | 0.6 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.2 | 98.3 | 100.0 | 656 |
| 1-2 | 11.5 | 7.4 | 0.0 | 1.6 | 0.4 | 0.9 | 2.9 | 1.5 | 0.1 | 4.1 | 2.3 | 0.7 | 1.1 | 88.5 | 100.0 | 1,751 |
| 3-4 | 14.2 | 9.6 | 0.2 | 2.8 | 1.0 | 1.7 | 1.6 | 1.9 | 0.3 | 4.6 | 1.8 | 1.8 | 1.0 | 85.8 | 100.0 | 1,449 |
| 5+ | 17.1 | 11.0 | 0.5 | 1.6 | 1.2 | 4.4 | 1.7 | 1.4 | 0.0 | 6.2 | 2.9 | 1.9 | 1.3 | 82.9 | 100.0 | 1,480 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 6.9 | 3.6 | 0.1 | 0.9 | 0.1 | 1.5 | 0.7 | 0.4 | 0.0 | 3.3 | 1.3 | 0.1 | 1.9 | 93.1 | 100.0 | 1,150 |
| Second | 5.6 | 2.9 | 0.1 | 0.4 | 0.3 | 1.2 | 0.4 | 0.4 | 0.0 | 2.8 | 1.4 | 0.6 | 0.8 | 94.4 | 100.0 | 1,142 |
| Middle | 9.1 | 6.7 | 0.2 | 1.7 | 0.3 | 2.1 | 0.3 | 1.9 | 0.0 | 2.4 | 1.4 | 0.3 | 0.7 | 90.9 | 100.0 | 1,086 |
| Fourth | 13.5 | 9.2 | 0.3 | 2.8 | 1.0 | 1.0 | 1.7 | 2.3 | 0.1 | 4.3 | 2.7 | 1.3 | 0.3 | 86.5 | 100.0 | 957 |
| Highest | 30.0 | 20.5 | 0.5 | 3.7 | 2.3 | 4.1 | 7.3 | 2.1 | 0.4 | 9.4 | 4.0 | 4.2 | 1.2 | 70.0 | 100.0 | 1,002 |
| Total | 12.6 | 8.2 | 0.2 | 1.8 | 0.7 | 2.0 | 1.9 | 1.4 | 0.1 | 4.3 | 2.1 | 1.3 | 1.0 | 87.4 | 100.0 | 5,336 |

Note: If more than one method is used, only the most effective method is considered in this tabulation.
LAM = Lactational amenorrhoea method

Figure 5.1 Current Use of Any Contraceptive Method among Currently Married Women Age 15-49, by Background Characteristics


Current use of family planning is positively correlated with educational attainment. Use of any modern method increases from 2 percent among currently married women with no education to 22 percent among women with higher education. Interestingly, use of any traditional method also increases with the level of education, from slightly less than 2 percent of currently married women with no education to 15 percent of women with higher education.

As expected, there is a direct relationship between the number of living children and use of family planning. The 2003 NDHS indicates that use of any contraceptive method increases with the number of living children. Only 2 percent of currently married women with no children use contraception, compared to 17 percent with five or more children.

The wealth index measures the economic status of the household (Chapter 2). Data from the 2003 NDHS show that currently married women in households in the highest (most economically advantaged) quintile of the wealth index are more than four times as likely to use a method of contraception as those in the lowest (least advantaged) quintile ( 30 percent versus 7 percent).

A woman's desire and ability to control her fertility and her choice of contraceptive method are in part affected by her empowerment status and self-image. 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. Table 5.6 shows the distribution of currently married women by contraceptive use, according to selected indicators of women's status (described in Chapter 2).

## Table 5.6 Current use of contraception by women's status

Percent distribution of currently married women by contraceptive method currently used, according to indicators of women's status, Nigeria 2003

|  |  | Modern method |  |  |  |  |  |  |  | Traditional method |  |  |  |  | Total | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Women's status indicator | Any method | Any modern method | Female steri-lization | Pill | IUD | $\begin{aligned} & \text { In- } \\ & \text { ject- } \\ & \text { ables } \end{aligned}$ | Male condom | LAM | Emergency contraception | Any traditional method | Periodic abstinence | Withdrawal | Other method | $\underset{\text { currently }}{\text { Not }}$ using |  |  |



[^5]${ }^{1}$ Either by herself or jointly with others

The data indicate that, in Nigeria, there is a correlation between women's status and their ability to use a contraceptive method, including their ability to negotiate the use of male condoms or to discuss periodic abstinence with their partners. The strong positive relationship between empowerment and contraceptive use is observed for all three indicators of women's status.

### 5.4 Number of Children at First Use of Contraception

Family planning may be used by couples to either space births or limit family size. Contraception is used to space births when there is an intention to delay a possible pregnancy. When couples have already had the number of children they want, family planning is used as a means to limit family size (i.e., to stop having children).

The 2003 NDHS asked women how many children they had at the time they first used a method of family planning. Table 5.7 shows the percent distribution of women who have ever used a contraceptive method by the number of living children at the time of first use of contraception, according to current age. Overall, 40 percent of women began using contraception before they gave birth and an additional 25 percent began after having one child. Early use of family planning increases among younger women. For example, the data show that 80 percent of the youngest women started contraceptive use before they began having children, compared with 10 percent of the oldest women. The pattern suggests that younger women are increasingly adopting family planning to delay or space births, while older women are adopting family planning to limit births.

| Table 5.7 Number of children at first use of contraception |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of women who have ever used contraception by number of living children at the time of first use of contraception, according to current age, Nigeria 2003 |  |  |  |  |  |  |  |  |
|  | Number of living children at time of first use of contraception |  |  |  |  | Missing | Total | Number of women |
| Current age | 0 | 1 | 2 | 3 | 4+ |  |  |  |
| 15-19 | 79.8 | 14.0 | 0.4 | 0.7 | 0.0 | 5.1 | 100.0 | 192 |
| 20-24 | 67.1 | 25.1 | 5.9 | 1.3 | 0.0 | 0.6 | 100.0 | 452 |
| 25-29 | 42.2 | 32.1 | 13.5 | 6.5 | 5.0 | 0.6 | 100.0 | 542 |
| 30-34 | 25.4 | 26.6 | 17.4 | 12.8 | 17.7 | 0.2 | 100.0 | 346 |
| 35-39 | 19.9 | 19.4 | 15.4 | 8.7 | 35.8 | 0.8 | 100.0 | 324 |
| 40-44 | 16.3 | 21.0 | 13.0 | 9.2 | 39.3 | 1.2 | 100.0 | 219 |
| 45-49 | 10.1 | 23.4 | 9.1 | 9.2 | 48.1 | 0.0 | 100.0 | 168 |
| Total | 39.7 | 24.7 | 11.4 | 6.7 | 16.6 | 1.0 | 100.0 | 2,243 |

### 5.5 Knowledge of Fertile Period

The successful use of natural family planning methods depends largely on an understanding of when during the menstrual cycle a woman is most likely to conceive. An elementary knowledge of reproductive physiology thus provides background for the successful practice of coitus-associated methods such as withdrawal. Such knowledge is especially critical for the practice of periodic abstinence.

The 2003 NDHS asked respondents about their knowledge of a woman's fertile period. Table 5.8 provides the results for all women users and nonusers of periodic abstinence. Only one-fifth (20 percent) of all respondents reported the correct timing of the fertile period, that is halfway through her menstrual cycle. Even among users of periodic abstinence, less than one in three knows the correct timing of the fertile period. It is clear that knowledge of the fertile period is minimal among women, which has major implications regarding use of periodic abstinence as an effective means of pregnancy prevention.

Table 5.8 Knowledge of fertile period
Percent distribution of women by knowledge of the fertile period during the ovulatory cycle, according to current use/nonuse of periodic abstinence, Nigeria 2003

|  | Users <br> of <br> periodic <br> abstinence | Nonusers <br> of <br> periodic <br> abstinence | All <br> women |
| :--- | :---: | :---: | ---: |
| Perceived fertile period | 3.1 | 3.2 | 3.2 |
| Just before her period begins | 1.4 | 1.2 | 1.2 |
| During her period | 50.2 | 33.0 | 33.4 |
| Right after her period has ended | 28.8 | 19.8 | 20.0 |
| Halfway between two periods | 0.0 | 0.2 | 0.1 |
| Other | 5.4 | 10.8 | 10.7 |
| No specific time | 9.6 | 31.3 | 30.9 |
| Don't know | 1.5 | 0.4 | 0.4 |
| Missing | 100.0 | 100.0 | 100.0 |
| Total | 163 | 7,457 | 7,620 |
| Number of women |  |  |  |

### 5.6 SOURCE OF CONTRACEPTION

In the 2003 NDHS, information was collected from current users of family planning methods on where they most recently obtained their method of contraception. Such information is important to family planning programme managers for strategic planning purposes. Table 5.9 shows the percent distribution of current users by source.

| Table 5.9 Source of contraception |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of current users of modern contraceptive methods by most recent source of method, according to specific method, Nigeria 2003 |  |  |  |  |  |
| Source | Pill | IUD | Injectables | Male condoms | Total ${ }^{1}$ |
| Public sector | 18.6 | (65.5) | 48.4 | 4.1 | 22.8 |
| Government hospital | 10.9 | (47.0) | 22.9 | 3.1 | 13.1 |
| Government health center | 4.9 | (12.9) | 19.0 | 0.4 | 6.5 |
| Family planning clinic | 1.3 | (5.6) | 6.0 | 0.5 | 2.4 |
| Community health worker | 1.5 | (0.0) | 0.5 | 0.0 | 0.8 |
| Other public | 0.0 | (0.0) | 0.0 | 0.1 | 0.1 |
| Private medical sector | 74.0 | (32.5) | 48.0 | 59.2 | 57.7 |
| Private hospital or clinic | 2.3 | (30.3) | 17.9 | 0.6 | 7.5 |
| Pharmacy | 71.6 | (0.0) | 25.1 | 58.3 | 48.8 |
| Private doctor | 0.0 | (0.0) | 4.3 | 0.3 | 1.0 |
| Private community health worker | 0.0 | (0.0) | 0.6 | 0.0 | 0.1 |
| Other private medical | 0.0 | (2.1) | 0.0 | 0.0 | 0.2 |
| Other source | 5.5 | (0.0) | 1.0 | 29.1 | 14.3 |
| Shop | 1.9 | (0.0) | 0.0 | 4.7 | 2.5 |
| Friends/relatives | 3.6 | (0.0) | 1.0 | 24.5 | 11.8 |
| Other | 0.2 | (0.0) | 0.6 | 0.3 | 0.3 |
| Missing | 1.7 | (2.1) | 1.9 | 7.2 | 4.9 |
| Total | 100.0 | (100.0) | 100.0 | 100.0 | 100.0 |
| Number of women | 152 | 45 | 121 | 260 | 597 |

Note: Table excludes lactational amenorrhoea method (LAM) and emergency contraception. Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ Total includes 12 sterilized women, 1 implant user, 2 diaphragm users, 1 foam/jelly user, and 4 users of female condoms.

According to the findings of the 2003 NDHS, the private sector was the most frequently reported source of contraceptive supply (Figure 5.2), providing contraception to two and a half times as many women as the public sector ( 58 percent versus 23 percent). A private hospital or clinic was the most frequently reported private sector source (49 percent), while a government hospital was the most frequently reported in the public sector ( 13 percent). This pattern is different from that observed in the 1999 NDHS, which indicated that women accessed family planning methods from both sectors equally.

Access to specific methods varies greatly by source. The public sector is the most common source of IUDs ( 66 percent), and the private sector is the most common source for the pill ( 74 percent) and male condom ( 59 percent). Provision of injectables for current users is equally shared by the public sector and the private sector (48 percent each).

Figure 5.2 Source of Family Planning Methods among Current Users of Modern Methods


### 5.7 INFORMED Choice

Informed choice is an important aspect of the delivery of family planning services. It is required that all family planning providers inform method users of the potential side effects and what they should do if they encounter such side effects. This information is to assist the user in coping with side effects and thus decrease discontinuations of temporary methods. Contraceptive users should also be informed of the choices they have with respect to other methods.

Table 5.10 shows that less than half of users were given information about each of the three issues considered to be essential parts of informed choice. Forty-two percent were informed about potential side effects of their method, 39 percent were told what to do if they experience any of the side effects, and 42 percent were given information about other family planning method options. There are significant differentials by background characteristics. Family planning providers in the public sector are twice as likely to inform contraceptive users about method side effects or problems, what to do if they experience side effects, and other contraceptive options as their counterparts in the private sector. Women in urban areas have significantly more access to information than their rural counterparts.

## Table 5.10 Informed choice

Among current users of modern contraceptive methods who adopted the current method in the five years preceding the survey, percentage who were informed about the side effects of the method used, percentage who were informed what to do if side effects were experienced, and percentage who were informed of other methods that could be used for contraception, by method, initial source of method, and background characteristics, Nigeria 2003

| Method, source, and background characteristic | Informed about side effects or problems of method used ${ }^{1}$ | Informed what to do if experienced side effects ${ }^{1}$ | Informed of other methods that could be used ${ }^{2}$ |
| :---: | :---: | :---: | :---: |
| Method |  |  |  |
| Pill | 36.5 | 32.0 | 41.7 |
| IUD | (53.6) | (50.4) | (58.9) |
| Injectables | 45.5 | 44.7 | 56.8 |
| Initial source of method ${ }^{3}$ |  |  |  |
| Public sector | 64.5 | 60.3 | 69.5 |
| Private medical sector | 36.1 | 34.8 | 46.6 |
| Residence |  |  |  |
| Urban | 49.6 | 47.2 | 47.1 |
| Rural | 35.7 | 31.6 | 37.0 |
| Region |  |  |  |
| North Central | 38.1 | 33.8 | 43.0 |
| North East | (41.8) | (37.0) | (35.4) |
| North West | (61.7) | (59.1) | 28.0 |
| South East | (25.9) | (22.0) | (21.2) |
| South South | 35.4 | 31.2 | 44.2 |
| South West | (51.5) | (50.5) | 53.5 |
| Education |  |  |  |
| No education | (36.5) | (30.3) | 25.2 |
| Primary | 45.7 | 40.6 | 45.0 |
| Secondary | 41.5 | 39.1 | 43.6 |
| Higher | 45.4 | 46.2 | 51.7 |
| Wealth quintile |  |  |  |
| Lowest | (36.1) | (37.9) | (45.7) |
| Second | (33.8) | (26.7) | (36.6) |
| Middle | 37.2 | 32.2 | 39.0 |
| Fourth | 34.0 | 28.6 | 33.0 |
| Highest | 53.3 | 51.7 | 48.9 |
| Total | 42.4 | 39.1 | 41.7 |

Note: Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ Among users of female sterilization, pill, IUD, injectables, and implants
${ }^{2}$ Among users of female sterilization, pill, IUD, injectables, implants, female condom, diaphragm, foam or jelly, and lactational amenorrhoea method (LAM)
${ }^{3}$ Source at start of current episode of use

### 5.8 Future Use of Contraception

Intention to use contraception is an important indicator of the changing demand for family planning, that is, the extent to which nonusers of contraception plan to use family planning in the future. 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. The results of this inquiry are shown in Table 5.11.

| Table 5.11 Future use of contraception |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of currently married women who are not using a contraceptive method by intention to use in the future, according to number of living children, Nigeria 2003 |  |  |  |  |  |  |
| Intention | Number of living children ${ }^{1}$ |  |  |  |  | Total |
|  | 0 | 1 | 2 | 3 | 4+ |  |
| Intends to use | 21.3 | 26.2 | 28.4 | 27.2 | 29.1 | 27.4 |
| Unsure | 9.9 | 11.1 | 9.1 | 7.4 | 6.9 | 8.4 |
| Does not intend to use | 68.7 | 62.4 | 62.1 | 65.3 | 63.3 | 63.8 |
| Missing | 0.1 | 0.3 | 0.4 | 0.1 | 0.7 | 0.4 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of women | 480 | 815 | 757 | 680 | 1,932 | 4,664 |

A little more than one-quarter (27 percent) of currently married women intend to use family planning in the future, compared with two-thirds (64 percent) who do not intend to use a method. Intention to use increases with the number of living children; for example, 29 percent of women with four or more children intend to use a contraceptive method in the future compared with 21 percent of women with no children.

## Reasons for Not Intending to Use Contraception

The reasons given by respondents who do not intend to use a contraceptive method in the future are important to the family planning programme since they identify areas for potential interventions.

Table 5.12 presents the distribution of currently married nonusers who do not intend to use family planning in the future by the main reason for not intending to use. Half of nonusers gave a fertility-related reason for not planning to use contraception. In particular, 36 percent cited desire for as many children as possible as the main reason. This reason is more prominent among younger women (45 percent) than older women (28 percent). Onequarter of all nonusers cited opposition to use as the reason for not intending to use. Opposition to use includes respondent's own opposition (14 percent), the opposition of her husband or partner (4 percent), and religious prohibition ( 9 percent). Methodrelated reasons, which include health concerns and fear of side effects, are cited by only 10 percent of nonusers. Nine percent cited lack of knowledge as their reason for not intending to use in the future.

## Preferred Method of Contraception for Future Use

Future demand for specific methods of family planning was assessed by asking current nonusers which method they intend to use in the future. Table 5.13 shows that among currently married nonusers who intend to use in the future, the preferred method is injectables ( 28 percent), followed by the pill ( 23 percent), and periodic abstinence (6 percent). One-fifth of women are unsure which method they would prefer to use. There is little difference by age.

| Percent distribution of currently married women who are not using a contraceptive method but who intend to use in the future by preferred method, according to age, Nigeria 2003 |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
| Method | 15-29 | 30-49 | Total |
| Female sterilization | 0.3 | 2.9 | 1.4 |
| Pill | 22.5 | 22.8 | 22.6 |
| IUD | 2.1 | 3.1 | 2.6 |
| Injectables | 27.6 | 27.9 | 27.7 |
| Implants | 0.6 | 2.0 | 1.2 |
| Male condom | 6.1 | 3.5 | 5.0 |
| Female condom | 0.0 | 0.1 | 0.0 |
| Diaphragm | 0.0 | 0.8 | 0.3 |
| Foam/jelly | 0.0 | 0.7 | 0.3 |
| Lactational amenorrhoea method (LAM) | 1.9 | 2.8 | 2.3 |
| Periodic abstinence | 6.4 | 6.3 | 6.3 |
| Withdrawal | 1.6 | 1.5 | 1.5 |
| Other | 10.3 | 7.1 | 8.9 |
| Unsure | 20.6 | 18.5 | 19.7 |
| Total | 100.0 | 100.0 | 100.0 |
| Number of women | 718 | 559 | 1,278 |

### 5.9 Exposure to Family Planning Messages

Electronic media (radio and television), print media (newspaper, magazines, posters, and leaflets), and traditional folk media (town criers and mobile public announcements) are the major potential sources of information about family planning in Nigeria. Information about public exposure to messages on a particular type of media allows policymakers to ensure the use of the most effective means of communication for various target groups in the population. To assess the effectiveness of electronic, print, and traditional folk media on the dissemination of family planning information, respondents in the 2003 NDHS were asked if they had heard or seen family planning messages on the radio or television, read a family planning message in a newspaper, magazine, poster, or leaflet, or heard a family planning message through traditional folk media during the months preceding the survey. The results are shown in Tables 5.14.1 and 5.14.2.

| Percentage of women who heard or saw a family planning message on the radio, television, newspaper/ magazine, posters/leaflets/brochures, town crier/mobile public announcement, in the months preceding the survey, by background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Exposed to family planning messages on: |  |  |  |  |  |  |  |
| Background characteristic | Radio | Television | Newspaper/ magazine | Posters/ leaflets/ brochures | Town crier/ mobile public announcement | None of the specified media sources | Number of women |
| Age |  |  |  |  |  |  |  |
| 15-19 | 30.4 | 16.2 | 9.2 | 11.4 | 7.1 | 65.5 | 1,716 |
| 20-24 | 41.7 | 24.0 | 15.1 | 17.3 | 8.0 | 53.7 | 1,494 |
| 25-29 | 47.4 | 25.4 | 14.4 | 17.0 | 9.7 | 49.4 | 1,382 |
| 30-34 | 44.0 | 22.8 | 13.0 | 15.8 | 8.4 | 53.6 | 941 |
| 35-39 | 43.7 | 24.5 | 13.7 | 17.5 | 9.1 | 51.9 | 816 |
| 40-44 | 38.6 | 18.0 | 9.0 | 10.5 | 7.1 | 59.9 | 688 |
| 45-49 | 39.8 | 18.3 | 8.6 | 11.6 | 8.7 | 58.4 | 583 |
| Residence |  |  |  |  |  |  |  |
| Urban | 54.7 | 39.6 | 20.3 | 23.3 | 10.9 | 40.2 | 2,629 |
| Rural | 32.6 | 11.8 | 7.9 | 10.2 | 6.9 | 64.8 | 4,991 |
| Region |  |  |  |  |  |  |  |
| North Central | 26.3 | 14.4 | 9.7 | 14.4 | 7.7 | 69.7 | 1,121 |
| North East | 20.8 | 7.6 | 5.7 | 9.7 | 3.9 | 76.6 | 1,368 |
| North West | 39.3 | 10.8 | 4.6 | 5.4 | 2.7 | 60.4 | 2,095 |
| South East | 53.6 | 27.5 | 18.4 | 14.9 | 10.2 | 41.4 | 737 |
| South South | 49.1 | 36.2 | 23.1 | 28.1 | 20.9 | 44.7 | 1,342 |
| South West | 63.8 | 47.1 | 20.9 | 23.8 | 8.0 | 30.1 | 958 |
| Education |  |  |  |  |  |  |  |
| No education | 27.1 | 6.0 | 2.3 | 4.3 | 2.7 | 72.1 | 3,171 |
| Primary | 38.3 | 18.2 | 8.2 | 12.2 | 9.6 | 58.6 | 1,628 |
| Secondary | 53.0 | 36.1 | 21.6 | 24.1 | 11.9 | 40.9 | 2,370 |
| Higher | 72.6 | 64.6 | 46.5 | 48.0 | 23.0 | 17.4 | 451 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 21.5 | 4.0 | 3.2 | 4.2 | 3.7 | 77.6 | 1,414 |
| Second | 26.5 | 6.4 | 3.9 | 6.1 | 4.2 | 71.6 | 1,439 |
| Middle | 36.4 | 11.7 | 8.1 | 11.0 | 7.8 | 61.2 | 1,513 |
| Fourth | 48.1 | 26.1 | 12.6 | 16.7 | 9.0 | 48.0 | 1,526 |
| Highest | 63.4 | 52.7 | 29.6 | 32.0 | 15.2 | 29.1 | 1,728 |
| Total | 40.2 | 21.4 | 12.2 | 14.7 | 8.3 | 56.3 | 7,620 |

Radio is the most common source of family planning messages for both women and men (40 and 56 percent, respectively). This is true regardless of age, residence, region, education, or economic status. Television is the next most common source among all respondents, with 21 percent of women and 32 percent of men having seen a message. Men are more likely than women to have read a family planning message in a newspaper or magazine ( 22 percent versus 12 percent) or on a poster or in a brochure ( 32 percent versus 15 percent). In part, this reflects higher levels of literacy among men. Additionally, approximately one in ten respondents has heard a message from a town crier or a mobile public announcement (Figure 5.3).

Table 5.14.2 Exposure to family planning messages: men
Percentage of men who heard or saw a family planning message on the radio, television, newspaper/magazine, posters/leaflets/brochures, town crier/mobile public announcement, in the months preceding the survey, by background characteristics, Nigeria 2003

| Background characteristic | Exposed to family planning messages on: |  |  |  |  | None of the specified media sources | Number of men |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Radio | Television | Newspaper/ magazine | Posters/ leaflets/ brochures | Town crier/ mobile public announcement |  |  |
| Age |  |  |  |  |  |  |  |
| 15-19 | 45.2 | 26.9 | 12.6 | 23.8 | 7.9 | 51.5 | 453 |
| 20-24 | 55.8 | 36.8 | 24.0 | 34.9 | 13.4 | 40.6 | 426 |
| 25-29 | 63.3 | 38.6 | 28.4 | 40.6 | 14.8 | 32.6 | 328 |
| 30-34 | 64.2 | 37.1 | 28.2 | 35.7 | 12.1 | 33.8 | 299 |
| 35-39 | 53.6 | 28.7 | 23.1 | 29.1 | 10.4 | 43.2 | 220 |
| 40-44 | 55.5 | 28.5 | 21.8 | 30.1 | 14.3 | 43.7 | 208 |
| 45-49 | 61.0 | 33.0 | 22.7 | 38.1 | 11.5 | 38.8 | 159 |
| 50-54 | 53.8 | 27.9 | 21.4 | 35.3 | 7.4 | 42.8 | 133 |
| 55-59 | 57.3 | 18.0 | 14.4 | 19.5 | 4.6 | 41.9 | 120 |
| Residence |  |  |  |  |  |  |  |
| Urban | 66.2 | 47.3 | 29.1 | 40.8 | 15.2 | 30.1 | 872 |
| Rural | 49.9 | 22.9 | 17.7 | 27.0 | 8.9 | 47.9 | 1,474 |
| Region |  |  |  |  |  |  |  |
| North Central | 54.2 | 32.2 | 24.7 | 39.2 | 21.6 | 40.5 | 348 |
| North East | 49.3 | 24.1 | 14.6 | 33.9 | 6.7 | 48.4 | 421 |
| North West | 49.3 | 16.9 | 8.9 | 18.8 | 4.4 | 48.8 | 602 |
| South East | 43.1 | 28.2 | 22.1 | 22.7 | 14.5 | 55.5 | 207 |
| South South | 61.3 | 40.3 | 35.8 | 44.2 | 7.1 | 35.1 | 445 |
| South West | 80.0 | 61.1 | 33.7 | 36.5 | 22.3 | 18.4 | 322 |
| Education |  |  |  |  |  |  |  |
| No education | 37.8 | 7.2 | 2.4 | 11.6 | 3.0 | 61.3 | 507 |
| Primary | 52.3 | 22.4 | 10.7 | 24.8 | 6.6 | 46.4 | 603 |
| Secondary | 63.2 | 42.6 | 28.0 | 38.7 | 13.5 | 33.4 | 960 |
| Higher | 71.9 | 61.4 | 61.4 | 63.2 | 28.4 | 20.9 | 276 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 36.4 | 11.0 | 8.5 | 16.6 | 5.0 | 61.3 | 423 |
| Second | 49.0 | 15.4 | 11.2 | 23.3 | 6.6 | 50.7 | 418 |
| Middle | 55.7 | 22.8 | 16.1 | 26.1 | 8.1 | 41.5 | 436 |
| Fourth | 64.7 | 43.8 | 27.2 | 43.7 | 12.9 | 31.8 | 507 |
| Highest | 68.1 | 56.5 | 39.7 | 44.6 | 20.3 | 27.8 | 563 |
| Total | 55.9 | 32.0 | 21.9 | 32.1 | 11.2 | 41.3 | 2,346 |

More than half of women and 41 percent of men were not exposed to family planning messages from any source during the months preceding the survey. There are significant differences in exposure by background characteristics: those respondents residing in rural areas, in the north, in households lower on the wealth index, and those with less education are the least likely to have been exposed to family planning messages.

Figure 5.3 Percentage of Women and Men Exposed to Family Planning Messages


NDHS 2003

### 5.10 Contact of Nonusers with Family Planning Providers

Information on contacts of nonusers with family planning providers is important for determining whether family planning initiatives are effective or not. Contact could be through a home visit by a health worker or a visit to a health facility. The 2003 NDHS asked women who are not using contraception whether in the 12 months preceding the survey 1) they were visited by a community health worker who discussed family planning, and 2) whether they visited a health facility, and if so, whether anyone discussed family planning.

Table 5.15 shows that few women who are nonusers had contacts with health workers who discussed family planning. Only 4 percent of nonusers reported that they were visited by a family planning service provider at home, and 6 percent of nonusers visited a health facility and discussed family planning with a provider. Across all age groups, residence, region, education, and economic status, the percentage of nonusers who visited a health facility but did not discuss family planning is significantly higher than the percentage of nonusers who visited a health facility and discussed family planning. This is an indication of missed opportunities for increasing family planning acceptance and use.

Educational attainment and a higher score on the wealth index are correlated with greater exposure to family planning providers. Three percent of women with no education versus 14 percent of women with higher education discussed family planning on a visit to a health facility. Similarly, 3 percent of women in households in the two lowest quintiles of the wealth index versus 10 percent of those in households in the two highest quintiles discussed family planning at a health facility. The proportion of nonusers who did not discuss family planning with a fieldworker or health facility staff is very high across all background characteristics. The high proportion of nonusers of family planning represents a large pool of potential users that could be targeted for family planning counselling.

Table 5.15 Contact of nonusers with family planning providers
Percentage of women who are not using contraception who were visited by a community health extension worker (CHEW) who discussed family planning, percentage who visited a health facility and discussed family planning,, and percentage who visited a health facility but did not discuss family planning, in the 12 months preceding the survey, by background characteristics, Nigeria 2003

| Background characteristic | Women who were visited by a CHEW who discussed family planning | Women who visited health facility and discussed family planning | Women who visited health facility didn't discuss family planning | Did not discuss family planning with CHEW or at a health facility | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  |  |
| 15-19 | 1.4 | 1.6 | 15.4 | 97.4 | 1,603 |
| 20-24 | 3.7 | 5.3 | 27.3 | 92.5 | 1,260 |
| 25-29 | 4.0 | 9.7 | 31.2 | 88.7 | 1,132 |
| 30-34 | 4.7 | 10.8 | 29.4 | 87.1 | 808 |
| 35-39 | 4.9 | 6.4 | 28.3 | 90.3 | 682 |
| 40-44 | 5.1 | 6.3 | 23.2 | 90.9 | 587 |
| 45-49 | 3.1 | 4.6 | 18.7 | 94.3 | 537 |
| Residence |  |  |  |  |  |
| Urban | 4.4 | 8.9 | 29.6 | 89.0 | 2,121 |
| Rural | 3.1 | 4.6 | 21.9 | 93.7 | 4,488 |
| Region |  |  |  |  |  |
| North Central | 2.9 | 5.9 | 24.2 | 92.4 | 984 |
| North East | 3.0 | 4.5 | 22.9 | 94.4 | 1,314 |
| North West | 1.5 | 2.3 | 28.0 | 96.9 | 1,994 |
| South East | 4.4 | 2.4 | 30.0 | 94.3 | 590 |
| South South | 7.1 | 10.8 | 17.0 | 85.4 | 1,020 |
| South West | 5.0 | 15.4 | 23.0 | 82.2 | 707 |
| Education |  |  |  |  |  |
| No education | 1.5 | 2.6 | 21.8 | 96.4 | 3,042 |
| Primary | 4.2 | 8.6 | 25.9 | 89.5 | 1,403 |
| Secondary | 5.3 | 8.4 | 25.5 | 88.9 | 1,872 |
| Higher | 9.4 | 13.6 | 36.2 | 82.0 | 290 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 1.6 | 2.8 | 18.4 | 96.2 | 1,313 |
| Second | 2.3 | 2.8 | 19.9 | 95.7 | 1,343 |
| Middle | 3.5 | 4.7 | 24.0 | 93.5 | 1,379 |
| Fourth | 5.2 | 10.2 | 28.0 | 87.5 | 1,310 |
| Highest | 5.0 | 9.8 | 32.0 | 87.5 | 1,263 |
| Total | 3.5 | 6.0 | 24.4 | 92.2 | 6,608 |

### 5.11 Discussion of Family Planning with Husband

Although discussion between a husband and wife about contraceptive use is not a precondition for adoption of contraception, its absence may be an impediment to use. Interspousal communication is thus an important intermediate step along the path to eventual adoption, and especially continuation, of contraceptive use. Lack of discussion may reflect a lack of personal interest, hostility to the subject, or customary reticence in talking about sex-related matters. To gain insight about interspousal communication on family planning, currently married women in the 2003 NDHS were asked the number of times family planning was discussed with their husbands in the 12 months preceding the survey.

Table 5.16 presents information on currently married women who know a contraceptive method by the number of times they discussed family planning with their husbands in the past year, according to age. Almost two-thirds of women reported that they never discussed family planning with their husbands.

| Table 5.16 Discussion of family planning with husband |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of currently married women who know a contraceptive method by the number of times they discussed family planning with their husband in the past year, according to current age, Nigeria 2003 |  |  |  |  |  |  |
| Number of times family planning was discussed with husband |  |  |  |  |  |  |
| Age | Never | Once or twice | Three or more | Missing | Total | of women |
| 15-19 | 80.0 | 16.1 | 3.8 | 0.1 | 100.0 | 353 |
| 20-24 | 67.8 | 22.6 | 9.7 | 0.0 | 100.0 | 700 |
| 25-29 | 58.8 | 27.5 | 13.5 | 0.3 | 100.0 | 985 |
| 30-34 | 62.4 | 23.0 | 14.5 | 0.0 | 100.0 | 684 |
| 35-39 | 63.0 | 24.5 | 12.2 | 0.3 | 100.0 | 634 |
| 40-44 | 62.3 | 20.6 | 16.7 | 0.4 | 100.0 | 469 |
| 45-49 | 68.8 | 21.5 | 8.4 | 1.3 | 100.0 | 361 |
| Total | 64.6 | 23.2 | 11.9 | 0.3 | 100.0 | 4,186 |

Women age 15-19 were the least likely to have had a discussion about family planning. It is notable, however, that 12 percent of women discussed family planning at least three times. In particular, women in their prime childbearing years were the most likely to have had multiple discussions about family planning with their husbands.

### 5.12 Attitudes Toward Family Planning

When couples have a positive attitude toward family planning, they are more likely to adopt a family planning method. In the 2003 NDHS, married women were asked whether they approved of family planning and what they perceived as their husband's attitude toward family planning. This information is useful in the development of family planning policies because it indicates the extent to which further education and publicity are needed to gain general acceptance of family planning. If there is widespread disapproval of contraception, this can be a major barrier to adoption of contraceptive methods.

Table 5.17 shows that more than half ( 55 percent) of married women who know a family planning method approve of family planning. Almost two-thirds of those who approve, which is 33 percent of all respondents, reported that their husband also approves of family planning. However, one-third of women who approve say that their husband disapproves. Among the 39 percent of those interviewed who disapprove of family planning, almost all reported that their husband also disapproves of family planning.

Education plays a significant role in approval of family planning. Sixty-one percent of women with higher education reported that both they and their husband approve of family planning. This compares with just 16 percent of women with no education. Approval of family planning is also higher among urban than rural residents.

There is significant regional variation in approval of family planning. In particular, approval in the south tends to be higher than in the north. For example, 61 percent of women in the South West say that both they and their husbands approve of family planning, as do 51 percent of women in the South East. More than half of women in the North West, however, say that both they and their husbands disapprove.

| Percent distribution of currently married women who know of a method of family planning, by approval of family planning and perception of their husband's attitude toward family planning, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Woman approves of family planning |  |  | Woman disapproves of family planning |  |  |  |  |  |
| Background characteristic | Husband approves | Husband disapproves | Husband's attitude unknown | Husband approves | Husband disapproves | Husband's attitude unknown | Woman is unsure ${ }^{1}$ | Total | Number of women |
| Age |  |  |  |  |  |  |  |  |  |
| 15-19 | 14.9 | 6.2 | 13.3 | 1.6 | 46.1 | 7.1 | 10.8 | 100.0 | 353 |
| 20-24 | 29.9 | 12.3 | 10.2 | 2.9 | 31.4 | 6.4 | 6.9 | 100.0 | 700 |
| 25-29 | 42.1 | 10.6 | 9.0 | 2.0 | 26.5 | 4.3 | 5.7 | 100.0 | 985 |
| 30-34 | 33.4 | 11.5 | 12.2 | 1.9 | 29.4 | 4.8 | 6.9 | 100.0 | 684 |
| 35-39 | 35.9 | 11.7 | 9.5 | 0.5 | 30.6 | 5.8 | 5.8 | 100.0 | 634 |
| 40-44 | 33.6 | 10.6 | 9.5 | 3.1 | 30.7 | 6.0 | 6.4 | 100.0 | 469 |
| 45-49 | 28.2 | 10.7 | 11.7 | 1.6 | 33.2 | 8.8 | 5.9 | 100.0 | 361 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 40.6 | 10.4 | 9.3 | 1.8 | 28.1 | 4.1 | 5.7 | 100.0 | 1,487 |
| Rural | 29.2 | 11.0 | 11.1 | 2.0 | 32.8 | 6.7 | 7.1 | 100.0 | 2,699 |
| Region |  |  |  |  |  |  |  |  |  |
| North Central | 40.6 | 11.0 | 15.8 | 1.8 | 16.6 | 6.3 | 8.1 | 100.0 | 584 |
| North East | 18.0 | 11.4 | 11.9 | 2.8 | 38.7 | 9.3 | 7.9 | 100.0 | 713 |
| North West | 17.4 | 7.5 | 8.1 | 1.8 | 51.6 | 6.6 | 7.0 | 100.0 | 1,412 |
| South East | 50.7 | 9.1 | 6.2 | 2.9 | 22.4 | 3.5 | 5.2 | 100.0 | 321 |
| South South | 47.4 | 17.8 | 9.5 | 2.1 | 13.8 | 3.8 | 5.5 | 100.0 | 625 |
| South West | 60.6 | 11.5 | 12.8 | 0.7 | 8.2 | 1.8 | 4.5 | 100.0 | 531 |
| Education |  |  |  |  |  |  |  |  |  |
| No education | 15.6 | 9.8 | 11.5 | 1.9 | 44.7 | 8.2 | 8.3 | 100.0 | 1,914 |
| Primary | 38.6 | 12.2 | 11.8 | 1.7 | 24.2 | 5.5 | 6.0 | 100.0 | 1,022 |
| Secondary | 54.8 | 10.9 | 8.0 | 2.6 | 17.1 | 2.3 | 4.4 | 100.0 | 1,012 |
| Higher | 61.2 | 13.2 | 6.5 | 0.9 | 11.5 | 1.5 | 5.1 | 100.0 | 237 |
| Total | 33.3 | 10.8 | 10.5 | 1.9 | 31.1 | 5.8 | 6.6 | 100.0 | 4,186 |
| ${ }^{1}$ Includes missing |  |  |  |  |  |  |  |  |  |

This chapter addresses the principal factors, other than contraception, that affect a woman's risk of becoming pregnant: nuptiality and sexual intercourse, postpartum amenorrhoea, abstinence from sexual relations, and menopause. Generally, marriage is a primary indication of the 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. For this reason, it is important to examine trends in age at marriage. Data on age at first sexual intercourse, which is a more direct measure of the beginning of exposure to pregnancy and the level of exposure, are also presented in this chapter. Durations of postpartum amenorrhoea, postpartum abstinence, and menopause are additional measures of other proximate determinants of fertility that, like marriage and sexual intercourse, influence exposure to the risk of pregnancy.

### 6.1 Current Marital Status

Table 6.1 presents the percent distribution of women and men by marital status at the time of the survey. In this table, the term "married," refers to legal or formal unions, while "living together" refers to informal unions. Widowed, divorced, and separated make up the remainder of the "ever-married" or "ever-in-union" category. In other tables and text, the term "currently married" refers to both formal and informal unions.

| Table 6.1 Current marital status |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of women and men by current marital status, according to age, Nigeria 2003 |  |  |  |  |  |  |  |  |
|  | Marital status |  |  |  |  |  | Total | Number |
| Age | Never married | Married | Living together | Divorced | Separated | Widowed |  |  |
| WOMEN |  |  |  |  |  |  |  |  |
| 15-19 | 66.7 | 30.9 | 0.8 | 1.1 | 0.3 | 0.1 | 100.0 | 1,716 |
| 20-24 | 36.1 | 59.2 | 1.8 | 1.4 | 1.1 | 0.4 | 100.0 | 1,494 |
| 25-29 | 12.2 | 80.3 | 2.6 | 2.3 | 1.9 | 0.6 | 100.0 | 1,382 |
| 30-34 | 5.1 | 86.7 | 3.4 | 1.6 | 1.6 | 1.6 | 100.0 | 941 |
| 35-39 | 1.7 | 91.3 | 2.2 | 1.4 | 0.6 | 2.8 | 100.0 | 816 |
| 40-44 | 0.7 | 87.6 | 2.4 | 2.2 | 1.5 | 5.6 | 100.0 | 688 |
| 45-49 | 0.9 | 84.7 | 1.7 | 3.1 | 1.6 | 8.1 | 100.0 | 583 |
| Total | 25.3 | 68.0 | 2.0 | 1.7 | 1.2 | 1.8 | 100.0 | 7,620 |
| MEN |  |  |  |  |  |  |  |  |
| 15-19 | 98.9 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 453 |
| 20-24 | 84.7 | 13.3 | 0.6 | 0.3 | 1.1 | 0.0 | 100.0 | 426 |
| 25-29 | 54.0 | 41.9 | 1.5 | 1.8 | 0.8 | 0.0 | 100.0 | 328 |
| 30-34 | 14.5 | 75.4 | 5.8 | 1.5 | 2.0 | 0.9 | 100.0 | 299 |
| 35-39 | 4.9 | 89.6 | 3.3 | 1.6 | 0.5 | 0.2 | 100.0 | 220 |
| 40-44 | 3.6 | 89.1 | 5.6 | 1.1 | 0.6 | 0.0 | 100.0 | 208 |
| 45-49 | 0.2 | 93.5 | 4.0 | 0.4 | 0.1 | 1.8 | 100.0 | 159 |
| 50-54 | 0.2 | 92.2 | 1.2 | 3.2 | 2.0 | 1.2 | 100.0 | 133 |
| 55-59 | 0.0 | 94.5 | 1.7 | 0.9 | 0.0 | 2.8 | 100.0 | 120 |
| Total | 44.7 | 50.8 | 2.3 | 1.0 | 0.8 | 0.5 | 100.0 | 2,346 |

In general, marriage and cohabitation are considered to be primary factors of exposure to the risk of pregnancy. Table 6.1 indicates that in Nigeria 25 percent of women age 15-49 have never married, while 68 percent are married, 2 percent are living together, and 5 percent are separated, divorced, or widowed. It is of interest to note that among adolescents age 15-19, more than 30 percent are married or living together. As expected, the percentage married increases with age. Widowhood also increases with age, from less than 1 percent below age 30 to 8 percent among women age 45-49.

The proportion of men who have never married is considerably higher ( 45 percent) than that of women ( 25 percent). About half of men are formally married, 2 percent are living together, and 2 percent are either divorced, separated, or widowed. A significant proportion of men marry when they are age 25 or older, unlike women who tend to marry at younger ages. In addition, the proportion of widowers does not increase significantly with age among men, possibly because of higher rates of remarriage among men.

### 6.2 Polygyny

Polygyny (having more than one spouse) has implications for the frequency of exposure to sexual activity and fertility. Measurement of polygyny is derived from responses of currently married women to the following questions, "Does your husband (partner) have any other wives apart from yourself," and if so, "How many other wives does he have?" Similarly, currently married men were asked, "How many wives do you have?"

Table 6.2 presents the proportion of currently married women who are in polygynous unions by background characteristics. The data show that 36 percent of married women in Nigeria are in polygynous unions. Twenty-seven percent report that they have only one cowife, while 9 percent say they have two or more cowives. The percentage of women in polygynous unions tends to increase with age, from 27 percent of women age 15-19 to 45 percent of those age 40-44. Further, polygyny is more prevalent in rural than in urban areas, and more common among women with lower levels of education. There is marked regional variation in polygyny. Polygyny is more prevalent in the northern parts of Nigeria and ranges from a low of 10 percent in the South East to a high of 44 percent in the North East. Approximately onefifth of men are in polygynous unions, which is less than the proportion of women (36 percent) (Figure 6.1).

## Table 6.2 Polygyny

Percent distribution of currently married women age 15-49 by number of cowives and percent distribution of currently married men age $15-59$ by number of wives, according to background characteristics, Nigeria 2003

| Background characteristic | Women |  |  |  |  |  | Men |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of cowives |  |  |  | Total | Number | Number of wives |  |  | Total | Number |
|  | 0 | 1 | $2+$ | Missing |  |  | 1 | $2+$ | Missing |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 72.3 | 22.9 | 4.0 | 0.8 | 100.0 | 545 | * | * | * | * | 5 |
| 20-24 | 72.7 | 22.2 | 3.9 | 1.2 | 100.0 | 911 | 98.0 | 2.0 | 0.0 | 100.0 | 60 |
| 25-29 | 67.1 | 25.5 | 7.1 | 0.3 | 100.0 | 1,146 | 93.3 | 6.7 | 0.0 | 100.0 | 142 |
| 30-34 | 58.2 | 31.5 | 10.1 | 0.2 | 100.0 | 848 | 84.5 | 15.5 | 0.0 | 100.0 | 243 |
| 35-39 | 58.2 | 28.7 | 11.8 | 1.3 | 100.0 | 763 | 74.2 | 24.7 | 1.2 | 100.0 | 204 |
| 40-44 | 54.2 | 30.6 | 14.3 | 0.8 | 100.0 | 619 | 71.6 | 28.2 | 0.3 | 100.0 | 197 |
| 45-49 | 57.9 | 24.0 | 17.8 | 0.3 | 100.0 | 504 | 69.0 | 31.0 | 0.0 | 100.0 | 155 |
| 50-54 | na | na | na | na | na | na | 68.6 | 30.9 | 0.5 | 100.0 | 124 |
| 55-59 | na | na | na | na | na | na | 67.1 | 32.5 | 0.4 | 100.0 | 116 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 69.6 | 21.8 | 8.1 | 0.4 | 100.0 | 1,633 | 81.9 | 17.8 | 0.3 | 100.0 | 401 |
| Rural | 60.9 | 28.6 | 9.7 | 0.8 | 100.0 | 3,703 | 75.1 | 24.6 | 0.3 | 100.0 | 844 |
| Region |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 60.9 | 24.8 | 13.9 | 0.3 | 100.0 | 754 | 77.1 | 22.9 | 0.0 | 100.0 | 174 |
| North East | 55.8 | 34.3 | 9.8 | 0.0 | 100.0 | 1,122 | 70.4 | 29.6 | 0.0 | 100.0 | 283 |
| North West | 58.7 | 32.5 | 7.7 | 1.1 | 100.0 | 1,880 | 75.2 | 24.0 | 0.8 | 100.0 | 372 |
| South East | 88.1 | 4.4 | 6.0 | 1.6 | 100.0 | 368 | 91.8 | 8.2 | 0.0 | 100.0 | 99 |
| South South | 73.8 | 17.4 | 7.6 | 1.2 | 100.0 | 664 | 77.5 | 22.5 | 0.0 | 100.0 | 172 |
| South West | 70.7 | 18.4 | 11.0 | 0.0 | 100.0 | 548 | 86.2 | 13.1 | 0.7 | 100.0 | 145 |
| Education |  |  |  |  |  |  |  |  |  |  |  |
| No education | 55.2 | 33.8 | 10.4 | 0.6 | 100.0 | 2,877 | 69.9 | 29.9 | 0.2 | 100.0 | 399 |
| Primary | 62.9 | 25.2 | 11.1 | 0.7 | 100.0 | 1,175 | 77.5 | 22.4 | 0.1 | 100.0 | 366 |
| Secondary | 82.7 | 11.2 | 5.1 | 1.0 | 100.0 | 1,046 | 85.2 | 14.1 | 0.7 | 100.0 | 325 |
| Higher | 82.9 | 13.1 | 4.0 | 0.0 | 100.0 | 238 | 79.3 | 20.4 | 0.3 | 100.0 | 155 |
| Total | 63.5 | 26.5 | 9.2 | 0.7 | 100.0 | 5,336 | 77.3 | 22.4 | 0.3 | 100.0 | 1,245 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.


### 6.3 Age at First Marriage

Marriage is universal in Nigeria, as revealed by the results of the 1991 Census (NPC, 1998). The age at which a woman first gets married influences the length of time she is exposed to the risk of pregnancy during her childbearing years.

The proportion of women who are married by specific exact ages and median age at first marriage are shown in Table 6.3. Three-fifths of women age 30-49 at the time of the survey were married by age 18 , while eight in ten were married by age 22 . The median age at first marriage is 16.6 years for women 25-49, and has increased from 15.5 years among women 45-49 to 19.1 among women age 20-24. This implies that younger women are marrying at later ages than women did in the past.

| Table 6.3 Age at first marriage |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of women and men who were first married by specific exact ages and median age at first marriage according to current age, Nigeria 2003 |  |  |  |  |  |  |  |  |
|  |  | first | rcenta by | age: |  | Percentage |  | Median age at |
| Current age | 15 | 18 | 20 | 22 | 25 | married | Number | marriage |
| WOMEN |  |  |  |  |  |  |  |  |
| 15-19 | 16.1 | na | na | na | na | 66.7 | 1,716 | a |
| 20-24 | 18.8 | 43.3 | 55.5 | na | na | 36.1 | 1,494 | 19.1 |
| 25-29 | 25.5 | 47.0 | 58.4 | 70.2 | 82.1 | 12.2 | 1,382 | 18.5 |
| 30-34 | 34.4 | 61.3 | 71.3 | 79.0 | 85.5 | 5.1 | 941 | 16.5 |
| 35-39 | 38.0 | 63.7 | 74.8 | 82.6 | 90.4 | 1.7 | 816 | 16.0 |
| 40-44 | 41.8 | 65.1 | 77.6 | 85.2 | 90.6 | 0.7 | 688 | 15.7 |
| 45-49 | 43.5 | 70.6 | 79.2 | 85.3 | 90.8 | 0.9 | 583 | 15.5 |
| 20-49 | 30.6 | 55.1 | 66.3 | na | na | 13.2 | 5,904 | 17.2 |
| 25-49 | 34.6 | 59.1 | 69.9 | 78.7 | 86.8 | 5.5 | 4,410 | 16.6 |
| MEN |  |  |  |  |  |  |  |  |
| 15-19 | 0.7 | na | na | na | na | 98.9 | 453 | a |
| 20-24 | 0.4 | 4.1 | 8.2 | na | na | 84.7 | 426 | a |
| 25-29 | 1.4 | 4.8 | 13.1 | 23.3 | 36.7 | 54.0 | 328 | a |
| 30-34 | 1.7 | 7.6 | 14.0 | 22.0 | 43.5 | 14.5 | 299 | 26.4 |
| 35-39 | 3.4 | 13.7 | 22.8 | 30.9 | 44.6 | 4.9 | 220 | 26.1 |
| 40-44 | 1.6 | 7.1 | 19.1 | 32.0 | 50.5 | 3.6 | 208 | 24.9 |
| 45-49 | 1.1 | 7.9 | 17.1 | 30.7 | 53.1 | 0.2 | 159 | 24.2 |
| 50-54 | 6.1 | 15.0 | 27.7 | 40.7 | 58.4 | 0.2 | 133 | 23.6 |
| 55-59 | 1.1 | 9.7 | 16.3 | 22.8 | 37.9 | 0.0 | 120 | 26.5 |
| 20-59 | 1.7 | 7.7 | 15.5 | na | na | 31.7 | 1,983 | a |
| 25-59 | 2.1 | 8.7 | 17.6 | 27.8 | 45.1 | 16.3 | 1,466 | a |
| na $=$ Not applicable <br> ${ }^{a}$ Omitted because less than 50 percent of the respondents were married for the first time before reaching the beginning of the age group |  |  |  |  |  |  |  |  |

Table 6.3 also shows that men marry at significantly older ages than women. The median age at first marriage for men is over 23 years in all age groups. Less than half of men age 25-29 have married, compared with almost 90 percent of women. Unlike women, there are no significant differentials in men's median age at first marriage between the younger and the older cohorts.

Table 6.4 shows the median age at first marriage among women age 20-49 and men age 25-59 by current age and background characteristics. Among women, the median age at first marriage is consistently lower in rural areas than in urban areas. However, in both rural and urban areas, younger women are marrying at later ages. For example, the median age at first marriage for urban women age 45-49 is 16.5 as opposed to 21.1 years among women age 25-29. Similarly, in rural areas, the median age at first marriage among the oldest women is 15.2 versus 17.8 years among women in their early twenties.

Across regions, there is evidence of increasing median age at first marriage between the oldest and youngest cohorts. The region with the lowest median age at first marriage, the North West, shows an increase from 14.1 years among women age $45-49$ to 15.5 years among women age $20-24$. There are substantial differentials in age at first marriage by wealth quintile: women from more advantaged households tend to marry later than those from less advantaged households.

| Table 6.4 Median age at first marriage |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Median age at first marriage among women 20-49 and among men age 25-59, by current age and background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |
|  | Current age: women |  |  |  |  |  | Women age 20-49 | Women age 25-49 | Men age 25-59 |
| characteristic | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 |  |  |  |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | a | 21.1 | 18.6 | 17.5 | 17.5 | 16.5 | 19.6 | 18.9 | a |
| Rural | 17.8 | 17.0 | 15.8 | 15.5 | 15.3 | 15.2 | 16.3 | 15.9 | 24.9 |
| Region |  |  |  |  |  |  |  |  |  |
| North Central | 19.6 | 18.9 | 17.8 | 16.5 | 16.5 | 16.5 | 18.2 | 17.7 | a |
| North East | 16.3 | 15.9 | 14.7 | 15.0 | 14.7 | 14.7 | 15.3 | 15.0 | 23.1 |
| North West | 15.5 | 15.1 | 14.8 | 14.5 | 14.0 | 14.1 | 14.8 | 14.6 | 24.0 |
| South East | a | 23.8 | 22.5 | 20.7 | 19.6 | 17.3 | a | 21.8 | a |
| South South | a | 21.4 | 20.2 | 16.8 | 17.5 | 16.2 | a | 19.2 | a |
| South West | a | 22.7 | 21.5 | 21.3 | 20.1 | 19.7 | a | 21.3 | a |
| Education |  |  |  |  |  |  |  |  |  |
| No education | 15.4 | 15.1 | 14.7 | 14.7 | 14.5 | 15.0 | 14.9 | 14.8 | 22.5 |
| Primary | 18.1 | 17.9 | 17.3 | 16.8 | 17.7 | 16.4 | 17.5 | 17.3 | a |
| Secondary | a | 22.1 | 20.4 | 20.2 | 20.4 | (22.7) | a | 21.2 | a |
| Higher | a | a | 26.7 | 24.3 | 21.8 | (20.8) | a | 24.8 | a |
| Wealth quintile |  |  |  |  |  |  |  |  |  |
| Lowest | 16.3 | 15.4 | 15.2 | 14.5 | 14.7 | 15.2 | 15.3 | 15.0 | 23.4 |
| Second | 16.7 | 15.9 | 14.8 | 15.3 | 14.9 | 14.5 | 15.4 | 15.1 | 23.3 |
| Middle | 17.9 | 16.5 | 15.8 | 15.8 | 15.4 | 15.6 | 16.4 | 15.9 | 24.9 |
| Fourth | 19.6 | 19.8 | 17.7 | 15.4 | 16.3 | 15.6 | 17.9 | 17.4 | a |
| Highest | a | 23.2 | 22.0 | 20.8 | 20.1 | 19.8 | a | 21.8 | a |
| All women | 19.1 | 18.5 | 16.5 | 16.0 | 15.7 | 15.5 | 17.2 | 16.6 | na |
| All men | na | a | 26.4 | 26.1 | 24.9 | 24.2 | na | na | a |
| Note: Figures in parentheses are based on 25-49 unweighted cases. <br> na $=$ Not applicable <br> ${ }^{\text {a }}$ Omitted because less than 50 percent were married for the first time before the beginning of the age group |  |  |  |  |  |  |  |  |  |

### 6.4 Age at First Sexual Intercourse

Age at first marriage is used as a proxy for the onset of a woman's exposure to the risk of pregnancy. However, some women start sexual activity before marriage, therefore the age at which they begin sexual intercourse signifies the beginning of their exposure to the risk of pregnancy, instead of their age at first marriage. Table 6.5 presents the percentage of women and men who had first sexual intercourse by specific ages and the median age at first sexual intercourse.

Table 6.5 Age at first sexual intercourse
Percentage of women and men who had first sexual intercourse by specified exact ages and median age at first intercourse, according to current age, Nigeria 2003

| Current age | Percentage who had first sexual intercourse by exact age: |  |  |  |  | Percentage who never had intercourse | Number | Median age at first intercourse |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 15 | 18 | 20 | 22 | 25 |  |  |  |
| WOMEN |  |  |  |  |  |  |  |  |
| 15-19 | 20.3 | na | na | na | na | 48.9 | 1,716 | a |
| 20-24 | 21.2 | 54.1 | 73.9 | na | na | 13.6 | 1,494 | 17.6 |
| 25-29 | 26.7 | 55.1 | 72.2 | 84.6 | 91.3 | 2.7 | 1,382 | 17.3 |
| 30-34 | 34.2 | 63.5 | 77.7 | 84.9 | 89.0 | 0.7 | 941 | 16.1 |
| 35-39 | 36.6 | 65.4 | 77.1 | 84.4 | 88.3 | 0.3 | 816 | 15.9 |
| 40-44 | 42.0 | 66.5 | 77.7 | 83.2 | 86.8 | 0.3 | 688 | 15.6 |
| 45-49 | 42.7 | 70.7 | 79.5 | 85.7 | 89.1 | 0.0 | 583 | 15.5 |
| 20-49 | 31.2 | 60.5 | 75.5 | na | na | 4.3 | 5,904 | 16.7 |
| 25-49 | 34.6 | 62.7 | 76.1 | 84.6 | 89.3 | 1.1 | 4,410 | 16.2 |
| MEN |  |  |  |  |  |  |  |  |
| 15-19 | 7.9 | na | na | na | na | 75.2 | 453 | a |
| 20-24 | 5.1 | 22.3 | 47.4 | na | na | 37.9 | 426 | , |
| 25-29 | 7.5 | 22.7 | 44.4 | 66.9 | 81.3 | 14.3 | 328 | 20.4 |
| 30-34 | 7.2 | 25.0 | 47.2 | 62.1 | 81.6 | 2.6 | 299 | 20.3 |
| 35-39 | 6.2 | 25.1 | 38.1 | 56.9 | 73.7 | 0.6 | 220 | 20.8 |
| 40-44 | 4.4 | 22.7 | 38.8 | 57.2 | 70.5 | 0.4 | 208 | 20.8 |
| 45-49 | 2.4 | 16.6 | 31.7 | 50.9 | 69.8 | 0.0 | 159 | 21.8 |
| 50-54 | 5.6 | 16.4 | 35.7 | 53.1 | 76.7 | 0.2 | 133 | 21.3 |
| 55-59 | 1.7 | 14.8 | 22.7 | 39.7 | 48.4 | 0.0 | 120 | 25.2 |
| 20-59 | 5.5 | 21.8 | 41.1 | na | na | 11.5 | 1,893 | a |
| 25-59 | 5.6 | 21.6 | 39.3 | 57.8 | 74.3 | 3.9 | 1,466 | 20.8 |

na $=$ Not applicable
${ }^{\text {a }}$ Omitted because less than 50 percent had intercourse for the first time before reaching the beginning of the age group

One-third of women age 25-49 report that they had sexual intercourse by age 15 . By age 20, more than three-quarters of women, and by age 25 , almost all women (nine in ten), have had sexual intercourse. The median age at first sexual intercourse is lower among the older women than among the younger women. For the oldest women (age 45-49), the median age at first intercourse is 15.5 years and for younger women (age 20-24), the median age at first intercourse is 17.6 years.

As with marriage, the age at which the majority of men have had sexual intercourse is higher than for women. For example, at age 20, two-fifths of men have had sexual intercourse, compared with threequarters of women. However, whereas median age at first intercourse has increased among women, it has decreased among men. Median age at first intercourse has declined from 25.2 years among men age 55-59 to 20.4 years among men age 25-29.

Table 6.6 presents the median age at first sexual intercourse for different cohorts by background characteristics. Rural women have their first sexual intercourse at younger ages than their urban counterparts. Among the regions, age at first sex is lowest in the North East and North West (15 years or less), and highest in the South West and South East (approximately 19 years). For women, the median age at first sexual intercourse increases with level of educational attainment. Women with no education start
sexual activity as early as 15 years of age, while women with secondary or higher education have their first sexual intercourse after age 18. Among the younger cohorts, median age at first intercourse increases with level of education.

Table 6.6 presents the same information for men. Rural and urban men have their first sexual experience at almost the same ages. Educational differentials are also small. Median age at first intercourse among men does vary by region, ranging from a low of 18.9 years in North Central to 23.5 years in the North West.

| Table 6.6 Median age at first intercourse |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Median age at first sexual intercourse among women age 20-49 and among men age 25-59, by current age and background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |
|  | Current age: women |  |  |  |  |  | Women age 20-49 | Women age 25-49 | Men age 25-59 |
| characteristic | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 |  |  |  |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 18.7 | 18.7 | 17.9 | 16.7 | 17.3 | 16.0 | 18.2 | 17.8 | 21.5 |
| Rural | 16.9 | 16.4 | 15.6 | 15.6 | 15.2 | 15.2 | 15.9 | 15.7 | 20.6 |
| Region |  |  |  |  |  |  |  |  |  |
| North Central | 18.0 | 18.3 | 17.0 | 16.9 | 16.7 | 16.1 | 17.6 | 17.3 | 18.9 |
| North East | 16.1 | 15.9 | 14.9 | 14.8 | 14.8 | 14.7 | 15.3 | 15.0 | 21.1 |
| North West | 15.8 | 15.2 | 14.9 | 14.7 | 14.3 | 14.3 | 14.9 | 14.7 | 23.5 |
| South East | a | 18.9 | 18.9 | 19.0 | 19.8 | 16.9 | 19.1 | 18.8 | 20.7 |
| South South | 18.0 | 18.1 | 16.9 | 16.8 | 16.2 | 15.8 | 17.4 | 17.0 | 20.5 |
| South West | 19.1 | 19.9 | 19.1 | 18.8 | 19.6 | 19.2 | 19.3 | 19.4 | 20.4 |
| Education |  |  |  |  |  |  |  |  |  |
| No education | 15.5 | 15.2 | 14.8 | 14.8 | 14.6 | 15.1 | 15.0 | 14.9 | 21.5 |
| Primary | 16.9 | 16.9 | 16.3 | 16.8 | 17.1 | 16.1 | 16.7 | 16.7 | 20.8 |
| Secondary | 18.8 | 18.7 | 18.8 | 18.5 | 19.8 | 20.4 | 18.8 | 18.8 | 20.4 |
| Higher | a | 20.6 | 19.8 | 18.6 | 20.3 | 19.2 | a | 20.1 | 20.9 |
| All women | 17.6 | 17.3 | 16.1 | 15.9 | 15.6 | 15.5 | 16.7 | 16.2 | na |
| All men | na | 20.4 | 20.3 | 20.8 | 20.8 | 21.8 | na | na | 20.8 |
| na $=$ Not applicable |  |  |  |  |  |  |  |  |  |

### 6.5 Recent Sexual Activity

In the absence of contraception, the probability of pregnancy is related to the regularity of sexual intercourse. The information on recent intercourse is important for the refinement of the measurement of exposure to pregnancy.

Table 6.7.1 presents the distribution of women by timing of the last sexual intercourse, according to background characteristics. In the four weeks preceding the survey, 56 percent of women age 15-49 were sexually active, while 19 percent were sexually active in the last 12 months, and 7 percent had not had sex for more than one year. Among all women, 14 percent have never had sexual intercourse. The proportion of women who were sexually active in the four weeks preceding the survey increases with age up to a maximum of 70 percent of women age 35-39; at older ages the percentage declines.

Not surprisingly, there is great variation in the percentage of women who were sexually active in the last four weeks by marital status. It is notable that among currently married women, the proportion of women who had recent intercourse remains relatively stable at all marital durations.

Table 6.7.1 Recent sexual activity: women
Percent distribution of women by timing of last sexual intercourse, according to background characteristics, Nigeria 2003

| Background characteristic | Timing of last sexual intercourse |  |  | Missing | Never had sexual intercourse | Total | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Within the last 4 weeks | Within <br> 1 year ${ }^{1}$ | One or more years ago |  |  |  |  |
| Current age |  |  |  |  |  |  |  |
| 15-19 | 33.5 | 13.9 | 2.4 | 1.3 | 48.9 | 100.0 | 1,716 |
| 20-24 | 55.3 | 20.9 | 6.2 | 4.0 | 13.6 | 100.0 | 1,494 |
| 25-29 | 63.7 | 22.8 | 5.2 | 5.6 | 2.7 | 100.0 | 1,382 |
| 30-34 | 67.4 | 19.6 | 6.0 | 6.2 | 0.7 | 100.0 | 941 |
| 35-39 | 70.1 | 18.1 | 7.2 | 4.4 | 0.3 | 100.0 | 816 |
| 40-44 | 66.9 | 18.9 | 11.4 | 2.5 | 0.3 | 100.0 | 688 |
| 45-49 | 59.5 | 17.1 | 21.1 | 2.2 | 0.0 | 100.0 | 583 |
| Marital status |  |  |  |  |  |  |  |
| Never married | 15.1 | 19.5 | 7.5 | 1.4 | 56.5 | 100.0 | 1,926 |
| Married or living together | 73.7 | 17.7 | 4.3 | 4.3 | 0.0 | 100.0 | 5,336 |
| Divorced/separated/widowed | 19.7 | 30.0 | 41.5 | 8.4 | 0.4 | 100.0 | 358 |
| Marital duration ${ }^{2}$ |  |  |  |  |  |  |  |
| Married only once |  |  |  |  |  |  |  |
| 0-4 years | 77.5 | 15.7 | 2.2 | 4.6 | 0.1 | 100.0 | 1,149 |
| 5-9 years | 72.3 | 20.8 | 2.0 | 4.9 | 0.0 | 100.0 | 880 |
| 10-14 years | 71.0 | 17.8 | 5.4 | 5.7 | 0.0 | 100.0 | 704 |
| 15-19 years | 74.7 | 16.3 | 4.6 | 4.5 | 0.0 | 100.0 | 552 |
| 20-24 years | 73.9 | 19.1 | 5.1 | 2.0 | 0.0 | 100.0 | 538 |
| $25+$ years | 70.9 | 17.6 | 9.0 | 2.4 | 0.0 | 100.0 | 580 |
| Married more than once | 73.6 | 17.4 | 4.6 | 4.4 | 0.0 | 100.0 | 933 |
| Residence |  |  |  |  |  |  |  |
| Urban | 51.8 | 20.1 | 7.6 | 3.1 | 17.4 | 100.0 | 2,629 |
| Rural | 58.8 | 18.0 | 6.5 | 4.1 | 12.7 | 100.0 | 4,991 |
| Region |  |  |  |  |  |  |  |
| North Central | 41.6 | 25.0 | 11.1 | 4.5 | 17.8 | 100.0 | 1,121 |
| North East | 63.4 | 16.0 | 5.0 | 5.8 | 9.8 | 100.0 | 1,368 |
| North West | 77.8 | 11.2 | 2.5 | 2.5 | 6.0 | 100.0 | 2,095 |
| South East | 42.2 | 22.2 | 8.7 | 3.3 | 23.7 | 100.0 | 737 |
| South South | 50.8 | 20.9 | 7.7 | 3.4 | 17.2 | 100.0 | 1,342 |
| South West | 35.4 | 26.2 | 11.5 | 3.3 | 23.5 | 100.0 | 958 |
| Education |  |  |  |  |  |  |  |
| No education | 71.0 | 15.0 | 6.3 | 4.5 | 3.2 | 100.0 | 3,171 |
| Primary | 51.3 | 21.1 | 8.7 | 4.3 | 14.6 | 100.0 | 1,628 |
| Secondary | 41.6 | 20.7 | 5.9 | 2.7 | 29.0 | 100.0 | 2,370 |
| Higher | 49.5 | 26.0 | 8.7 | 2.1 | 13.8 | 100.0 | 451 |
| Current contraceptive method |  |  |  |  |  |  |  |
| Pill | 79.1 | 13.8 | 4.1 | 3.1 | 0.0 | 100.0 | 152 |
| IUD | (78.4) | (21.6) | (0.0) | (0.0) | (0.0) | (100.0) | 45 |
| Condom | 62.4 | 34.7 | 2.0 | 0.9 | 0.0 | 100.0 | 260 |
| Periodic abstinence | 58.2 | 35.4 | 3.4 | 2.9 | 0.0 | 100.0 | 163 |
| Other method | 72.6 | 22.9 | 2.9 | 1.5 | 0.0 | 100.0 | 392 |
| No method | 54.5 | 17.5 | 7.5 | 4.0 | 16.5 | 100.0 | 6,608 |
| Total | 56.4 | 18.7 | 6.8 | 3.7 | 14.3 | 100.0 | 7,620 |

[^6]Rural women are more likely to be sexually active ( 59 percent) than urban women ( 52 percent). Among the six regions, the North West has the highest proportion of sexually active women (78 percent), followed by the North East ( 63 percent). The South West has the lowest proportion of sexually active women ( 35 percent), followed by the South East and North Central ( 42 percent each). Women with no education are more likely to be sexually active than women with some education, as are women who are using a contraceptive method.

Table 6.7.2 shows that almost half the men interviewed were sexually active in the four weeks preceding the survey. Another one-fifth had sexual intercourse in the past year, while 7 percent had not had sex in more than a year. Twenty-four percent of men had never had sex. The percentage sexually

| Table 6.7.2 Recent sexual activity: men |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of men by timing of last sexual intercourse, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |
|  | Timing of last sexual intercourse |  |  |  | Never had sexual intercourse | Total | Number of men |
| Background characteristic | Within the last 4 weeks | Within 1 year $^{1}$ | One or more years ago | Missing |  |  |  |
| Current age |  |  |  |  |  |  |  |
| 15-19 | 11.1 | 7.1 | 6.5 | 0.0 | 75.2 | 100.0 | 453 |
| 20-24 | 29.3 | 21.7 | 11.1 | 0.0 | 37.9 | 100.0 | 426 |
| 25-29 | 53.0 | 24.6 | 7.9 | 0.2 | 14.3 | 100.0 | 328 |
| 30-34 | 62.8 | 26.9 | 7.4 | 0.3 | 2.6 | 100.0 | 299 |
| 35-39 | 69.3 | 25.4 | 3.8 | 0.9 | 0.6 | 100.0 | 220 |
| 40-44 | 75.6 | 16.2 | 4.0 | 3.9 | 0.4 | 100.0 | 208 |
| 45-49 | 72.8 | 22.0 | 4.6 | 0.6 | 0.0 | 100.0 | 159 |
| 50-54 | 72.6 | 22.0 | 4.6 | 0.6 | 0.2 | 100.0 | 133 |
| 55-59 | 67.0 | 22.0 | 8.6 | 2.5 | 0.0 | 100.0 | 120 |
| Marital status |  |  |  |  |  |  |  |
| Never married | 20.5 | 15.2 | 11.0 | 0.0 | 53.3 | 100.0 | 1,048 |
| Married or living together | 73.0 | 23.0 | 2.7 | 1.3 | 0.0 | 100.0 | 1,245 |
| Divorced/separated/widowed | 27.8 | 39.3 | 32.9 | 0.0 | 0.0 | 100.0 | 53 |
| Marital duration ${ }^{2}$ |  |  |  |  |  |  |  |
| Married only once |  |  |  |  |  |  |  |
| $0-4$ years | 72.0 | 23.8 | 3.9 | 0.3 | 0.0 | 100.0 | 268 |
| 5-9 years | 67.3 | 29.6 | 3.1 | 0.0 | 0.0 | 100.0 | 178 |
| 10-14 years | 71.2 | 20.6 | 3.4 | 4.9 | 0.0 | 100.0 | 145 |
| 15-19 years | 79.9 | 18.7 | 0.5 | 0.9 | 0.0 | 100.0 | 142 |
| 20-24 years | 79.4 | 18.1 | 1.7 | 0.8 | 0.0 | 100.0 | 131 |
| 25+years | 68.5 | 25.0 | 4.3 | 2.3 | 0.0 | 100.0 | 163 |
| Married more than once | 75.4 | 22.2 | 1.2 | 1.2 | 0.0 | 100.0 | 218 |
| Residence |  |  |  |  |  |  |  |
| Urban | 43.0 | 20.1 | 7.8 | 1.0 | 28.0 | 100.0 | 872 |
| Rural | 51.8 | 19.7 | 6.6 | 0.5 | 21.3 | 100.0 | 1,474 |
| Region |  |  |  |  |  |  |  |
| North Central | 42.4 | 28.5 | 8.4 | 0.0 | 20.7 | 100.0 | 348 |
| North East | 60.1 | 17.4 | 4.0 | 1.6 | 16.9 | 100.0 | 421 |
| North West | 55.2 | 9.1 | 2.9 | 0.5 | 32.3 | 100.0 | 602 |
| South East | 30.1 | 26.6 | 16.8 | 3.2 | 23.2 | 100.0 | 207 |
| South South | 47.8 | 20.9 | 7.2 | 0.0 | 24.1 | 100.0 | 445 |
| South West | 40.5 | 27.9 | 11.1 | 0.0 | 20.4 | 100.0 | 322 |
| Education |  |  |  |  |  |  |  |
| No education | 66.8 | 13.2 | 4.1 | 1.1 | 14.8 | 100.0 | 507 |
| Primary | 46.3 | 25.1 | 7.0 | 0.4 | 21.2 | 100.0 | 603 |
| Secondary | 39.2 | 18.4 | 9.0 | 0.2 | 33.2 | 100.0 | 960 |
| Higher | 52.5 | 25.7 | 5.8 | 2.3 | 13.7 | 100.0 | 276 |
| Total | 48.6 | 19.9 | 7.1 | 0.7 | 23.8 | 100.0 | 2,346 |
| ${ }^{1}$ Excludes men who had sexual intercourse within the last 4 weeks <br> ${ }^{2}$ Excludes men who are not currently married |  |  |  |  |  |  |  |

active increases with age from 11 percent of men age 15-19 to 76 percent of men age 40-44; thereafter, the percentage decrease slightly. The table shows that men in union are the most likely to be sexually active (73 percent).

Men's patterns of sexual activity by residence and region are similar to those of women. As with women, recent sexual activity varies with educational attainment. Approximately 67 percent of men with no education were sexually active in the four weeks preceding the survey, compared with 39 percent of men with some secondary education.

### 6.6 Postpartum Amenorrhoea, Abstinence, and Insuseptibility

Postpartum amenorrhoea refers to the interval between childbirth and the return of menstruation. This is the period during which a woman becomes temporarily infecund following childbirth. A number of studies have established a direct relationship between the length and intensity of breastfeeding and the duration of postpartum amenorrhoea. Postpartum abstinence refers to the period of voluntary sexual inactivity after childbirth. Women are considered insusceptible if they are not exposed to the risk of pregnancy, either because they are amenorrhoeic or are abstaining from sexual intercourse following a birth. Women who gave birth during the three years preceding the survey were asked about the duration of amenorrhoea and the duration of sexual abstinence following childbirth.

Table 6.8 shows the percentage of births in the three years preceding the survey for which mothers are postpartum amenorrhoeic, abstaining, and insusceptible by number of months since birth. Mean and median durations are also shown. In Nigeria, women are amenorrhoeic for approximately 13 months after giving birth. The median duration of postpartum abstinence is lower-just 3 months. Eighty-five percent of women abstain from sex during the first two months following childbirth. The proportion abstaining decreases with increasing months after delivery, particularly during the first year after birth. A comparison of the data with those from the 1999 NDHS indicates that there has been no change in the duration of postpartum insusceptibility.

Table 6.9 shows the median duration

Table 6.8 Postpartum amenorrhoea, abstinence, and insusceptibility

Percentage of births in the three years preceding the survey for which mothers are postpartum amenorrhoeic, abstaining, and insusceptible, by number of months since birth, and median and mean durations, Nigeria 2003

| Months since birth | Percentage of births for which the mother is: |  |  | Number of births |
| :---: | :---: | :---: | :---: | :---: |
|  | Amenorrhoeic | Abstaining | Insusceptible |  |
| < 2 | 91.7 | 85.1 | 97.2 | 189 |
| 2-3 | 81.6 | 52.5 | 88.0 | 241 |
| 4-5 | 69.4 | 33.0 | 77.4 | 272 |
| 6-7 | 63.5 | 33.4 | 70.4 | 249 |
| 8-9 | 65.2 | 29.2 | 72.5 | 244 |
| 10-11 | 52.4 | 23.7 | 60.7 | 216 |
| 12-13 | 52.9 | 13.9 | 56.5 | 238 |
| 14-15 | 51.2 | 19.3 | 59.0 | 204 |
| 16-17 | 33.4 | 14.7 | 41.3 | 216 |
| 18-19 | 24.9 | 11.4 | 31.1 | 143 |
| 20-21 | 18.6 | 5.5 | 21.0 | 153 |
| 22-23 | 16.1 | 18.3 | 29.9 | 143 |
| 24-25 | 6.2 | 4.3 | 10.0 | 273 |
| 26-27 | 4.6 | 2.7 | 6.8 | 230 |
| 28-29 | 3.2 | 3.4 | 6.7 | 167 |
| 30-31 | 2.1 | 3.9 | 6.0 | 198 |
| 32-33 | 1.0 | 3.2 | 4.2 | 175 |
| 34-35 | 2.2 | 4.3 | 5.4 | 184 |
| Total | 38.1 | 21.0 | 43.8 | 3,734 |
| Median | 13.2 | 3.0 | 15.1 | na |
| Mean | 13.1 | 7.6 | 15.1 | na |

Note: Estimates are based on status at the time of the survey. $\mathrm{na}=$ Not applicable of postpartum amenorrhoea, abstinence, and insusceptibility by background characteristics. The median duration of postpartum amenorrhoea, abstinence, and insusceptibility are 13 months, 3 months, and 15 months, respectively. Urban women in Nigeria have a shorter duration of amenorrhoea and postpartum insusceptibility than rural women, but have longer postpartum abstinence. There are also substantial differentials by region and mother's education.


### 6.7 Menopause

The lack of a menstrual period in the preceding six months among women who are neither pregnant nor postpartum amenorrhoeic is taken as evidence of menopause. Table 6.10 shows the proportion of women who are menopausal. The proportion of women who are menopausal increases steadily after age 30 . More than half of women age 48-49 report that they are menopausal.

Table 6.10 Menopause
Percentage of women age 30-49 who are menopausal by age, Nigeria 2003

| Age | Percentage <br> menopausal | Number <br> of <br> women |
| :--- | :---: | :---: |
| $30-34$ | 0.6 | 941 |
| $35-39$ | 1.5 | 816 |
| $40-41$ | 5.9 | 381 |
| $42-43$ | 12.7 | 247 |
| $44-45$ | 28.9 | 280 |
| $46-47$ | 36.3 | 142 |
| $48-49$ | 52.4 | 221 |
| Total | 10.6 | 3,028 |

${ }^{1}$ Percentage of all women who are not pregnant and not postpartum amenorrhoeic whose last menstrual period occurred six or more months preceding the survey

## FERTILITY PREFERENCES

This chapter addresses three questions that allow an assessment of the need for contraception. Does the respondent want more children? If so, how long would she prefer to wait before the next child? If she could start afresh, how many children in all would she want? This chapter also examines the occurrence of unwanted or mistimed pregnancies and analyzes the effect that prevention of such pregnancies would have on the fertility rates. Because the underlying rationale of most family planning programmes is to give couples the freedom and ability to bear the number of children they want and to achieve the spacing of births they prefer, these are key issues for programme planners.

Interpretation of data on fertility preferences has always been the subject of controversy. Survey questions have been criticized on the grounds that answers are misleading because 1) they reflect unformed, ephemeral views, which are held with weak intensity and little conviction; and 2) they do not take into account the effect of social pressures or the attitudes of other family members, particularly the husband, who may exert a major influence on reproductive decisions. The first objection has greater force in noncontracepting societies where the idea of conscious reproductive choice may still be alien; preference data from these settings should be interpreted with caution. In societies with moderate to high levels of use, greater interpretive weight can be attached to the findings. The second objection is correct in principle. In practice, however, its importance is doubtful; for instance, the evidence from surveys in which both husbands and wives are interviewed suggests that there is no radical difference between the views of the two sexes.

The inclusion of women who are currently pregnant complicates the measurement of views on future childbearing. For these women, the question on desire for more children is rephrased to refer to desire for another child after the one that they are expecting. To take into account the way in which the preference variable is defined for pregnant women, the results are classified by number of living children, including the current pregnancy as equivalent to a living child.

### 7.1 Desire for More Children

Information on fertility preferences among currently married women is presented in Table 7.1. The table shows the potential need for contraceptive services for spacing as well as for limiting births. Until recently, concern for providing appropriate contraceptive methods to couples who wish to have no more children has overshadowed contraception for child spacing purposes. The interest in spacing has been reinforced by recent evidence that 1) short birth intervals are harmful to the welfare of children and mothers; 2) large numbers of couples wish to postpone childbearing by using contraception; and 3) there is a potential demand for contraception for spacing births in some countries where demand for limiting family size has not yet emerged.

Table 7.1 shows that the desire for more children is related to the number of living children women already have. Virtually all currently married women with no children want to have a child, eight in ten express the desire to have a child soon. As the number of living children increases, the desire to have children decreases. The percentage of women who want to space the birth of their next child (have another later) first rises with parity, up to parity two, then declines steadily with the rise in the number of living children. This pattern was also observed in the 1999 NDHS (NPC, 2000:88). However, it is striking that almost three-quarters of women with four living children ( 73 percent) want to have another child.

It is equally significant that 18 percent of all women want no more children. The desire to stop childbearing begins to appear when couples have had at least three living children. While only 2 percent
of childless women want no children, half of women who have had six or more children say they want to stop childbearing.

Irrespective of the number of living children, more than half of women (52 percent) either want to delay having another child or stop childbearing altogether. These women are potential contraceptive users for spacing or for limitation of fertility.

Table 7.1 Fertility preferences by number of living children
Percent distribution of currently married women by desire for children, according to number of living children, Nigeria 2003

| Desire for children | Number of living children ${ }^{1}$ |  |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6+ |  |
| Have another soon ${ }^{2}$ | 79.2 | 47.1 | 42.1 | 36.8 | 32.4 | 23.2 | 14.8 | 37.1 |
| Have another later ${ }^{3}$ | 10.5 | 43.8 | 46.2 | 42.6 | 36.7 | 29.5 | 19.1 | 33.8 |
| Have another, undecided when | 2.3 | 5.1 | 4.4 | 6.3 | 3.5 | 3.8 | 3.6 | 4.3 |
| Undecided | 0.9 | 0.5 | 0.7 | 2.7 | 3.5 | 3.7 | 3.9 | 2.3 |
| Want no more | 1.8 | 0.6 | 4.4 | 8.2 | 20.5 | 34.4 | 50.3 | 18.1 |
| Sterilized ${ }^{4}$ | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.0 | 0.8 | 0.2 |
| Declared infecund | 5.1 | 2.4 | 2.2 | 3.2 | 3.0 | 4.4 | 7.1 | 3.9 |
| Missing | 0.3 | 0.5 | 0.0 | 0.1 | 0.0 | 1.0 | 0.4 | 0.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of women | 491 | 902 | 871 | 776 | 701 | 608 | 986 | 5,336 |

${ }^{1}$ Includes current pregnancy
${ }^{2}$ Wants next birth within 2 years
${ }^{3}$ Wants to delay next birth for 2 or more years
${ }^{4}$ Includes both female and male sterilization

### 7.2 Desire to Limit Childbearing

Table 7.2 presents the percentage of currently married women who want no more children by number of living children and background characteristics. This table provides information about variations in the potential demand for fertility control.

The data show that the desire to limit childbearing is higher in urban than rural areas (22 and 17 percent, respectively) and varies with the number of living children. In urban areas, for example, onethird of women with four living children desire no more children. This compares with just 15 percent of women living in rural areas. There are no significant urban-rural differences in the desire to limit childbearing once women have had six or more children. At that parity, about half of women in both urban and rural areas want no more children.

There are large regional variations in the desire to limit childbearing. In general, the desire to limit childbearing is lowest in the North West (7 percent) and highest in the South East and South South regions ( 32 percent each). In the South West, even at parity four, half of all currently married women want no more children. In all the southern regions, the majority desire no more children once they have had five children. At parity six and above, eight in every ten women in the southern regions do not want any more children. In contrast, in the North West and North East, the majority of women do not wish to limit childbearing, irrespective of the number of living children they already have. This is especially true of women in the North West; in that region, just two out of every ten women with six or more children say that they want no more children.

Table 7.2 Desire to limit childbearing by background characteristics
Percentage of currently married women who want no more children, by number of living children and background characteristics, Nigeria 2003

| Background characteristic | Number of living children ${ }^{1}$ |  |  |  |  |  |  | All women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6+ |  |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 0.0 | 0.0 | 5.1 | 12.5 | 34.1 | 46.0 | 49.4 | 21.8 |
| Rural | 2.5 | 0.9 | 4.1 | 6.5 | 15.2 | 29.2 | 51.8 | 16.7 |
| Region |  |  |  |  |  |  |  |  |
| North Central | 0.0 | 0.0 | 7.2 | 7.3 | 31.8 | 46.6 | 61.9 | 24.1 |
| North East | 3.5 | 0.2 | 4.5 | 8.1 | 16.0 | 23.3 | 44.8 | 16.3 |
| North West | 2.2 | 0.9 | 1.3 | 3.0 | 8.2 | 10.4 | 20.7 | 6.5 |
| South East | (0.0) | 0.0 | 4.6 | 10.0 | 27.7 | 55.6 | 83.5 | 31.6 |
| South South | (0.0) | 0.0 | 3.7 | 12.3 | 16.7 | 53.8 | 80.6 | 31.6 |
| South West | (0.0) | 1.6 | 11.0 | 21.4 | 52.0 | 62.3 | 80.9 | 29.9 |
| Education |  |  |  |  |  |  |  |  |
| No education | 2.8 | 0.8 | 4.1 | 7.7 | 15.4 | 22.8 | 40.5 | 15.0 |
| Primary | 0.0 | 0.0 | 4.8 | 8.9 | 19.1 | 44.1 | 65.4 | 25.8 |
| Secondary | 0.0 | 0.8 | 3.7 | 7.7 | 23.5 | 53.0 | 68.2 | 16.4 |
| Higher | (0.0) | (0.0) | (9.1) | (14.3) | (76.2) | (49.9) | (81.0) | 29.3 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 2.8 | 1.5 | 2.7 | 6.7 | 13.5 | 17.7 | 48.3 | 15.5 |
| Second | 1.2 | 0.2 | 5.9 | 7.0 | 12.5 | 27.8 | 49.6 | 16.1 |
| Middle | 3.7 | 0.3 | 3.2 | 5.1 | 15.6 | 38.8 | 46.3 | 17.3 |
| Fourth | 0.0 | 0.0 | 4.9 | 10.0 | 25.1 | 35.3 | 45.2 | 18.4 |
| Highest | 0.0 | 0.9 | 5.1 | 13.4 | 39.5 | 56.1 | 76.7 | 24.8 |
| Total | 1.8 | 0.6 | 4.4 | 8.3 | 20.8 | 34.4 | 51.0 | 18.3 |

Note: Women who have been sterilized are considered to want no more children. Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ Includes current pregnancy

In addition to regional differences, the desire to limit childbearing varies by education. Almost twice as many women with higher education as women with no education want to limit childbearing (29 percent versus 15 percent). The desire to limit childbearing increases with household economic status. For example, one in six women in households in the lowest wealth quintile wants to limit childbearing, compared with one in four women in households in the highest quintile.

Among women residing in urban areas and in the south and in the North Central region, among those with some education, and among those in the highest wealth quintile, parity five appears to be the threshold value at which a significant proportion begin to want no more children.

### 7.3 Need for Family Planning

This section discusses the extent of need and potential demand for family planning services in Nigeria. Unmet need for family planning refers to fecund women who either wish to postpone the next birth (spacers) or who wish to stop childbearing altogether (limiters), but are not using a contraceptive method. Pregnant women are considered to have unmet need for spacing or limiting if their pregnancy was mistimed or unwanted, respectively. Similarly, amenorrhoeic women are classified as having unmet need if their last birth was mistimed or unwanted. Women who are currently using a family planning method are said to have a met need for family planning method. The total demand for family planning comprises those who fall in the met need and the unmet need categories.

Table 7.3 presents estimates for unmet need, met need, and total demand for family planning among currently married Nigerian women by background characteristics. The total demand for family planning among currently married women is 30 percent, and 43 percent of that demand is satisfied. The demand for spacing purposes is twice as high as the demand for limiting purposes ( 20 and 10 percent, respectively). Overall, less than one-fifth of currently married women have an unmet need for family planning (17 percent). Twelve percent have unmet need for spacing and 5 percent for limiting.

Unmet need does not vary much by age except for women age 45-49, who have the lowest unmet need. It is notable that up to age 34 , virtually all unmet need for family planning is for spacing purposes. After age 35 , most unmet need is for limiting childbearing. Total unmet need for family planning is highest in the South South region, where one-fourth of currently married women have unmet need for family planning, and lowest in the North West (11 percent). There are no rural-urban differentials nor does unmet need vary substantially by wealth quintile. However, it should be noted that among women in households in the lowest wealth quintile, only 32 percent of demand for family planning is satisfied, compared with 62 percent among women in households in the highest wealth quintile. No doubt, women in more economically advantaged households have the means to satisfy their family planning needs, unlike women in poorer households.

Table 7.4 shows the need for family planning among all women and women who are not currently married. As expected, unmet need for family planning is higher among currently married women (17 percent) and lower among all women (14 percent) and women who are not currently married (6 percent).

Table 7.3 Need for family planning among currently married women
Percentage of currently married women with unmet need for family planning, and with met need for family planning, and the total demand for family planning, by background characteristics, Nigeria 2003

| Background characteristic | Unmet need for family planning ${ }^{1}$ |  |  | Met need for family planning (currently using) ${ }^{2}$ |  |  | Total demand for family planning ${ }^{3}$ |  |  | 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 | 13.9 | 0.6 | 14.6 | 4.1 | 0.2 | 4.3 | 18.0 | 0.9 | 18.9 | 22.9 | 545 |
| 20-24 | 16.1 | 0.3 | 16.4 | 9.3 | 0.2 | 9.4 | 25.4 | 0.4 | 25.8 | 36.5 | 911 |
| 25-29 | 16.0 | 1.1 | 17.1 | 15.3 | 0.8 | 16.1 | 31.2 | 1.9 | 33.2 | 48.5 | 1,146 |
| 30-34 | 13.9 | 5.3 | 19.1 | 8.8 | 4.8 | 13.6 | 22.7 | 10.0 | 32.7 | 41.5 | 848 |
| 35-39 | 8.1 | 10.1 | 18.1 | 5.2 | 11.1 | 16.3 | 13.3 | 21.2 | 34.5 | 47.4 | 763 |
| 40-44 | 5.3 | 14.1 | 19.3 | 2.5 | 12.7 | 15.1 | 7.7 | 26.7 | 34.4 | 43.9 | 619 |
| 45-49 | 2.4 | 9.0 | 11.4 | 1.2 | 7.6 | 8.9 | 3.6 | 16.7 | 20.3 | 43.7 | 504 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 11.7 | 5.5 | 17.3 | 12.1 | 8.2 | 20.2 | 23.8 | 13.7 | 37.5 | 54.0 | 1,633 |
| Rural | 11.8 | 4.9 | 16.7 | 6.0 | 3.3 | 9.2 | 17.8 | 8.2 | 26.0 | 35.5 | 3,703 |
| Region |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 15.2 | 6.6 | 21.8 | 7.0 | 6.4 | 13.3 | 22.2 | 12.9 | 35.1 | 37.9 | 754 |
| North East | 13.1 | 5.0 | 18.1 | 2.8 | 1.4 | 4.2 | 15.9 | 6.4 | 22.3 | 19.0 | 1,122 |
| North West | 9.9 | 1.2 | 11.1 | 4.6 | 0.4 | 4.9 | 14.5 | 1.5 | 16.1 | 30.8 | 1,880 |
| South East | 9.0 | 10.0 | 18.9 | 12.3 | 10.2 | 22.5 | 21.2 | 20.2 | 41.4 | 54.3 | 368 |
| South South | 13.0 | 11.5 | 24.5 | 14.7 | 10.7 | 25.4 | 27.7 | 22.3 | 49.9 | 50.9 | 664 |
| South West | 11.3 | 5.9 | 17.2 | 19.1 | 13.6 | 32.7 | 30.4 | 19.5 | 49.9 | 65.6 | 548 |
| Education |  |  |  |  |  |  |  |  |  |  |  |
| No education | 10.1 | 3.9 | 14.1 | 2.5 | 1.4 | 4.0 | 12.7 | 5.4 | 18.0 | 22.1 | 2,877 |
| Primary | 13.4 | 7.6 | 21.0 | 8.3 | 8.4 | 16.7 | 21.7 | 16.0 | 37.7 | 44.4 | 1,175 |
| Secondary | 15.8 | 4.9 | 20.7 | 18.1 | 8.0 | 26.1 | 33.9 | 12.9 | 46.8 | 55.8 | 1,046 |
| Higher | 6.6 | 8.1 | 14.7 | 24.1 | 12.8 | 36.9 | 30.7 | 20.9 | 51.7 | 71.5 | 238 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 11.3 | 3.6 | 14.9 | 3.8 | 3.1 | 6.9 | 15.1 | 6.8 | 21.8 | 31.8 | 1,150 |
| Second | 10.6 | 5.0 | 15.6 | 4.1 | 1.6 | 5.6 | 14.7 | 6.5 | 21.2 | 26.6 | 1,142 |
| Middle | 12.5 | 4.2 | 16.7 | 5.4 | 3.7 | 9.1 | 17.9 | 7.9 | 25.8 | 35.2 | 1,086 |
| Fourth | 13.0 | 6.9 | 19.9 | 8.8 | 4.7 | 13.5 | 21.8 | 11.6 | 33.4 | 40.3 | 957 |
| Highest | 11.9 | 6.2 | 18.0 | 18.4 | 11.6 | 30.0 | 30.3 | 17.8 | 48.0 | 62.4 | 1,002 |
| Total | 11.8 | 5.1 | 16.9 | 7.8 | 4.8 | 12.6 | 19.6 | 9.9 | 29.5 | 42.7 | 5,336 |

${ }^{1}$ Unmet need for spacing includes pregnant women whose pregnancy was mistimed, amenorrhoeic women who are not using family planning and whose last birth was mistimed, and fecund women who are neither pregnant nor amenorrhoeic and who are not using any method of family planning and say they want to wait two or more years for their next birth. Also included in unmet need for spacing are fecund women who are not using any method of family planning and say they are unsure whether they want another child or who want another child but are unsure when to have the birth unless they say it would not be a problem if they discovered they were pregnant in the next few weeks. Unmet need for limiting refers to pregnant women whose pregnancy was unwanted, amenorrhoeic women whose last child was unwanted, and fecund women who are neither pregnant nor amenorrhoeic and who are not using any method of family planning and who want no more children. Excluded from the unmet need category are pregnant and amenorrhoeic women who became pregnant while using a method (these women are in need of better contraception).
${ }^{2}$ 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.
${ }^{3}$ Nonusers who are pregnant or amenorrhoeic and women whose pregnancy was the result of a contraceptive failure are not included in the category of unmet need, but are included in the total demand for contraception (since they would have been using had their method not failed).

| Percentage of all women and women who are not currently married with unmet need for family planning, and with met need for family planning, and the total demand for family planning, by background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Background characteristic | Unmet need for family planning ${ }^{1}$ |  |  | Met need for family planning (currently using) |  |  | Total demand for family planning ${ }^{3}$ |  |  | Percentage of demand satisfied | Number of women |
|  | For spacing | For limiting | Total | For spacing | For limiting | Total | For spacing | For limiting | Total |  |  |
| ALL WOMEN |  |  |  |  |  |  |  |  |  |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 7.7 | 0.2 | 7.9 | 6.3 | 0.3 | 6.6 | 14.0 | 0.5 | 14.5 | 45.4 | 1,716 |
| 20-24 | 12.7 | 0.3 | 13.0 | 15.4 | 0.3 | 15.7 | 28.0 | 0.6 | 28.6 | 54.8 | 1,494 |
| 25-29 | 14.4 | 1.0 | 15.4 | 17.0 | 1.1 | 18.1 | 31.4 | 2.1 | 33.5 | 54.1 | 1,382 |
| 30-34 | 13.9 | 4.9 | 18.8 | 9.4 | 4.8 | 14.2 | 23.3 | 9.7 | 33.0 | 43.0 | 941 |
| 35-39 | 7.6 | 9.5 | 17.1 | 5.8 | 10.6 | 16.4 | 13.4 | 20.1 | 33.5 | 48.9 | 816 |
| 40-44 | 4.7 | 12.8 | 17.5 | 2.5 | 12.1 | 14.6 | 7.3 | 24.9 | 32.1 | 45.6 | 688 |
| 45-49 | 2.4 | 8.0 | 10.3 | 1.1 | 6.8 | 7.9 | 3.5 | 14.8 | 18.3 | 43.4 | 583 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 8.9 | 3.5 | 12.5 | 13.7 | 5.6 | 19.3 | 22.7 | 9.1 | 31.8 | 60.8 | 2,629 |
| Rural | 10.5 | 3.7 | 14.2 | 7.4 | 2.6 | 10.1 | 18.0 | 6.4 | 24.3 | 41.4 | 4,991 |
| Region |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 12.3 | 4.6 | 16.8 | 7.2 | 5.0 | 12.2 | 19.5 | 9.6 | 29.0 | 42.0 | 1,121 |
| North East | 12.0 | 4.1 | 16.1 | 2.8 | 1.2 | 4.0 | 14.7 | 5.3 | 20.0 | 19.7 | 1,368 |
| North West | 9.0 | 1.1 | 10.0 | 4.2 | 0.6 | 4.8 | 13.2 | 1.6 | 14.9 | 32.5 | 2,095 |
| South East | 7.7 | 5.0 | 12.7 | 14.8 | 5.2 | 20.0 | 22.5 | 10.2 | 32.7 | 61.1 | 737 |
| South South | 10.7 | 6.0 | 16.8 | 18.0 | 6.0 | 24.0 | 28.8 | 12.0 | 40.7 | 58.8 | 1,342 |
| South West | 7.2 | 3.4 | 10.5 | 18.3 | 8.0 | 26.2 | 25.4 | 11.3 | 36.8 | 71.4 | 958 |
| Education |  |  |  |  |  |  |  |  |  |  |  |
| No education | 9.8 | 3.6 | 13.4 | 2.5 | 1.6 | 4.0 | 12.2 | 5.2 | 17.4 | 23.2 | 3,171 |
| Primary | 11.2 | 5.6 | 16.8 | 7.5 | 6.3 | 13.8 | 18.8 | 11.8 | 30.6 | 45.2 | 1,628 |
| Secondary | 10.3 | 2.4 | 12.6 | 17.0 | 4.0 | 21.0 | 27.3 | 6.4 | 33.6 | 62.4 | 2,370 |
| Higher | 5.1 | 4.3 | 9.4 | 28.6 | 7.1 | 35.7 | 33.7 | 11.4 | 45.1 | 79.1 | 451 |
| Total | 10.0 | 3.7 | 13.6 | 9.6 | 3.7 | 13.3 | 19.6 | 7.3 | 26.9 | 49.3 | 7,620 |
| WOMEN WHO ARE NOT CURRENTLY MARRIED |  |  |  |  |  |  |  |  |  |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 4.8 | 0.0 | 4.8 | 7.4 | 0.3 | 7.6 | 12.2 | 0.3 | 12.4 | 61.3 | 1,171 |
| 20-24 | 7.3 | 0.4 | 7.6 | 24.9 | 0.6 | 25.5 | 32.2 | 0.9 | 33.1 | 77.0 | 583 |
| 25-29 | 6.6 | 0.3 | 6.8 | 25.6 | 2.3 | 28.0 | 32.2 | 2.6 | 34.8 | 80.4 | 236 |
| 30-34 | 14.2 | 1.4 | 15.7 | 14.4 | 5.3 | 19.7 | 28.6 | 6.7 | 35.3 | 55.7 | 93 |
| 35-39 | 0.9 | 1.8 | 2.7 | 13.8 | 3.3 | 17.1 | 14.7 | 5.1 | 19.8 | 86.4 | 53 |
| 40-44 | 0.0 | 1.1 | 1.1 | 3.1 | 7.1 | 10.2 | 3.1 | 8.2 | 11.3 | 90.2 | 69 |
| 45-49 | 2.3 | 1.3 | 3.6 | 0.5 | 1.5 | 2.1 | 2.8 | 2.9 | 5.7 | 36.5 | 79 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 4.3 | 0.2 | 4.6 | 16.5 | 1.4 | 17.9 | 20.8 | 1.6 | 22.4 | 79.6 | 996 |
| Rural | 6.7 | 0.3 | 7.1 | 11.7 | 0.9 | 12.6 | 18.4 | 1.2 | 19.6 | 64.0 | 1,288 |
| Region |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 6.3 | 0.4 | 6.7 | 7.7 | 2.2 | 9.9 | 13.9 | 2.7 | 16.6 | 59.6 | 366 |
| North East | 6.8 | 0.3 | 7.1 | 2.6 | 0.0 | 2.6 | 9.4 | 0.3 | 9.7 | 27.0 | 245 |
| North West | 0.5 | 0.0 | 0.5 | 1.1 | 2.6 | 3.7 | 1.6 | 2.6 | 4.2 | 88.0 | 215 |
| South East | 6.5 | 0.0 | 6.5 | 17.3 | 0.2 | 17.5 | 23.8 | 0.2 | 24.0 | 72.8 | 369 |
| South South | 8.6 | 0.7 | 9.2 | 21.3 | 1.3 | 22.6 | 29.8 | 1.9 | 31.8 | 71.0 | 678 |
| South West | 1.7 | 0.0 | 1.7 | 17.1 | 0.4 | 17.5 | 18.8 | 0.4 | 19.2 | 91.2 | 411 |
| Education |  |  |  |  |  |  |  |  |  |  |  |
| No education | 6.2 | 0.2 | 6.4 | 1.5 | 3.2 | 4.7 | 7.7 | 3.4 | 11.1 | 42.3 | 293 |
| Primary | 5.6 | 0.3 | 5.9 | 5.6 | 0.7 | 6.3 | 11.2 | 1.0 | 12.2 | 51.6 | 454 |
| Secondary | 6.0 | 0.4 | 6.3 | 16.2 | 0.8 | 17.0 | 22.1 | 1.2 | 23.3 | 72.9 | 1,324 |
| Higher | 3.4 | 0.0 | 3.4 | 33.5 | 0.7 | 34.2 | 37.0 | 0.7 | 37.7 | 90.8 | 213 |
| Total | 5.7 | 0.3 | 6.0 | 13.8 | 1.1 | 14.9 | 19.5 | 1.4 | 20.9 | 71.3 | 2,284 |

${ }^{1}$ Unmet need for spacing includes pregnant women whose pregnancy was mistimed, amenorrhoeic women who are not using family planning and whose last birth was mistimed, and fecund women who are neither pregnant nor amenorrhoeic and who are not using any method of family planning and say they want to wait two or more years for their next birth. Also included in unmet need for spacing are fecund women who are not using any method of family planning and say they are unsure whether they want another child or who want another child but are unsure when to have the birth unless they say it would not be a problem if they discovered they were pregnant in the next few weeks. Unmet need for limiting refers to pregnant women whose pregnancy was unwanted, amenorrhoeic women whose last child was unwanted, and fecund women who are neither pregnant nor amenorrhoeic and who are not using any method of family planning and who want no more children. Excluded from the unmet need category are pregnant and amenorrhoeic women who became pregnant while using a method (these women are in need of better contraception).
${ }^{2}$ 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.
${ }^{3}$ Nonusers who are pregnant or amenorrhoeic and women whose pregnancy was the result of a contraceptive failure are not included in the category of unmet need, but are included in the total demand for contraception (since they would have been using had their method not failed).

### 7.4 Ideal Number of Children

This section discusses responses of women to inquiries about what they consider to be the ideal number of children. Respondents who had no children were asked how many children they would like to have if they could choose the number of children to have in their whole life. Those who had living children were asked about the number of children they would choose if they could start their childbearing again. Responses provide an indicator of future fertility, while the information supplied by the latter group also provides a measure of unwanted fertility.

Table 7.5 shows the distribution of respondents by ideal number of children and mean ideal number of children according to actual number of living children for all women and for all men. One in every nine women gave a non-numeric response ${ }^{1}$ to the question on ideal number of children. In general, Nigerian women, irrespective of their number of living children, consider a large number of children ideal.

The ideal number of children is 6.7 for all women and 7.3 for currently married women. Almost two-thirds of all women consider five or more children to be ideal. Only 6 percent of women think three or less children is ideal.

Among all women, the mean ideal number of children increases with the number of living children, from 5.4 for those without any children to 8.6 among those with six or more children. Clearly, Nigerian women consider a large family to be desirable.

Nigerian men, on average, want even more children than Nigerian women. Indeed, men's mean ideal number of children is about two children more than that of women ( 8.6 versus 6.7 ). Currently married men report a mean ideal number of children that is three children more than the ideal of currently married women (10.6 versus 7.3). These findings are similar to those from the 1999 NDHS (NPC, 2000:95).

[^7]
## Table 7.5 Ideal number of children

Percent distribution of all women and all men by ideal number of children and mean ideal number of children for all women and for all men and for currently married women and for currently married men, according to number of living children, Nigeria 2003

| Ideal number of children | Number of living children ${ }^{1}$ |  |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6+ |  |
| WOMEN |  |  |  |  |  |  |  |  |
| 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1 | 0.2 | 0.1 | 0.0 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 |
| 2 | 2.5 | 2.2 | 1.6 | 0.5 | 0.6 | 1.7 | 0.4 | 1.6 |
| 3 | 7.6 | 6.2 | 3.9 | 2.1 | 0.7 | 2.0 | 1.4 | 4.4 |
| 4 | 30.2 | 21.2 | 16.6 | 12.7 | 11.8 | 5.7 | 6.3 | 18.2 |
| 5 | 18.1 | 15.6 | 17.4 | 14.7 | 9.6 | 11.5 | 5.9 | 14.2 |
| 6+ | 34.5 | 44.9 | 51.2 | 57.7 | 65.6 | 63.6 | 68.2 | 50.7 |
| Non-numeric responses | 6.8 | 9.7 | 9.4 | 12.2 | 11.4 | 15.5 | 17.7 | 10.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of women | 2,319 | 1,109 | 936 | 818 | 737 | 646 | 1,055 | 7,620 |
| Mean ideal number of children for: ${ }^{2}$ |  |  |  |  |  |  |  |  |
| All women | 5.4 | 6.3 | 6.6 | 7.0 | 7.5 | 7.6 | 8.6 | 6.7 |
| Number | 2,161 | 1,001 | 849 | 718 | 653 | 546 | 868 | 6,795 |
| Currently married women | 6.9 | 6.6 | 6.7 | 7.0 | 7.5 | 7.7 | 8.6 | 7.3 |
| Number | 431 | 805 | 786 | 678 | 621 | 510 | 806 | 4,638 |
| MEN |  |  |  |  |  |  |  |  |
| 0 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.8 |
| 1 | 0.0 | 0.1 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 2 | 2.0 | 0.3 | 1.3 | 0.0 | 0.0 | 0.0 | 0.4 | 1.2 |
| 3 | 5.7 | 11.2 | 5.1 | 7.1 | 1.6 | 2.7 | 1.1 | 4.8 |
| 4 | 21.0 | 18.3 | 14.3 | 15.6 | 30.8 | 17.3 | 7.2 | 17.3 |
| 5 | 20.9 | 14.2 | 16.1 | 19.5 | 9.0 | 7.2 | 6.9 | 15.8 |
| 6+ | 39.4 | 37.6 | 39.9 | 45.0 | 41.9 | 56.7 | 58.1 | 44.6 |
| Non-numeric responses | 9.5 | 18.3 | 22.6 | 12.9 | 16.7 | 16.1 | 26.1 | 15.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of men | 1,139 | 168 | 161 | 145 | 117 | 102 | 513 | 2,346 |
| Mean ideal number of children for: ${ }^{2}$ |  |  |  |  |  |  |  |  |
| All men | 6.7 | 7.3 | 8.3 | 9.6 | 9.3 | 10.2 | 13.4 | 8.6 |
| Number | 1,031 | 138 | 124 | 126 | 98 | 85 | 379 | 1,982 |
| Currently married men | 6.7 | 8.0 | 8.5 | 9.7 | 9.4 | 10.3 | 13.5 | 10.6 |
| Number | 80 | 105 | 116 | 122 | 95 | 83 | 371 | 972 |

${ }^{1}$ Includes current pregnancy
${ }^{2}$ Means are calculated excluding respondents giving non-numeric responses.

### 7.5 Ideal Number of Children by Background Characteristics

Among both women and men, there are significant variations in mean ideal number of children by background characteristics (Table 7.6). The older the respondent, the more children they consider ideal; this is true across most background characteristics. However, even the youngest women (age 1519), think the ideal family size is about six children (5.8). Rural women want one more child than urban women ( 7.0 versus 6.0 ). Women in the North West have the largest ideal number of children (8.6), followed by those in the North East (7.8). Women in the south, on the other hand, want fewer children than women in the north. The number is lowest in the South West (4.8).

| Mean ideal number of children for all women by current age and mean ideal number of children for all men, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Background characteristic | Current age: women |  |  |  |  |  |  | All women | All men |
|  | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 |  |  |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 5.5 | 5.6 | 5.7 | 6.4 | 6.6 | 7.0 | 7.1 | 6.0 | 6.6 |
| Rural | 6.0 | 6.6 | 7.0 | 7.4 | 8.1 | 8.0 | 8.1 | 7.0 | 9.8 |
| Region |  |  |  |  |  |  |  |  |  |
| North Central | 5.2 | 6.0 | 6.1 | 6.4 | 7.1 | 6.9 | 7.6 | 6.2 | 8.0 |
| North East | 7.0 | 6.9 | 7.9 | 8.0 | 8.9 | 9.1 | 8.8 | 7.8 | 12.5 |
| North West | 7.4 | 8.2 | 8.5 | 9.3 | 9.6 | 9.1 | 9.4 | 8.6 | 12.8 |
| South East | 5.2 | 5.0 | 5.0 | 5.3 | 5.6 | 5.8 | 6.3 | 5.3 | 5.3 |
| South South | 5.0 | 5.1 | 5.3 | 5.7 | 5.9 | 7.0 | 6.9 | 5.5 | 6.7 |
| South West | 4.4 | 4.4 | 4.4 | 4.8 | 5.2 | 5.4 | 6.3 | 4.8 | 4.8 |
| Education |  |  |  |  |  |  |  |  |  |
| No education | 7.5 | 7.8 | 8.4 | 8.7 | 9.1 | 8.7 | 8.6 | 8.3 | 14.4 |
| Primary | 5.9 | 6.5 | 6.5 | 6.6 | 7.2 | 7.1 | 6.8 | 6.6 | 9.0 |
| Secondary | 5.0 | 5.1 | 5.1 | 5.5 | 5.5 | 5.8 | 5.0 | 5.2 | 6.8 |
| Higher | (5.0) | 5.1 | 4.6 | 4.8 | 4.8 | (5.6) | (5.3) | 4.9 | 6.5 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |
| Lowest | 6.4 | 6.7 | 8.0 | 8.1 | 8.6 | 8.4 | 8.8 | 7.6 | 11.4 |
| Second | 6.3 | 7.0 | 7.4 | 7.8 | 8.5 | 8.3 | 8.4 | 7.4 | 11.6 |
| Middle | 6.3 | 6.9 | 7.0 | 7.4 | 8.0 | 8.6 | 7.7 | 7.1 | 9.6 |
| Fourth | 5.8 | 6.0 | 6.3 | 7.2 | 7.9 | 7.3 | 7.8 | 6.5 | 7.4 |
| Highest | 4.7 | 5.1 | 5.0 | 5.3 | 5.6 | 5.6 | 5.8 | 5.1 | 5.0 |
| All women | 5.8 | 6.2 | 6.5 | 7.1 | 7.5 | 7.7 | 7.8 | 6.7 | na |
| Note: Figures in parentheses are based on 25-49 unweighted cases. na $=$ Not applicable |  |  |  |  |  |  |  |  |  |

The ideal number of children declines as level of education and wealth quintile increase. For example, the mean ideal number of children is 4.9 among women with higher education, compared with 8.3 for women with no education. Similarly, women in households in the lowest wealth quintile want 7.6 children, compared with the 5.1 children for women living in households in the highest wealth quintile, a difference of 2.5 children. These findings are similar to those of the 1999 NDHS (NPC, 2000:97), which showed that ideal family size has a strong negative correlation with level of education.

Table 7.6 also presents the findings for men. As observed earlier, men, irrespective of background characteristics, want more children than women. Similar to women, the ideal family size among urban men is lower than among rural men ( 6.6 and 9.8 , respectively). However, the differential for men between urban and rural ideal number of children ( 3.2 children) is larger than the differential for women ( 1 child). The magnitude of regional differences is also more pronounced for men than for women. Men in the North West want almost three times as many children as men in the South West (12.8 versus 4.8). Similar to women, the mean ideal number of children is lowest in the South West and South East and highest in the North West and North East.

Men's ideal number of children decreases as level of education and wealth quintile increase. For example, men without education want twice as many children as men with higher education ( 14.4 versus 6.5). In fact, men without education have the largest ideal family size among all the subgroups in the sample.

### 7.6 Wanted and Unwanted Fertility

In the 2003 NDHS, women were asked a series of questions for each child born in the preceding five years (and for any current pregnancy) to determine whether the particular pregnancy was planned, unplanned but wanted at a later time, or unwanted. These questions form a potentially powerful indicator of the degree to which couples successfully control childbearing. In addition, the data can be used to gauge the effect of the prevention of unwanted births on fertility.

The questions are demanding. The respondent is required to recall accurately her wishes at one or more points in the past five years and to report them honestly. The danger of rationalization is present and a previously unwanted pregnancy may well become a cherished child. Despite these potential problems, results from previous surveys have proved plausible. Respondents are clearly willing to report unwanted conceptions, although some after-the-fact rationalization probably occurs; the result is probably an underestimate of unwanted fertility.

In DHS surveys, these retrospective questions are asked independently of the questions on the desire for more children and total desired family size and have not been cross-edited at the data processing stage.

Table 7.7 shows the percent distribution of births in the five years preceding the survey by planning status of birth, according to birth order and mother's age at birth. Although more than eight in ten births were wanted at the time, one out of every six births was either not wanted at all or was wanted later (mistimed). There is no clear pattern in the percentage of births not wanted by birth order.

| Table 7.7 Fertility planning status |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of births in the five years preceding the survey (including current pregnancies), by fertility planning status, according to birth order and mother's age at birth, Nigeria 2003 |  |  |  |  |  |  |
| Birth order and mother's age at birth | Planning status of birth |  |  |  | Total | Number of births |
|  | Wanted then | Wanted later | Wanted no more | Missing |  |  |
| Birth order |  |  |  |  |  |  |
| 1 | 83.0 | 8.4 | 7.8 | 0.9 | 100.0 | 1,430 |
| 2 | 88.3 | 8.0 | 2.7 | 1.0 | 100.0 | 1,169 |
| 3 | 88.8 | 8.9 | 1.5 | 0.7 | 100.0 | 1,005 |
| 4+ | 83.0 | 10.6 | 5.6 | 0.7 | 100.0 | 3,483 |
| Mother's age at birth |  |  |  |  |  |  |
| <20 | 82.4 | 9.4 | 7.1 | 1.1 | 100.0 | 1,235 |
| 20-24 | 85.4 | 10.9 | 3.1 | 0.5 | 100.0 | 1,916 |
| 25-29 | 88.4 | 8.8 | 1.8 | 1.0 | 100.0 | 1,776 |
| 30-34 | 84.1 | 9.8 | 5.6 | 0.6 | 100.0 | 1,100 |
| 35-39 | 81.7 | 7.5 | 10.1 | 0.7 | 100.0 | 770 |
| 40-44 | 76.0 | 9.8 | 12.3 | 1.8 | 100.0 | 246 |
| 45-49 | 81.9 | 7.5 | 10.6 | 0.0 | 100.0 | 43 |
| Total | 84.7 | 9.5 | 5.0 | 0.8 | 100.0 | 7,087 |

### 7.7 Wanted Fertility Rates

Table 7.8 presents total wanted fertility rates and total fertility rates for the three years preceding the survey by background characteristics. Wanted fertility rates are calculated in the same manner as the conventional age-specific fertility rates presented in Chapter 4, except that births classified as unwanted are omitted from the numerator. The remainder is cumulated to form a total wanted fertility rate, which is analogous to the conventional TFR. A comparison of the two rates suggests the potential effect of the elimination of unwanted births.

The total wanted fertility rate is 5.3 , which is 0.4 births less than the total fertility rate of 5.7. This difference implies a low level of unwanted births in Nigeria. However, there are some differences between wanted TFRs and actual TFRs across subgroups. For example, the difference between the two rates is lowest in the North West ( 0.1 child) and largest in the South South region ( 0.7 child).

### 7.8 Ideal Number of Children and Unmet Need by Women's Status

Table 7.9 shows women's ideal family size and their unmet need for family planning by the three indicators of women empowerment-number of decisions in which the respondent participates, number of reasons for which a woman can refuse to have sexual relations with her husband, and number of reasons for which the respondent feels a husband is justified in beating his wife (see Chapter 3).

The data indicate that the higher the status of women, the lower the ideal number of children. This is true regardless of indicator of women's status. However, the relationship between women's status indicators and unmet need for family planning is unclear.

Table 7.8 Wanted fertility rates
Total wanted fertility rates and total fertility rates for the three years preceding the survey, by background characteristics, Nigeria 2003

| Background <br> characteristic | Total <br> wanted <br> fertility <br> rate | Total <br> fertility <br> rate |
| :--- | :--- | :--- |
| Residence <br> Urban | 4.6 | 4.9 |
| Rural | 5.7 | 6.1 |
| Region |  |  |
| North Central | 5.2 | 5.7 |
| North East | 6.7 | 7.0 |
| North West | 6.6 | 6.7 |
| South East | 3.5 | 4.1 |
| South South | 3.9 | 4.6 |
| South West | 3.9 | 4.1 |
| Education |  |  |
| $\quad$ No education | 6.5 | 6.7 |
| Primary | 5.7 | 6.3 |
| Secondary | 4.3 | 4.7 |
| Higher | 2.6 | 2.8 |
| Wealth quintile |  |  |
| Lowest | 6.1 | 6.5 |
| Second | 5.9 | 6.3 |
| Middle | 5.4 | 5.7 |
| Fourth | 5.6 | 5.9 |
| Highest | 3.8 | 4.2 |
| Total | 5.3 | 5.7 |

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.

| Mean ideal number of children and unmet need for family planning, by women's status indicators, Nigeria 2003 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Unme | for famil | ning ${ }^{2}$ |  |
| Women's status indicator | number of children ${ }^{1}$ | Number | For spacing | For limiting | Total | of women |
| Number of decisions in which woman has final say ${ }^{3}$ |  |  |  |  |  |  |
| 0 | 8.1 | 1,791 | 11.8 | 2.6 | 14.4 | 2,136 |
| 1-2 | 7.3 | 1,564 | 12.6 | 5.0 | 17.6 | 1,799 |
| 3-4 | 6.1 | 643 | 13.3 | 8.6 | 21.9 | 709 |
| 5 | 6.3 | 640 | 8.1 | 9.7 | 17.8 | 692 |
| Number of reasons to refuse sex with husband |  |  |  |  |  |  |
| 0 | 8.0 | 420 | 12.6 | 4.0 | 16.6 | 506 |
| 1-2 | 7.9 | 1,171 | 10.4 | 4.4 | 14.8 | 1,409 |
| 3-4 | 7.0 | 3,046 | 12.2 | 5.6 | 17.8 | 3,422 |
| Number of reasons wife beating is justified |  |  |  |  |  |  |
| 0 | 6.4 | 1,493 | 11.5 | 5.5 | 16.9 | 1,632 |
| 1-2 | 7.5 | 998 | 9.6 | 5.2 | 14.8 | 1,135 |
| 3-4 | 7.3 | 761 | 16.1 | 4.4 | 20.5 | 878 |
| 5-6 | 8.1 | 1,386 | 11.4 | 5.1 | 16.4 | 1,691 |
| Total | 7.3 | 4,638 | 11.8 | 5.1 | 16.9 | 5,336 |
| ${ }^{1}$ Totals are calculated excluding the women giving non-numeric responses. <br> ${ }^{2}$ See Table 7.3 for definition of unmet need for family planning. <br> ${ }^{3}$ Either by herself or jointly with others |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

## INFANT AND CHILD MORTALITY

One important objective of the 2003 Nigeria Demographic and Health Survey (2003 NDHS) was to measure levels and trends of mortality among children, because infant and child mortality rates are basic indicators of a country's socioeconomic situation and quality of life. Estimates of childhood mortality are based on information from the birth history section of the questionnaire administered to women. The section began with questions about the aggregate childbearing experience of respondents (i.e., the number of sons and daughters who live with the mother, the number who live elsewhere, and the number who have died). For each of these births, information was collected on sex, month and year of birth, survivorship status, and current age or, if the child had died, age at death. This information is used to directly estimate the following five mortality rates:

$$
\begin{array}{ll}
\text { Neonatal mortality: } & \begin{array}{l}
\text { the probability of dying within the first month of life } \\
\text { Postneonatal mortality: } \\
\text { the difference between infant and neonatal mortality }
\end{array} \\
\text { Infant mortality: } & \text { the probability of dying before the first birthday } \\
\text { Child mortality: } & \text { the probability of dying between the first and fifth birthdays } \\
\text { Under-five mortality: } & \text { the probability of dying between birth and the fifth birthday. }
\end{array}
$$

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

### 8.1 Data Quality Assessment

The reliability of mortality estimates depends on the sampling variability of the estimates and on nonsampling errors. Sampling variability and sampling errors are discussed in Appendix B. Nonsampling errors depend on the completeness with which child deaths are reported and the accuracy of the reported date of birth and age at death. Omission of births and deaths affects mortality estimates, displacement of dates impacts mortality trends, and misreporting of age at death may distort the age pattern of mortality.

Typically, the most serious source of nonsampling errors in a survey that collects retrospective information on births and deaths arises from an underreporting of births and deaths of children who are not alive at the time of the survey. Mothers may be reluctant to talk about their dead children because of feelings associated with any death or because the culture in which they live may discourage discussing the dead. Even if a respondent is willing to discuss a dead child, she may be likely to forget events that happened in the more distant past, particularly if a child was alive only for a short time.

When selective omission of childhood deaths occurs, it is usually most severe for deaths in early infancy. However, the proportion of neonatal deaths occurring in the first week of life is high: 74 percent for the period $0-4$ years preceding the survey. Furthermore, it appears that early infant deaths for births that occurred longer before the survey have not been severely underreported; 72 percent of all neonatal deaths in the 20 years preceding the survey were early neonatal deaths (Appendix Table C.5).

Another issue affecting childhood mortality estimates is the quality of reporting of age at death. If age at death is misreported, estimates may be biased, especially if the net effect of age misreporting results in transference of deaths from one age bracket to another. To minimize the error in reporting of age at death, interviewers were instructed to record the age at death in days for deaths under one month and in months for deaths under two years. They also were asked to probe for deaths reported at one year to determine a more precise age at death in terms of months. Despite the emphasis during interviewer training and fieldwork monitoring on probing for accurate age at death, Appendix Table C. 6 shows that the num-
ber of reported deaths at age 12 months or one year of age is several times that reported for ages 11 and 13 months. It is likely, then, that some of these deaths actually occurred before one year of age but are not included in the infant mortality rate. Of course, the excess deaths reported at 12 months and one year of age have no effect on estimates of overall under-five mortality rates.

Despite evidence of heaping at age of death, it should be noted that the age at death data collected in the 2003 NDHS are far superior to those collected in the 1999 NDHS and are substantially better than those in the 1990 NDHS, both in terms of heaping of age at death and completeness of reporting of age at death. Furthermore, the majority of deaths recorded at one year of age occurred in the North East and North West (data not shown), where lack of recordkeeping and uncertainty regarding dates of events makes this type of data collection extremely difficult.

### 8.2 LeVELS

Table 8.1 shows early childhood mortality rates based on data from the 2003 NDHS. For the five years immediately preceding the survey (1999-2003), the infant mortality rate was 100 deaths per 1,000 live births. The estimates of neonatal mortality and postneonatal mortality were 48 and 52 deaths per 1,000 births, respectively. The estimate of child mortality (age 1 to age 4) was higher: 112 deaths per 1,000 children surviving to 12 months of age. The overall under-five mortality rate for the period was 201 deaths per 1,000 births.

| Table 8.1 Early childhood mortality rates |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Neonatal, postneonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey, Nigeria 2003 |  |  |  |  |  |  |
| Years preceding the survey | Approximate calendar period | Neonatal mortality (NN) | Postneonatal mortality ${ }^{1}$ (PNN) | Infant mortality $\left({ }_{1} q_{0}\right)$ | Child mortality $\left({ }_{4} q_{1}\right)$ | Under-five mortality $\left({ }_{5} \mathrm{q}_{0}\right)$ |
| 0-4 | 1999-2003 | 48 | 52 | 100 | 112 | 201 |
| 5-9 | 1994-1998 | 59 | 61 | 120 | 132 | 236 |
| 10-14 | 1989-1993 | 55 | 58 | 113 | 136 | 234 |

### 8.3 Comparison of Infant Mortality Rates with Previous Demographic and Health Surveys

## The 2003 NDHS Compared with the 1999 NDHS

The infant mortality estimate from the 2003 NDHS (100 per 1,000) is significantly higher than those from the 1990 NDHS ( 87 per 1,000) and the 1999 NDHS ( 75 per 1,000). In the case of the latter survey, there is evidence of omission of births and deaths from the period preceding the survey (National Population Commission, 2000). The conclusion of the data quality assessment in the 1999 NDHS report is that the reported rates significantly underestimated the true mortality levels in the country. The very substantial difference between the 1999 and 2003 surveys confirms the underreporting of events in the 1999 NDHS. Thus, this chapter will include no further discussion of the 1999 results.

## The 2003 NDHS Compared with the 1990 NDHS

The 1990 NDHS infant mortality rate of 87 per 1,000 is significantly lower than the 2003 NDHS rate of 100 per 1,000 , which would indicate a worsening of health conditions in the country during the 1990s. In comparing the results of the two surveys, however, it is necessary to consider that the difference between the rates may not indicate an increase in infant mortality, but rather reflect an underestimate during the previous survey.

The 2003 NDHS results for the period 10-14 years preceding the survey, which would correspond to approximately the 1989-1993 calendar years, produce an infant mortality rate of 113 per 1,000, while the 1990 NDHS estimate for approximately the same time period (1986-1990) was 87 per 1,000. The 26point difference is substantial, and it is unlikely that sampling variability is responsible for the much higher rate of the 2003 survey.

Table 8.2 shows a comparison between the infant mortality rates from the 2003 NDHS and the 1990 NDHS, according to the four regions of analysis used in the 1990 survey. ${ }^{1}$ The rates are shown for approximately the same time period, which is the $10-14$ years preceding the 2003 NDHS (1989-1993) and the 0-4 years preceding the 1990 NDHS (1986-1990). For clarity, this section examines only infant mortality rates for comparable time periods. A more detailed analysis would include neonatal, postneonatal, and child mortality.

The comparison of infant mortality rates suggests that the 1990 survey underestimated mortality in certain regions. Table 8.2 shows that while the estimates for infant mortality in the Southeast and Southwest are statistically identical, there are discrepancies between the Northeast and Northwest rates. In the case of the Northwest, the rate calculated from the 2003 data is 136 per 1,000 compared with the 1990 estimate of 110 per 1,000 , a 26 -point difference. The difference between rates in the Northeast region is even greater: the rate from the 2003 survey is 129 per 1,000 , compared with the 1990 survey rate of 83 per 1,000 , a 46 -point difference.

Mortality estimates from the two surveys for the Northeast and Northwest are substantially different. Greater credibility should be placed in the 2003 estimates for two reasons. First, studies have shown that respondents typically underreport infant and child deaths. Thus, it is likely that the interviewers working in the Northeast during the 2003 NDHS were better able to obtain complete information regarding respondents' dead children. Second, in the case of the Northeast, the infant morality rates in the 1990 survey were as low as rates in the southern regions, even though women in the Northeast were comparatively disadvantaged in terms of various maternal care indicators such as antenatal and delivery care.

Although a thorough investigation of the discrepancies between

Table 8.2 Comparison of infant mortality rates from the 2003 NDHS and the 1990 NDHS

Infant mortality rates (per 1,000 live births) for the period 10-14 years preceding the 2003 NDHS and the period 0-4 years preceding the 1990 NDHS, by region

| Region/ <br> survey | Infant <br> mortality <br> rate |
| :--- | :---: |

## Northeast

2003 NDHS 129
1990 NDHS 83

Northwest
2003 NDHS 136
1990 NDHS 110

Southeast
2003 NDHS 74
1990 NDHS 78

Southwest

| 2003 NDHS | 81 |
| :--- | :--- |
| 1990 NDHS | 75 |

Total
2003 NDHS 113
1990 NDHS 87
Note: For this comparison, the regions of analysis are the four regions used in the 1990 NDHS. the two sets of estimates is beyond the scope of this report, evidence points to a serious underestimate of mortality in the Northeast and Northwest regions during the 1990 NDHS. This, in turn, would have biased

[^8]downward the infant mortality rate for the entire country, because the high-fertility respondents of the north contributed more than half of the births in Nigeria in the sample. The greater contribution to the underestimate is attributable to respondents in the Northeast. In conclusion, this preliminary analysis indicates that the 1990 survey estimate of 87 per 1,000 for the 1986-1990 period was an underestimate. Thus, it is not possible to conclude that the difference between the 1990 rate ( 87 per 1,000 ) and the 2003 rate (100 per 1,000 ) is due to an increase in mortality risks during the intervening years. Clearly, poor data quality in the previous survey contributes to the difference.

### 8.4 Socioeconomic Differentials in Childhood Mortality

Table 8.3 shows the 2003 NDHS infant and child mortality rates by socioeconomic variables. The estimated mortality rates are for the 10 -year period preceding the survey. A 10 -year period is used to calculate the rates for population subgroups to reduce sampling variability.

| Neonatal, postneonatal, infant, child, and under-five mortality rates for the ten-year period preceding the survey, by background characteristics, Nigeria 2003 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Background characteristic | Neonatal mortality ( NN ) | Postneonatal mortality ${ }^{1}$ (PNN) | Infant mortality $\left(1 q_{0}\right)$ | Child mortality $\left({ }_{4} q_{1}\right)$ | Under-five mortality $\left({ }_{5} \mathrm{q}_{0}\right)$ |
| Residence |  |  |  |  |  |
| Urban | 37 | 44 | 81 | 78 | 153 |
| Rural | 60 | 61 | 121 | 139 | 243 |
| Region |  |  |  |  |  |
| North Central | 53 | 49 | 103 | 70 | 165 |
| North East | 61 | 65 | 125 | 154 | 260 |
| North West | 55 | 59 | 114 | 176 | 269 |
| South East | 34 | 32 | 66 | 40 | 103 |
| South South | 53 | 68 | 120 | 63 | 176 |
| South West | 39 | 30 | 69 | 47 | 113 |
| Mother's education |  |  |  |  |  |
| No education | 60 | 64 | 124 | 166 | 269 |
| Primary | 53 | 58 | 111 | 85 | 186 |
| Secondary | 37 | 35 | 71 | 45 | 113 |
| Higher | (39) | (22) | (61) | (20) | (80) |
| Wealth quintile |  |  |  |  |  |
| Lowest | 59 | 74 | 133 | 143 | 257 |
| Second | 70 | 70 | 140 | 178 | 293 |
| Middle | 56 | 54 | 110 | 118 | 215 |
| Fourth | 48 | 39 | 87 | 101 | 179 |
| Highest | 23 | 30 | 52 | 29 | 79 |
| Total | 53 | 56 | 109 | 121 | 217 |
| Note: Figures in parentheses are based on 250 to 499 exposed persons. <br> ${ }^{1}$ Computed as the difference between the infant and the neonatal mortality rates |  |  |  |  |  |

As is the case in most countries, mortality rates in infancy and early childhood are higher in rural than in urban areas. In terms of infant mortality, rural rates ( 121 per 1,000 ) exceed urban rates ( 81 per 1,000 ) by a factor of about 1.5. Much of this difference arises from the neonatal rates. In the case of child mortality, rural rates ( 139 per 1,000 ) exceed urban rates ( 78 per 1,000 ) by a factor of about 1.8 . Infant and child mortality rates also vary according to region. For example, the North East, North West, and South South have the highest infant mortality rates, followed by North Central. In these regions, infant mortality is estimated as exceeding 100 per 1,000. Infant mortality in the South East and South West,
however, is estimated at less than 70 per 1,000. Regional differentials in infant mortality are consistent with regional differentials in basic indicators of maternal care, such as antenatal care visits and content, as well as delivery assistance (see Chapter 9).

As expected, mortality levels decline as mother's education increases. Between education categories, the differentials are greater for postneonatal mortality and, especially, child mortality than for neonatal mortality. The mortality risk of children is also associated with the economic status of the household. The under-five mortality rate in households in the lowest and second quintiles of the wealth index is more than three times that in households in the highest quintile.

### 8.5 Demographic Differentials in Childhood Mortality

Table 8.4 shows the relationship between early childhood mortality and demographic variables. As was the case with the socioeconomic differentials, the rates are shown for the 10 -year period preceding the survey.

| Neonatal, postneonatal, infant, child, and under-five mortality rates for the ten-year period preceding the survey, by demographic characteristics, Nigeria 2003 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Demographic characteristic | Neonatal mortality (NN) | Postneonatal mortality ${ }^{1}$ (PNN) | Infant mortality $\left({ }_{1} q_{0}\right)$ | Child mortality ${ }_{4} q_{1}$ ) | Under-five mortality $\left({ }_{5} q_{0}\right)$ |
| Sex of child |  |  |  |  |  |
| Male | 60 | 56 | 116 | 120 | 222 |
| Female | 46 | 56 | 102 | 122 | 212 |
| Mother's age at birth |  |  |  |  |  |
| <20 | 58 | 65 | 123 | 143 | 248 |
| 20-29 | 48 | 52 | 100 | 114 | 203 |
| 30-39 | 55 | 57 | 113 | 112 | 212 |
| 40-49 | (95) | (50) | (145) | (188) | (306) |
| Birth order |  |  |  |  |  |
| 1 | 59 | 47 | 106 | 105 | 200 |
| 2-3 | 40 | 54 | 94 | 105 | 189 |
| 4-6 | 51 | 58 | 109 | 128 | 223 |
| $7+$ | 73 | 65 | 137 | 152 | 269 |
| Previous birth interval ${ }^{2}$ |  |  |  |  |  |
| <2 | 79 | 81 | 160 | 174 | 307 |
| 2 years | 49 | 62 | 111 | 134 | 230 |
| 3 years | 32 | 31 | 63 | 75 | 134 |
| $4+$ years | 30 | 31 | 61 | 59 | 116 |
| Birth size ${ }^{3}$ |  |  |  |  |  |
| Small/very small | 67 | 72 | 139 | na | na |
| Average or larger | 42 | 43 | 86 | na | na |
| Medical maternity care ${ }^{3}$ |  |  |  |  |  |
| No antenatal or delivery care | 63 | 67 | 130 | na | na |
| Either antenatal or delivery care | 37 | 37 | 74 | na | na |
| Both antenatal and delivery care | e 31 | 34 | 65 | na | na |
| Note: Figures in parentheses are based on 250 to 499 exposed persons. na $=$ Not applicable <br> ${ }^{1}$ Computed as the difference between the infant and the neonatal mortality rates <br> ${ }^{2}$ Excludes first-order births <br> ${ }^{3}$ Rates for the five-year period preceding the survey |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

As expected, mortality rates are generally higher for boys than for girls. There are significant differences in mortality risks associated with mother's age and birth order. The largest differentials are in the neonatal period. Shorter birth intervals are associated with higher childhood mortality, both during and after infancy. In terms of the length of the preceding birth interval, mortality rates are markedly lower for intervals of at least two years than for shorter birth intervals. There is a further decrease in the risk of death after a three-year birth interval. In terms of under-five mortality, births following an interval of at least three years are at less than half the risk of death as births occurring within two years of a preceding birth.

Studies have shown that a child's weight at birth is an important indicator of his or her survival chances. Since relatively few mothers had information on their child's exact weight at birth, they were asked instead whether their child was very large, larger than average, average, smaller than average, or small at birth. This has been found to be a good proxy for children's weight. Children reported to be small or very small have substantially higher mortality rates. Children whose mothers did not receive antenatal or delivery care also have higher mortality rates.

### 8.6 Mortality Differentials by Women's Status

The ability to access information, make decisions, and act effectively in their own interest, or in the interest of those who depend on them, are essential aspects of the empowerment of women. It follows that if women, the primary caretakers of children, are empowered, the health and survival of their infants will be enhanced. Table 8.5 presents mortality rates by three indicators of women's status: participation in household decisionmaking, attitude toward refusing to have sex with their husband, and attitude toward wife-beating. For all three indicators, there is an association between increasing women's status and decreasing levels of mortality.

| Table 8.5 Early childhood mortality by women's status indicators |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Neonatal, postneonatal, infant, child and under-five mortality rates for the ten-year period preceding the survey, by women's status indicators, Nigeria 2003 |  |  |  |  |  |
| Indicator of women's status | Neonatal mortality (NN) | Postneonatal mortality ${ }^{1}$ (PNN) | Infant mortality $\left({ }_{1} q_{0}\right)$ | Child mortality $\left({ }_{4} q_{1}\right)$ | Under-five mortality $\left({ }_{5} q_{0}\right)$ |
| Number of decisions in which woman has final say ${ }^{2}$ |  |  |  |  |  |
| 0 | 57 | 55 | 112 | 154 | 249 |
| 1-2 | 56 | 61 | 116 | 123 | 225 |
| 3-4 | 40 | 53 | 94 | 59 | 147 |
| 5 | 48 | 50 | 97 | 92 | 181 |
| Number of reasons to refuse sex with husband |  |  |  |  |  |
| 0 | 54 | 51 | 105 | 150 | 239 |
| 1-2 | 62 | 56 | 118 | 123 | 227 |
| 3-4 | 49 | 57 | 106 | 116 | 210 |
| Number of reasons wife beating is justified |  |  |  |  |  |
| 0 | 47 | 42 | 89 | 78 | 160 |
| 1-2 | 56 | 52 | 108 | 112 | 208 |
| 3-4 | 46 | 70 | 115 | 120 | 221 |
| 5-6 | 62 | 63 | 125 | 167 | 271 |
| ${ }^{1}$ Computed as the difference between the infant and the neonatal mortality rates <br> ${ }^{2}$ Either by herself or jointly with others |  |  |  |  |  |

### 8.7 High-Risk Fertility Behaviour

Previous research has shown a strong relationship between the fertility patterns of women and the mortality risks of their children. Typically, mortality risks are greater for children who are born to mothers who are too young or too old, who are born after a short birth interval, or who have a high birth order. In this analysis, a mother is classified as "too young" if she is less than 18 years of age and "too old" if she is older than 34 years of age. A "short birth interval" is defined as a birth occurring within 24 months of the previous birth, and a child is of "high birth order" if the mother has already given birth to three or more children.

Table 8.6 shows the distribution of children born in the five years preceding the survey by risk category. While first births to women age 18-34 are considered an unavoidable risk, they are included in the analysis and are shown as a separate risk category. Column 1 shows that in the five-year period before the survey, 41 percent of births were in a single high-risk category and 24 percent were in a multiple highrisk category. Only one-fifth of births were not in any high-risk category.

Column 2 shows risk ratios for births in various high-risk categories relative to births not having any high-risk characteristics. The risk ratio for children in any avoidable high-risk category (1.4) was about 40 percent higher than for children not in any high-risk category.

The last column in Table 8.6 looks to the future and addresses the question of how many currently married women have the potential for having a high-risk birth. The results were obtained by simulating the risk category into which a birth to a currently married woman would fall if she were to become pregnant at the time of the survey. For example, a woman who was 37 years old at the time of the survey and had three previous births, the last of which occurred three years earlier, would be classified in the multiple high-risk category for being too old ( 35 or older) and at risk of having a high-order birth (more than three previous births). Twenty-seven percent of currently married women would fall in this category. Overall, eight in ten married women have the potential to give birth to a child with an elevated risk of mortality. Almost half of all married women (48 percent) have the potential to give birth to children in the multiple high-risk categories.

## Table 8.6 High-risk fertility behaviour

Percent distribution of children born in the five years preceding the survey by category of elevated risk of dying and the risk ratio, and the percent distribution of currently married women by category of risk if they were to conceive a child at the time of the survey, Nigeria 2003

|  | Births in the 5 years <br> preceding the survey | Percentage <br> of <br> currently <br> married <br> women |  |
| :--- | :---: | :---: | :---: |
| Percentage <br> of births | Risk <br> ratio | 1.00 | $13.3^{\text {a }}$ |
| Risk category | 21.2 |  |  |
| Not in any high-risk category |  |  |  |
| Unavoidable risk category |  |  |  |
| First order births between |  | 13.7 | 1.22 |

Note: Risk ratio is the ratio of the proportion dead among births in a specific high-risk category to the proportion dead of births not in any high-risk category.
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 combined categories age $<18$ and birth order $>3$
${ }^{\text {a }}$ Includes sterilized women

## MATERNAL AND CHILD HEALTH

The state of maternal and child health is one indicator of a society's level of development, as well as an indicator of the performance of the health care delivery system. This chapter presents findings on several important aspects of reproductive and child health such as antenatal and delivery care, postnatal care, characteristics of the neonate, vaccinations, and common childhood illnesses and their treatment.

### 9.1 Antenatal Care

This section provides information on issues relating to antenatal care (ANC) services. ANC from a trained provider is important in monitoring pregnancy and helping to reduce the risks for the mother and child during this period. Table 9.1 shows the percent distribution of women who had a live birth in the five years preceding the survey by antenatal care provider for the most recent birth, according to background characteristics. The data show that six in ten mothers received antenatal care from a trained medical professional. The most common antenatal care providers are nurses or midwives ( 37 percent). More than one-third of mothers ( 37 percent) did not receive any antenatal care.

Almost half of teenage mothers did not receive antenatal care, compared with approximately onethird of mothers age 20 and older. The type of antenatal care provider also varies by the age at which women give birth. Teenage mothers are also less likely to receive ANC from a doctor. The receipt of ANC also varies by birth order, with births at higher parities less likely to receive ANC, particularly from a trained provider.

There are clear differences in ANC by residence; women residing in urban areas and in the south are much more likely to receive ANC than their rural and northern-dwelling counterparts. This difference is likely to be due to the concentration of hospitals and health care facilities in urban and southern areas. It is striking that rural women are three times less likely to receive antenatal care than urban women. Fortyseven percent of mothers in the North East and 59 percent of mothers in the North West did not receive ANC, whereas in other regions the proportion of women not receiving ANC ranges from 1 to 25 percent.

There is a positive relationship between ANC and educational attainment. For example, threefifths of mothers with no education did not receive any ANC from a trained provider. In contrast, doctors provide ANC to 70 percent of mothers with higher education.

There is also a positive relationship between the household wealth index and type of ANC provider. Whereas six in ten women in households in the two lowest quintiles did not receive ANC from a health professional, only 2 in 100 women in the most advantaged households were without care.

### 9.1.1 Number and Timing of ANC Visits

Antenatal care can be more effective in preventing adverse pregnancy outcomes when it is sought early in the pregnancy and continues through to delivery. Table 9.2 shows number of antenatal care visits and timing of the first visit by residence. At least four antenatal visits are recommended during pregnancy to ensure proper care. Less than half of mothers made four or more ANC visits (Figure 9.1). There is a relationship between residence and number of visits. Seventy-one percent of urban women make four or more visits to an antenatal care provider compared with only 38 percent of rural women.

| Table 9.1 Antenatal care |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of women who had a live birth in the five years preceding the survey by antenatal care (ANC) provider during pregnancy for the most recent birth, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |
| Background characteristic | Antenatal care provider |  |  |  |  |  |  | Total | Number of women |
|  | Doctor | Nurse/ midwife/ auxiliary midwife | Community health extension worker | Traditional birth attendant | Other | No one | Missing |  |  |
| Age at birth |  |  |  |  |  |  |  |  |  |
| <20 | 12.4 | 34.0 | 3.5 | 2.2 | 0.2 | 47.7 | 0.0 | 100.0 | 719 |
| 20-34 | 24.0 | 36.7 | 1.9 | 2.4 | 0.3 | 34.7 | 0.1 | 100.0 | 2,514 |
| 35-49 | 20.8 | 39.9 | 1.4 | 3.2 | 0.4 | 33.9 | 0.4 | 100.0 | 678 |
| Birth order |  |  |  |  |  |  |  |  |  |
| 1 | 24.9 | 36.6 | 2.5 | 2.9 | 0.2 | 32.9 | 0.1 | 100.0 | 803 |
| 2-3 | 26.4 | 34.2 | 2.0 | 2.6 | 0.3 | 34.3 | 0.1 | 100.0 | 1,102 |
| 4-5 | 21.1 | 39.2 | 1.4 | 2.2 | 0.3 | 35.8 | 0.1 | 100.0 | 874 |
| 6+ | 13.9 | 37.4 | 2.5 | 2.3 | 0.5 | 43.2 | 0.2 | 100.0 | 1,132 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 38.5 | 44.2 | 0.3 | 1.5 | 0.1 | 15.0 | 0.2 | 100.0 | 1,144 |
| Rural | 14.2 | 33.6 | 2.8 | 2.9 | 0.4 | 46.0 | 0.1 | 100.0 | 2,766 |
| Region |  |  |  |  |  |  |  |  |  |
| North Central | 23.8 | 50.0 | 0.5 | 0.0 | 0.1 | 25.3 | 0.2 | 100.0 | 575 |
| North East | 10.9 | 36.4 | 5.3 | 0.2 | 0.1 | 47.1 | 0.0 | 100.0 | 862 |
| North West | 5.4 | 31.5 | 1.9 | 1.6 | 0.6 | 59.0 | 0.0 | 100.0 | 1,341 |
| South East | 50.8 | 45.4 | 0.2 | 0.9 | 0.8 | 0.8 | 1.2 | 100.0 | 222 |
| South South | 38.8 | 33.3 | 0.7 | 10.0 | 0.3 | 16.8 | 0.0 | 100.0 | 544 |
| South West | 56.0 | 35.9 | 0.8 | 5.0 | 0.0 | 2.3 | 0.1 | 100.0 | 367 |
| Education |  |  |  |  |  |  |  |  |  |
| No education | 8.2 | 27.7 | 2.8 | 1.2 | 0.4 | 59.6 | 0.0 | 100.0 | 1,989 |
| Primary | 22.3 | 49.7 | 1.9 | 5.4 | 0.2 | 20.3 | 0.2 | 100.0 | 918 |
| Secondary | 42.3 | 45.2 | 1.1 | 2.9 | 0.2 | 8.1 | 0.2 | 100.0 | 862 |
| Higher | 70.2 | 27.9 | 0.0 | 0.0 | 0.0 | 1.7 | 0.2 | 100.0 | 143 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |
| Lowest | 7.6 | 26.4 | 3.2 | 2.9 | 0.2 | 59.7 | 0.1 | 100.0 | 852 |
| Second | 9.2 | 28.1 | 2.1 | 2.2 | 0.3 | 58.1 | 0.1 | 100.0 | 846 |
| Middle | 15.4 | 41.1 | 3.3 | 2.0 | 1.0 | 37.2 | 0.1 | 100.0 | 808 |
| Fourth | 25.5 | 51.6 | 1.1 | 3.6 | 0.1 | 18.0 | 0.2 | 100.0 | 735 |
| Highest | 56.5 | 39.3 | 0.4 | 1.8 | 0.1 | 1.8 | 0.1 | 100.0 | 670 |
| Total | 21.3 | 36.7 | 2.1 | 2.5 | 0.3 | 36.9 | 0.1 | 100.0 | 3,911 |
| Note: If more than one source of ANC was mentioned, only the provider with the highest qualification is considered in this tabulation. |  |  |  |  |  |  |  |  |  |

Table 9.2 Number of antenatal care visits and timing of first visit
Percent distribution of women who had a live birth in the five years preceding the survey by number of antenatal care (ANC) visits for the most recent birth, and by the timing of the first visit, according to residence, Nigeria 2003

| Number and timing of ANC visits | Residence |  | Total |
| :---: | :---: | :---: | :---: |
|  | Urban | Rural |  |
| Number of ANC visits |  |  |  |
| None | 15.0 | 46.0 | 36.9 |
| 1 | 2.8 | 2.5 | 2.6 |
| 2-3 | 8.4 | 12.1 | 11.0 |
| 4+ | 71.1 | 37.6 | 47.4 |
| Don't know/missing | 2.7 | 1.8 | 2.1 |
| Total | 100.0 | 100.0 | 100.0 |
| Number of months pregnant at time of first ANC visit |  |  |  |
| No antenatal care | 15.0 | 46.0 | 36.9 |
| <4 | 23.4 | 13.9 | 16.7 |
| 4-5 | 38.1 | 22.0 | 26.7 |
| 6-7 | 20.4 | 15.0 | 16.6 |
| 8+ | 2.3 | 2.1 | 2.1 |
| Don't know/missing | 0.8 | 1.0 | 1.0 |
| Total | 100.0 | 100.0 | 100.0 |
| Median months pregnant at first visit (for those with ANC) | 4.9 | 5.1 | 5.0 |
| Number of women | 1,144 | 2,766 | 3,911 |

Figure 9.1 Number of Antenatal Care Visits


Among women who receive antenatal care, 17 percent make their first ANC visit during the first three months of pregnancy. Although the proportions of urban and rural mothers who received antenatal care for the most recent births in the last five years differ substantially, among those who received antenatal care the proportion of women who benefit from ANC during the first trimester differs only slightly by residence. Slightly more than one-quarter of both urban and rural women who received antenatal care made their first visit during the first trimester. This result is also confirmed by the median number of months pregnant at first visit: 4.9 for urban mothers and 5.1 for rural mothers.

### 9.1.2 Components of ANC

The content of antenatal care is important in judging its quality. Certain items of care have been selected and included in the questionnaire to indicate the level of the care received. Pregnancy complications are an important source of maternal and child mortality and morbidity, and thus information on the signs of complications and tests for complications should be routinely included in all antenatal care. Moreover, in Nigeria, neonatal tetanus, malaria, and maternal anemia are major causes of neonatal mortality. In the 2003 Nigeria Demographic and Health Survey (2003 NDHS), respondents were asked whether they had received each of the following services at least once during antenatal care: weight measured, height measured, blood pressure measured, and urine and blood samples taken. Information on iron supplements and antimalarial drugs was collected and reported for the most recent birth in the five years preceding the survey, whether or not the mother saw anyone for antenatal care.

Table 9.3 shows the percent distribution of women who received antenatal care by the content of care and receipt of iron tablets or syrup and antimalarial drugs, according to background characteristics. More than half of all women were informed of signs of pregnancy complications, and about the same proportion had their height measured. More than eight in ten women had their weight measured and blood pressure taken, and almost two-thirds had urine and blood samples taken. For each component of ANC, older women were more likely than younger women to report that they had received services.

Urban-rural residence is an important determinant of the likelihood of receiving all of the specified components of ANC, with urban women receiving more components of care than rural woman. Once again, northern mothers appear to receive lower quality ANC than mothers in the south.

There is a positive correlation between both level of education and wealth quintile and the content of antenatal care women receive. Mothers with higher education and women in households higher on the wealth index receive more services than those with less education and those living in households lower on the wealth index.

Iron is a vital component of hemoglobin, which carries oxygen to the body tissues. To sustain life, mothers need iron. Almost six in ten mothers received iron supplements, while less than one in four mothers received antimalarial drugs during pregnancy. The likelihood of a mother receiving iron supplementation or an antimalarial varies by background characteristics in a pattern similar to that of antenatal care services.

Table 9.3 Antenatal care content
Percentage of women with a live birth in the five years preceding the survey who received antenatal care for the most recent birth, by content of antenatal care, and percentage of women with a live birth in the five years preceding the survey who received iron tablets or syrup or antimalarial drugs for the most recent birth, according to background characteristics, Nigeria 2003

| Background characteristic | Among women who received antenatal care |  |  |  |  |  | Number of women | Received iron tablets or syrup | Receive antimalarial drugs | Number <br> of <br> women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Informed of signs of pregnancy complications | Weight measured | Height measured | Blood pressure measured | Urine sample taken | Blood sample taken |  |  |  |  |
| Age at birth |  |  |  |  |  |  |  |  |  |  |
| <20 | 45.8 | 78.1 | 48.0 | 71.4 | 53.5 | 50.2 | 376 | 49.2 | 30.4 | 719 |
| 20-34 | 56.2 | 83.7 | 57.2 | 81.8 | 65.7 | 66.6 | 1,640 | 60.0 | 40.7 | 2,514 |
| 35-49 | 58.7 | 83.8 | 61.0 | 83.9 | 68.6 | 72.4 | 446 | 59.2 | 39.5 | 678 |
| Birth order |  |  |  |  |  |  |  |  |  |  |
| 1 | 53.9 | 82.1 | 54.7 | 79.4 | 66.3 | 63.3 | 538 | 60.4 | 43.0 | 803 |
| 2-3 | 55.1 | 83.9 | 58.8 | 82.4 | 67.0 | 68.9 | 723 | 60.5 | 37.6 | 1,102 |
| 4-5 | 58.5 | 85.1 | 58.8 | 81.2 | 63.8 | 66.3 | 561 | 60.5 | 40.3 | 874 |
| 6+ | 52.9 | 80.3 | 53.4 | 79.1 | 60.4 | 61.5 | 641 | 51.6 | 35.0 | 1,132 |
| Residence |  |  |  |  |  |  |  |  |  |  |
| Urban | 66.2 | 91.6 | 64.3 | 90.6 | 81.4 | 81.3 | 970 | 78.4 | 55.3 | 1,144 |
| Rural | 47.8 | 77.2 | 51.4 | 74.1 | 53.4 | 54.6 | 1,492 | 49.4 | 31.6 | 2,766 |
| Region |  |  |  |  |  |  |  |  |  |  |
| North Central | 47.3 | 90.8 | 63.0 | 92.6 | 74.7 | 75.3 | 429 | 58.7 | 39.4 | 575 |
| North East | 44.3 | 84.4 | 63.4 | 77.8 | 50.1 | 52.0 | 456 | 54.4 | 31.5 | 862 |
| North West | 48.1 | 80.2 | 46.8 | 64.1 | 54.1 | 42.2 | 549 | 40.6 | 25.3 | 1,341 |
| South East | 66.0 | 83.4 | 56.3 | 89.4 | 76.1 | 85.9 | 218 | 93.7 | 63.1 | 222 |
| South South | 60.0 | 68.8 | 49.0 | 76.6 | 63.4 | 69.9 | 452 | 69.4 | 56.7 | 544 |
| South West | 75.6 | 92.8 | 64.4 | 94.9 | 80.2 | 86.1 | 358 | 89.2 | 60.2 | 367 |
| Education |  |  |  |  |  |  |  |  |  |  |
| No education | 42.0 | 77.7 | 52.0 | 72.2 | 50.5 | 48.2 | 802 | 39.0 | 23.9 | 1,989 |
| Primary | 52.8 | 79.8 | 52.2 | 78.5 | 60.3 | 65.5 | 730 | 68.7 | 44.6 | 918 |
| Secondary | 65.9 | 88.3 | 61.1 | 88.2 | 77.5 | 77.3 | 790 | 84.4 | 59.7 | 862 |
| Higher | 80.4 | 97.4 | 78.4 | 96.8 | 91.4 | 91.8 | 140 | 91.2 | 76.7 | 143 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |
| Lowest | 39.0 | 70.3 | 46.4 | 68.5 | 36.9 | 45.5 | 343 | 36.4 | 24.9 | 852 |
| Second | 41.3 | 72.2 | 52.3 | 69.5 | 49.7 | 47.2 | 354 | 37.0 | 28.0 | 846 |
| Middle | 48.2 | 78.0 | 52.7 | 74.3 | 56.4 | 54.2 | 507 | 57.8 | 32.1 | 808 |
| Fourth | 59.5 | 86.9 | 58.8 | 87.0 | 72.5 | 74.4 | 602 | 75.0 | 48.1 | 735 |
| Highest | 72.0 | 95.1 | 64.9 | 92.0 | 85.4 | 85.0 | 657 | 92.9 | 66.6 | 670 |
| Total | 55.0 | 82.8 | 56.5 | 80.6 | 64.4 | 65.1 | 2,462 | 57.9 | 38.6 | 3,911 |

### 9.1.3 Tetanus Toxoid

Tetanus toxoid injections are given during pregnancy to prevent neonatal tetanus, a major cause of infant deaths. A pregnant woman is expected to receive two doses of the toxoid for full protection. On the other hand, if a woman has been fully vaccinated during a previous pregnancy, she may only require one dose for the current pregnancy.

Table 9.4 shows the distribution of women who received tetanus toxoid injections during pregnancy according to background characteristics.

Eleven percent of mothers received one dose and 40 percent received two or more doses of tetanus toxoid. However, almost half of respondents did not receive any tetanus toxoid injection during their pregnancy. This nonreceipt was more prevalent among teenage mothers, rural residents, mothers in the North West, those with no education, and those living in households in the lowest wealth quintile, with at least six in ten of these mothers not receiving tetanus toxoid injections.

The proportion of mothers who received two or more tetanus toxoid injections increases with age at birth, level of education, and wealth quintile. The percentage of urban women who received full tetanus coverage is almost twice that of rural women. At the regional level, there is a great disparity between mothers in the north and those in the south. In the north, only 20 to 45 percent of mothers received two or more injections, compared with 62 to 77 percent in the southern regions.

| Table 9.4 Tetanus toxoid injections |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of women who had a live birth in the five years preceding the survey by number of tetanus toxoid injections received during pregnancy for the most recent birth, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |
| Background characteristic | No injections | One injection | Two or more injections | Don't know/ missing | Total | Number of women |
| Age at birth |  |  |  |  |  |  |
| <20 | 61.6 | 9.4 | 27.1 | 1.9 | 100.0 | 719 |
| 20-34 | 44.2 | 10.7 | 43.0 | 2.1 | 100.0 | 2,514 |
| 35-49 | 43.5 | 10.9 | 43.8 | 1.8 | 100.0 | 678 |
| Birth order |  |  |  |  |  |  |
| 1 | 46.2 | 12.1 | 39.9 | 1.8 | 100.0 | 803 |
| 2-3 | 44.8 | 9.9 | 42.1 | 3.2 | 100.0 | 1,102 |
| 4-5 | 45.5 | 9.0 | 44.3 | 1.2 | 100.0 | 874 |
| 6+ | 51.8 | 11.2 | 35.5 | 1.5 | 100.0 | 1,132 |
| Residence |  |  |  |  |  |  |
| Urban | 24.7 | 12.7 | 60.7 | 2.0 | 100.0 | 1,144 |
| Rural | 56.6 | 9.6 | 31.8 | 2.0 | 100.0 | 2,766 |
| Region |  |  |  |  |  |  |
| North Central | 33.4 | 17.2 | 45.4 | 3.9 | 100.0 | 575 |
| North East | 56.2 | 12.3 | 30.8 | 0.7 | 100.0 | 862 |
| North West | 72.6 | 6.1 | 20.1 | 1.2 | 100.0 | 1,341 |
| South East | 7.3 | 12.3 | 77.4 | 2.9 | 100.0 | 222 |
| South South | 27.0 | 9.5 | 61.5 | 2.0 | 100.0 | 544 |
| South West | 9.3 | 12.5 | 74.0 | 4.3 | 100.0 | 367 |
| Education |  |  |  |  |  |  |
| No education | 70.4 | 8.3 | 20.4 | 1.0 | 100.0 | 1,989 |
| Primary | 32.8 | 10.8 | 52.6 | 3.8 | 100.0 | 918 |
| Secondary | 16.3 | 15.5 | 66.0 | 2.1 | 100.0 | 862 |
| Higher | 4.6 | 10.2 | 82.1 | 3.1 | 100.0 | 143 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 69.9 | 9.5 | 19.1 | 1.4 | 100.0 | 852 |
| Second | 68.6 | 7.2 | 22.7 | 1.6 | 100.0 | 846 |
| Middle | 49.9 | 11.2 | 36.9 | 2.0 | 100.0 | 808 |
| Fourth | 27.4 | 13.8 | 55.7 | 3.1 | 100.0 | 735 |
| Highest | 10.1 | 11.7 | 76.4 | 1.9 | 100.0 | 670 |
| Total | 47.3 | 10.5 | 40.2 | 2.0 | 100.0 | 3,911 |

### 9.2 Place of Delivery

Proper medical attention and hygienic conditions during delivery can reduce the risk of complication and infections that can cause serious illness or the death of the mother, her baby, or both. The 2003 NDHS collected information on the place of delivery and the type of assistance received, for all births during the five years preceding the survey. Table 9.5 shows the percent distribution of live births by place of delivery, according to background characteristics.

| Table 9.5 Place of delivery |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of live births in the five years preceding the survey by place of delivery, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |
| Background characteristic | Place of delivery |  |  |  |  |  | Total | Number of births |
|  | Any facility ${ }^{1}$ | Public sector | Private sector | Home | Other | Missing |  |  |
| Mother's age at birth |  |  |  |  |  |  |  |  |
| <20 | 21.6 | 15.4 | 6.2 | 76.5 | 0.7 | 1.2 | 100.0 | 1,121 |
| 20-34 | 35.8 | 18.9 | 16.9 | 63.4 | 0.3 | 0.5 | 100.0 | 4,206 |
| 35-49 | 31.3 | 18.5 | 12.8 | 67.6 | 0.2 | 1.0 | 100.0 | 892 |
| Birth order |  |  |  |  |  |  |  |  |
| 1 | 43.4 | 24.4 | 19.0 | 55.3 | 0.6 | 0.7 | 100.0 | 1,278 |
| 2-3 | 34.7 | 17.9 | 16.8 | 64.1 | 0.6 | 0.6 | 100.0 | 1,908 |
| 4-5 | 32.4 | 18.6 | 13.8 | 66.7 | 0.2 | 0.6 | 100.0 | 1,365 |
| 6+ | 22.0 | 13.4 | 8.6 | 77.2 | 0.1 | 0.8 | 100.0 | 1,667 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 54.2 | 28.5 | 25.6 | 44.8 | 0.5 | 0.5 | 100.0 | 1,795 |
| Rural | 23.8 | 14.0 | 9.8 | 75.1 | 0.3 | 0.7 | 100.0 | 4,424 |
| Region |  |  |  |  |  |  |  |  |
| North Central | 45.4 | 27.0 | 18.4 | 54.6 | 0.0 | 0.0 | 100.0 | 897 |
| North East | 17.1 | 14.5 | 2.6 | 82.2 | 0.0 | 0.6 | 100.0 | 1,472 |
| North West | 10.4 | 8.8 | 1.6 | 88.6 | 0.0 | 1.0 | 100.0 | 2,161 |
| South East | 84.1 | 19.9 | 64.1 | 13.2 | 0.3 | 2.5 | 100.0 | 371 |
| South South | 53.2 | 29.5 | 23.7 | 45.0 | 1.6 | 0.3 | 100.0 | 789 |
| South West | 77.6 | 33.7 | 43.9 | 20.8 | 1.5 | 0.1 | 100.0 | 529 |
| Mother's education |  |  |  |  |  |  |  |  |
| No education | 10.3 | 7.1 | 3.2 | 88.8 | 0.2 | 0.6 | 100.0 | 3,224 |
| Primary | 40.5 | 22.7 | 17.9 | 58.0 | 0.4 | 1.1 | 100.0 | 1,465 |
| Secondary | 69.2 | 35.4 | 33.7 | 30.0 | 0.5 | 0.4 | 100.0 | 1,316 |
| Higher | 88.1 | 48.6 | 39.5 | 10.5 | 1.2 | 0.2 | 100.0 | 215 |
| Antenatal care visits ${ }^{2}$ |  |  |  |  |  |  |  |  |
| None | 3.7 | 2.7 | 1.0 | 95.6 | 0.6 | 0.1 | 100.0 | 1,444 |
| 1-3 | 27.8 | 16.1 | 11.7 | 72.2 | 0.0 | 0.0 | 100.0 | 532 |
| 4+ | 59.2 | 33.0 | 26.2 | 40.2 | 0.5 | 0.1 | 100.0 | 1,855 |
| Don't know/missing | 57.7 | 20.3 | 37.4 | 35.2 | 0.0 | 7.1 | 100.0 | 81 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 11.5 | 7.5 | 4.0 | 87.1 | 0.5 | 0.9 | 100.0 | 1,394 |
| Second | 16.1 | 10.5 | 5.6 | 82.8 | 0.0 | 1.1 | 100.0 | 1,379 |
| Middle | 24.9 | 15.6 | 9.3 | 74.5 | 0.4 | 0.2 | 100.0 | 1,255 |
| Fourth | 43.8 | 28.1 | 15.7 | 55.2 | 0.1 | 0.9 | 100.0 | 1,157 |
| Highest | 79.7 | 34.9 | 44.8 | 19.2 | 0.8 | 0.2 | 100.0 | 1,033 |
| Total | 32.6 | 18.2 | 14.4 | 66.4 | 0.4 | 0.7 | 100.0 | 6,219 |

[^9]Two-thirds of births in Nigeria are delivered at home; this means the majority of births occur without quality delivery services. Only one-third of deliveries occur in a health facility: 18 percent in the public sector and 14 percent in the private sector.

Urban women are more than twice as likely as rural women to deliver in a health facility. There are significant regional differentials in place of delivery. Births in health facilities range from a low of 10 percent in the North West to a high of 84 percent in the South East. Educational attainment, number of antenatal care visits, and household economic status are all positively correlated with the likelihood of delivering in a facility. However, birth order is positively correlated with the likelihood of delivering at home.

### 9.2.1 Assistance during Delivery

The level of assistance received by a woman during delivery can reduce maternal and child deaths and related complications, which is one of the goals of the global Safe Motherhood Initiative. Maternal complications may arise during puerperium as a result of trauma sustained during labour, disorders of the circulatory system, or psychological disorders. The presence of a trained assistant during delivery, therefore, becomes imperative. Table 9.6 shows the percent distribution of live births by assistance provided during delivery, according to background characteristics.

Slightly more than one-third of births in Nigeria are attended by doctors, nurses, or midwives. One-fifth of births receive the assistance of a traditional birth attendant. One in every four births is assisted by a relative or some other untrained person, while 17 percent are unassisted. Differentials in delivery assistance are similar to those described previously in this chapter.

| Table 9.6 Assistance during delivery |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of live births in the five years preceding the survey by person providing assistance during delivery, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |
| Background characteristic | Person providing assistance during delivery |  |  |  |  |  |  | Total | Number <br> of births |
|  | Doctor | Nurse midwife/ auxiliary midwife | Community health extension worker | Traditional birth attendant | Relative/ other | No one | Don't know/ missing |  |  |
| Mother's age at birth |  |  |  |  |  |  |  |  |  |
| <20 | 5.1 | 19.1 | 1.9 | 25.3 | 33.6 | 13.9 | 1.1 | 100.0 | 1,121 |
| 20-34 | 7.1 | 30.7 | 0.9 | 19.3 | 24.0 | 17.3 | 0.7 | 100.0 | 4,206 |
| 35-49 | 5.7 | 30.6 | 1.0 | 19.4 | 23.1 | 19.1 | 1.2 | 100.0 | 892 |
| Birth order |  |  |  |  |  |  |  |  |  |
| 1 | 10.7 | 34.4 | 1.9 | 18.8 | 25.8 | 7.5 | 0.9 | 100.0 | 1,278 |
| 2-3 | 7.1 | 30.2 | 0.6 | 20.8 | 26.2 | 14.3 | 0.8 | 100.0 | 1,908 |
| 4-5 | 6.0 | 29.3 | 0.7 | 18.9 | 25.7 | 18.9 | 0.6 | 100.0 | 1,365 |
| 6+ | 3.2 | 21.7 | 1.3 | 22.3 | 24.8 | 25.6 | 1.1 | 100.0 | 1,667 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 14.1 | 44.4 | 0.3 | 11.6 | 17.9 | 10.6 | 1.0 | 100.0 | 1,795 |
| Rural | 3.5 | 22.2 | 1.4 | 23.9 | 28.7 | 19.4 | 0.8 | 100.0 | 4,424 |
| Region |  |  |  |  |  |  |  |  |  |
| North Central | 9.6 | 39.0 | 1.5 | 6.1 | 34.7 | 9.0 | 0.1 | 100.0 | 897 |
| North East | 2.4 | 17.4 | 2.2 | 25.4 | 31.7 | 19.8 | 1.0 | 100.0 | 1,472 |
| North West | 0.8 | 11.5 | 0.7 | 24.3 | 31.0 | 30.5 | 1.2 | 100.0 | 2,161 |
| South East | 20.2 | 67.3 | 0.2 | 3.0 | 6.2 | 0.4 | 2.8 | 100.0 | 371 |
| South South | 8.6 | 47.0 | 0.2 | 32.2 | 9.8 | 1.8 | 0.3 | 100.0 | 789 |
| South West | 23.9 | 57.0 | 0.7 | 9.0 | 8.4 | 0.9 | 0.1 | 100.0 | 529 |
| Mother's education |  |  |  |  |  |  |  |  |  |
| No education | 2.0 | 10.7 | 1.2 | 26.3 | 32.1 | 26.8 | 1.0 | 100.0 | 3,224 |
| Primary | 5.3 | 38.6 | 1.1 | 19.6 | 24.3 | 10.2 | 0.9 | 100.0 | 1,465 |
| Secondary | 13.8 | 57.9 | 0.9 | 9.8 | 13.9 | 2.9 | 0.7 | 100.0 | 1,316 |
| Higher | 38.9 | 50.0 | 0.0 | 2.2 | 8.3 | 0.4 | 0.2 | 100.0 | 215 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |
| Lowest | 1.8 | 9.8 | 1.4 | 31.6 | 34.3 | 20.3 | 0.8 | 100.0 | 1,394 |
| Second | 1.5 | 16.2 | 1.3 | 25.4 | 31.1 | 23.3 | 1.2 | 100.0 | 1,379 |
| Middle | 3.8 | 22.5 | 1.3 | 21.7 | 29.5 | 20.6 | 0.6 | 100.0 | 1,255 |
| Fourth | 6.6 | 43.6 | 1.0 | 13.8 | 20.5 | 13.2 | 1.5 | 100.0 | 1,157 |
| Highest | 23.1 | 61.2 | 0.2 | 4.3 | 7.5 | 3.5 | 0.2 | 100.0 | 1,033 |
| Total | 6.6 | 28.6 | 1.1 | 20.4 | 25.6 | 16.9 | 0.9 | 100.0 | 6,219 |

Note: If the respondent mentioned more than one person attending during delivery, only the most qualified person is considered in this tabulation.

### 9.2.2 Delivery Characteristics

Caesarean section (C-section) may be performed as a result of adverse conditions developing during labour as well as a decision reached before labour. In both cases, it tends to reduce the risks of delivery for mother and child. Table 9.7 shows that C-sections are rare in Nigeria: less than 2 percent of births are delivered by this procedure. Women with higher education are the most likely to have had a C-section; among these women, 14 percent of births are delivered by C-section. Caesarean section occurs more frequently in the South East ( 9 percent of births) than in other regions.

| Percentage of live births in the five years preceding the survey delivered by caesarian section, and percent distribution by birth weight and by mother's estimate of baby's size at birth, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Delivery by caesarean section | Birth weight |  |  |  |  | Size of child at birth |  |  |  |  | Number of births |
| Background characteristic |  | Not weighed | Less than 2.5 kg | 2.5 kg or more | Don't know/ missing | Total | Very small | Smaller than average | Average <br> or larger | Don't know/ missing | Total |  |
| Mother's age at birth |  |  |  |  |  |  |  |  |  |  |  |  |
| <20 | 1.3 | 84.2 | 0.4 | 5.2 | 10.3 | 100.0 | 8.3 | 8.2 | 81.8 | 1.7 | 100.0 | 1,121 |
| 20-34 | 1.8 | 70.1 | 1.5 | 13.8 | 14.6 | 100.0 | 6.2 | 8.5 | 84.2 | 1.1 | 100.0 | 4,206 |
| 35-49 | 1.9 | 70.2 | 1.5 | 11.9 | 16.4 | 100.0 | 5.1 | 6.3 | 86.9 | 1.7 | 100.0 | 892 |
| Birth order |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 3.6 | 68.1 | 1.6 | 15.1 | 15.2 | 100.0 | 6.9 | 8.3 | 83.3 | 1.4 | 100.0 | 1,278 |
| 2-3 | 1.3 | 70.1 | 1.2 | 14.9 | 13.8 | 100.0 | 5.7 | 7.7 | 85.3 | 1.3 | 100.0 | 1,908 |
| 4-5 | 1.6 | 72.9 | 1.0 | 11.9 | 14.2 | 100.0 | 6.2 | 8.4 | 84.3 | 1.1 | 100.0 | 1,365 |
| 6+ | 0.8 | 79.0 | 1.4 | 6.3 | 13.4 | 100.0 | 7.0 | 8.2 | 83.5 | 1.3 | 100.0 | 1,667 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 3.5 | 50.3 | 2.5 | 26.6 | 20.5 | 100.0 | 5.0 | 6.8 | 87.2 | 1.0 | 100.0 | 1,795 |
| Rural | 1.0 | 81.8 | 0.8 | 6.0 | 11.5 | 100.0 | 7.0 | 8.6 | 82.9 | 1.4 | 100.0 | 4,424 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 0.9 | 63.7 | 2.2 | 7.9 | 26.2 | 100.0 | 6.4 | 9.9 | 83.5 | 0.2 | 100.0 | 897 |
| North East | 1.1 | 87.2 | 0.4 | 4.2 | 8.2 | 100.0 | 8.7 | 10.1 | 78.7 | 2.5 | 100.0 | 1,472 |
| North West | 0.5 | 90.3 | 0.3 | 2.6 | 6.8 | 100.0 | 6.8 | 6.0 | 86.2 | 1.0 | 100.0 | 2,161 |
| South East | 8.6 | 30.9 | 5.6 | 47.9 | 15.6 | 100.0 | 3.6 | 10.3 | 82.5 | 3.6 | 100.0 | 371 |
| South South | 2.5 | 55.1 | 1.4 | 23.8 | 19.7 | 100.0 | 5.2 | 6.9 | 87.4 | 0.5 | 100.0 | 789 |
| South West | 3.9 | 31.2 | 2.8 | 35.8 | 30.2 | 100.0 | 2.3 | 8.3 | 88.5 | 0.9 | 100.0 | 529 |
| Mother's education |  |  |  |  |  |  |  |  |  |  |  |  |
| No education | 0.4 | 90.7 | 0.4 | 1.7 | 7.2 | 100.0 | 8.3 | 8.9 | 81.0 | 1.7 | 100.0 | 3,224 |
| Primary | 1.3 | 67.7 | 1.3 | 9.9 | 21.1 | 100.0 | 4.9 | 7.5 | 86.5 | 1.0 | 100.0 | 1,465 |
| Secondary | 3.4 | 43.3 | 3.2 | 30.2 | 23.2 | 100.0 | 3.9 | 7.4 | 88.0 | 0.7 | 100.0 | 1,316 |
| Higher | 13.9 | 15.9 | 3.2 | 68.3 | 12.7 | 100.0 | 4.0 | 3.9 | 91.6 | 0.5 | 100.0 | 215 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 0.5 | 91.4 | 0.1 | 1.9 | 6.6 | 100.0 | 9.3 | 10.5 | 78.2 | 2.0 | 100.0 | 1,394 |
| Second | 0.7 | 88.7 | 0.2 | 2.1 | 8.9 | 100.0 | 7.5 | 8.4 | 82.6 | 1.5 | 100.0 | 1,379 |
| Middle | 1.0 | 80.5 | 1.1 | 5.6 | 12.9 | 100.0 | 5.6 | 6.8 | 86.4 | 1.2 | 100.0 | 1,255 |
| Fourth | 1.6 | 63.0 | 1.5 | 12.3 | 23.2 | 100.0 | 5.2 | 6.4 | 87.2 | 1.2 | 100.0 | 1,157 |
| Highest | 5.8 | 27.5 | 4.2 | 46.1 | 22.2 | 100.0 | 3.4 | 8.0 | 88.2 | 0.4 | 100.0 | 1,033 |
| Total | 1.7 | 72.7 | 1.3 | 12.0 | 14.1 | 100.0 | 6.4 | 8.1 | 84.2 | 1.3 | 100.0 | 6,219 |

Birth weight is a major determinant of infant and child health and mortality. Birth weight of less than 2.5 kilograms is considered low. For all births during the five-year period preceding the survey, mothers were asked about their perception of the child's size at birth. They were then asked to report the actual weight in kilograms if the child had been weighed after delivery. It is not surprising that with the majority of deliveries occurring at home, the vast majority of newborns were not weighed at birth (73 percent). Birth weight was reported for one in seven births in the preceding five years. The same proportion of mothers said that their newborns were weighed but they did not remember the weight. Among births for which the birth weight was known, one in ten was classified as low birth weight (i.e., the infant weighed less than 2.5 kg at birth).

The percentage of children not weighed varies by background characteristics. Weighing at birth is less prevalent among teenage mothers, higher parity births, births in rural areas, and those in the North East and North West. The likelihood of being weighed at birth is also low among mothers with no education and those living in households in the lowest wealth quintile.

According to mothers’ estimates of their newborns’ size, more than eight in ten ( 84 percent) were of average or larger size. However, almost one in six births was reported as either very small or smaller than average.

### 9.3 Postnatal Care

Postnatal care is important both for the mother and the child to treat complications arising from the delivery, as well as to provide the mother with important information on how to care for herself and her child. The postnatal period is defined as the time between the delivery of the placenta and 42 days ( 6 weeks) following the delivery. The timing of postnatal care is important. The first two days after delivery are critical, since most maternal and neonatal deaths occur during this period. Table 9.8 measures postnatal care for births that occurred outside a health facility in the five years preceding the survey. If a woman had more than one live birth outside a health facility, only the most recent birth is considered.

In Nigeria, less than one-fourth of women who gave birth outside a health facility receive postnatal care within two days of birth ( 23 percent). An additional 3 percent have a checkup within the first week after birth. However, more than seven out of ten women who deliver outside a health facility receive no postnatal care. There are significant differentials by residence, region, education, and economic index.

| Table 9.8 Postnatal care by background characteristics |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of women whose last live birth in the five years preceding the survey occurred outside a health facility, by timing of postnatal care, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |
|  | Timing of first postnatal checkup |  |  |  | Did not receive postnatal checkup ${ }^{1}$ | Total | Number of women |
| Background characteristic | Within <br> 2 days of delivery | $\begin{gathered} \text { 3-6 days } \\ \text { after } \\ \text { delivery } \end{gathered}$ | 7-41 days after delivery | Don't know/ missing |  |  |  |
| Age at birth |  |  |  |  |  |  |  |
| <20 | 23.9 | 2.1 | 2.7 | 0.3 | 71.0 | 100.0 | 546 |
| 20-34 | 23.9 | 2.9 | 2.2 | 0.6 | 70.5 | 100.0 | 1,570 |
| 35-49 | 20.1 | 1.6 | 3.4 | 0.7 | 74.2 | 100.0 | 449 |
| Birth order |  |  |  |  |  |  |  |
| 1 | 25.0 | 2.0 | 2.5 | 0.4 | 70.1 | 100.0 | 454 |
| 2-3 | 23.6 | 3.1 | 3.0 | 0.5 | 69.8 | 100.0 | 691 |
| 4-5 | 25.1 | 2.0 | 2.5 | 0.5 | 69.8 | 100.0 | 561 |
| 6+ | 20.7 | 2.5 | 2.1 | 0.7 | 74.0 | 100.0 | 860 |
| Residence |  |  |  |  |  |  |  |
| Urban | 31.3 | 4.4 | 3.5 | 0.4 | 60.4 | 100.0 | 498 |
| Rural | 21.3 | 2.0 | 2.2 | 0.6 | 73.9 | 100.0 | 2,068 |
| Region |  |  |  |  |  |  |  |
| North Central | 13.8 | 1.7 | 4.3 | 0.2 | 80.1 | 100.0 | 303 |
| North East | 31.5 | 1.7 | 1.9 | 0.8 | 64.0 | 100.0 | 701 |
| North West | 18.6 | 1.5 | 1.3 | 0.5 | 78.1 | 100.0 | 1,194 |
| South East | 17.2 | 2.3 | 3.1 | 1.4 | 76.0 | 100.0 | 37 |
| South South | 32.9 | 7.7 | 3.4 | 0.7 | 55.4 | 100.0 | 251 |
| South West | 26.9 | 10.7 | 15.0 | 0.0 | 47.4 | 100.0 | 81 |
| Education |  |  |  |  |  |  |  |
| No education | 21.0 | 1.5 | 2.0 | 0.6 | 74.9 | 100.0 | 1,766 |
| Primary | 25.5 | 4.2 | 3.1 | 0.4 | 66.8 | 100.0 | 519 |
| Secondary | 32.7 | 5.6 | 3.0 | 0.6 | 58.1 | 100.0 | 265 |
| Higher | * | * | * | * | * | * | 15 |
| Wealth quintile |  |  |  |  |  |  |  |
| Lowest | 18.9 | 1.0 | 1.7 | 0.6 | 77.8 | 100.0 | 740 |
| Second | 19.0 | 2.1 | 1.5 | 1.3 | 76.1 | 100.0 | 692 |
| Middle | 24.9 | 3.1 | 2.4 | 0.0 | 69.7 | 100.0 | 589 |
| Fourth | 29.8 | 3.7 | 3.7 | 0.0 | 62.8 | 100.0 | 412 |
| Highest | 41.5 | 6.6 | 8.8 | 0.4 | 42.7 | 100.0 | 133 |
| Total | 23.2 | 2.5 | 2.5 | 0.6 | 71.3 | 100.0 | 2,566 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.
${ }^{1}$ Includes women who received the first postnatal checkup after 41 days

### 9.4 Reproductive Health Care by Women's Status

Table 9.9 shows women's use of antenatal, delivery, and postnatal care services by three indicators of women's status (empowerment) defined in Chapter 3. In societies where health care is widespread, women's status and age may not affect their access to reproductive health services; in other societies, however, increased empowerment of women is likely to be associated with increased ability to seek out and use health services to better meet their reproductive health needs, including the need for safe motherhood.

Table 9.9 Reproductive health care by women's status
Percentage of women with a live birth in the five years preceding the survey who received antenatal and postnatal care from a health professional for the most recent birth, and percentage of births in the five years preceding the survey for which mothers received professional delivery care, by women's status indicators, Nigeria 2003

| Women's status indicator | Percentage of women who received antenatal care from a doctor, nurse/midwife, or auxiliary midwife | Percentage of women who received postnatal care within first two days of delivery ${ }^{1}$ | Number of women | Percentage of births for which mothers received delivery care from a doctor, nurse/midwife, or auxiliary midwife | Number of births |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Number of decisions in which woman has final say ${ }^{2}$ |  |  |  |  |  |
| 0 | 50.2 | 35.4 | 1,616 | 24.0 | 2,585 |
| 1-2 | 60.4 | 54.8 | 1,328 | 34.7 | 2,152 |
| 3-4 | 77.4 | 66.3 | 478 | 59.1 | 756 |
| 5 | 75.5 | 66.3 | 489 | 60.6 | 726 |
| Number of reasons to refuse sex with husband |  |  |  |  |  |
| 0 | 53.3 | 44.6 | 359 | 33.7 | 557 |
| 1-2 | 54.3 | 45.0 | 1,037 | 27.3 | 1,677 |
| 3-4 | 63.5 | 52.2 | 2,515 | 40.3 | 3,985 |
| Number of reasons wife beating is justified |  |  |  |  |  |
| 0 | 72.3 | 61.5 | 1,188 | 54.1 | 1,821 |
| 1-2 | 63.3 | 49.5 | 836 | 36.2 | 1,327 |
| 3-4 | 57.0 | 48.1 | 667 | 31.5 | 1,095 |
| 5-6 | 47.7 | 38.9 | 1,220 | 22.4 | 1,977 |
| Total | 60.1 | 49.6 | 3,911 | 36.2 | 6,219 |

${ }^{1}$ Includes mothers who delivered in a health facility
${ }^{2}$ Either by herself or jointly with others

The first women's status indicator in Table 9.9 is positively related to women's empowerment and reflects the degree of decisionmaking control women are able to exercise in areas that affect their lives and environments. The second indicator reflects women's perception of sexual roles and women's rights over their bodies, and relates positively to women's sense of self and empowerment. The final indicator, which reflects women's perception of gender roles, is negatively related to women's level of empowerment. A higher value for this indicator (the number of reasons a woman believes wife beating is justified) is interpreted as indicating lower empowerment.

Table 9.9 shows that decisionmaking ability and perceptions regarding the justification of wife beating are strongly correlated with reproductive health care. The more empowered a woman, the more likely she is to receive reproductive health services. The pattern is less clear regarding the relationship between reproductive health care and reasons to refuse sex with the husband, although women who agree with at least three specified reasons are more likely to receive services than women agreeing with fewer reasons.

### 9.5 Vaccination of Children

Vaccination of children is an important part of current preventive measures designed to improve child health and reduce morbidity and mortality. According to the World Health Organization (WHO), to be considered fully vaccinated, a child should receive a dose of BCG vaccine against tuberculosis at birth or soon after; three doses of DPT for the prevention of diphtheria, pertussis (whooping cough), and tetanus; at least three doses of polio vaccine; and a vaccination against measles. The DPT and polio vaccinations should be given at approximately 4,8 , and 12 weeks of age; there is also a dose of polio vaccine that should be given at birth. Measles vaccine should be given at or soon after the child reaches nine months. WHO further recommends that children receive the complete schedule of vaccinations before 12 months of age and that the vaccinations be recorded on a health card given to the parents or caretaker.

Information on vaccination status was collected from vaccination cards shown to the interviewer and from mothers' verbal reports if no card was available. If the cards were available, the interviewers copied vaccination dates directly onto the questionnaire. If a vaccination card was presented but a vaccine had not been recorded on the card as having been given, the mother was asked to recall whether that particular vaccine had been given. The mother was then asked whether the child had received other vaccinations that were not recorded on the card, and if so, they too were noted on the questionnaire. If the mother was not able to provide a card for the child, she was asked to recall whether the child had received BCG, polio, DPT (including the number of doses for each), and measles vaccinations. The information collected covered all children under age five, although most data presented here are restricted to children age 12-23 months to better reflect children who have reached the age by which they should be fully vaccinated.

Information on vaccination coverage among children age 12-23 months is shown in Table 9.10 by source of information used to determine coverage (i.e., vaccination record or mother's report). Health cards were presented for just one-fifth ( 21 percent) of children age 12-23 months. The third row of the table shows the proportion of children who were immunized at any age up to the time of the survey, while the last row shows the proportion who were vaccinated by age 12 months, the age at which vaccination coverage should be complete.

| Table 9.10 Vaccinations by source of information |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of children 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, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Percentage of children who received: |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | DPT |  |  |  |  |  |  |  | N | Number |
| Source of information | BCG | 1 | 2 | 3 | 0 | 1 | 2 | 3 | Measles | All ${ }^{2}$ | nations | children |
| Vaccinated at any time |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Vaccination card | 20.2 | 18.0 | 14.0 | 10.4 | 14.6 | 17.8 | 14.4 | 10.7 | 13.5 | 8.3 | 0.1 | 213 |
| Mother's report | 28.1 | 24.6 | 17.7 | 11.0 | 13.1 | 49.4 | 37.9 | 18.7 | 22.4 | 4.7 | 26.5 | 786 |
| Either source | 48.3 | 42.6 | 31.7 | 21.4 | 27.8 | 67.2 | 52.3 | 29.4 | 35.9 | 12.9 | 26.5 | 999 |
| Vaccinated by 12 months of age ${ }^{3}$ | 46.9 | 38.7 | 30.1 | 20.1 | 27.1 | 63.7 | 50.6 | 26.8 | 31.4 | 11.3 | 30.6 | 999 |
| ${ }^{1}$ 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. |  |  |  |  |  |  |  |  |  |  |  |  |

According to information from both the vaccination records and mothers' recall, only 13 percent of Nigerian children age 12-23 months can be considered fully immunized, the lowest vaccination rate among the African countries in which DHS surveys have been conducted since 1998. Less than half of children have received each of the vaccinations, with the exception of Polio 1 (67 percent) and Polio 2 ( 52 percent). Although 43 percent of children receive DPT 1, the proportion who go on to receive the third dose falls off to 21 percent; the dropout rate ${ }^{1}$ is thus 50 percent, slightly lower than the dropout rate of 56 percent for polio.

WHO recommends that children receive the complete schedule of recommended vaccinations by 12 months of age. In Nigeria, however, only 11 percent of children age 12-23 months received all of the recommended vaccinations before their first birthday.

### 9.5.1 Vaccination by Background Characteristics

Table 9.11 presents vaccination coverage levels among children age 12-23 months by background characteristics, to provide an indication of the success of the vaccination programme in reaching all subgroups of the population.

The data show that the percentage of female children age 12-23 months who are fully immunized is almost twice that of their male counterparts ( 17 versus 9 percent). There are variations in percentage of children who received specific vaccinations by urban-rural residence, region, level of education, and wealth quintile. More than three times as many urban children as rural children are fully immunized (7 and 25 percent, respectively). In general, a higher proportion of children in the southern regions were vaccinated compared with those in the north. In the northern regions, vaccination coverage ranges from 4 to 12 percent, whereas in the southern regions the lowest vaccination rate is 21 percent and the highest in 45 percent. The differentials by wealth quintile are almost as large. While less than 4 percent of children living in households in the two lowest quintiles are fully vaccinated, 40 percent of children in households in the highest quintile have received all recommended vaccinations.

[^10]| Percentage of children 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, by background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of children who received: |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | DPT |  |  | Poli |  |  |  |  | No | with a | Number |
| characteristic | BCG | 1 | 2 | 3 | 0 | 1 | 2 | 3 | Measles | $\mathrm{All}^{2}$ | nations | tion card | children |
| Sex |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Male | 46.5 | 41.4 | 30.4 | 19.1 | 28.2 | 65.8 | 50.8 | 26.5 | 33.8 | 9.1 | 27.7 | 20.2 | 512 |
| Female | 50.2 | 44.0 | 33.1 | 23.8 | 27.3 | 68.6 | 53.9 | 32.5 | 38.1 | 17.0 | 25.3 | 22.5 | 486 |
| Birth order |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 59.6 | 51.5 | 39.8 | 29.0 | 37.3 | 68.7 | 54.4 | 32.1 | 43.5 | 17.8 | 19.2 | 33.1 | 188 |
| 2-3 | 48.0 | 44.5 | 32.5 | 22.3 | 27.0 | 66.0 | 53.8 | 29.2 | 33.8 | 13.4 | 29.8 | 20.6 | 332 |
| 4-5 | 52.8 | 42.7 | 34.9 | 24.1 | 30.2 | 71.3 | 54.6 | 32.1 | 39.3 | 14.4 | 22.7 | 21.7 | 220 |
| $6+$ | 36.8 | 33.8 | 22.3 | 12.3 | 19.8 | 64.2 | 46.8 | 25.7 | 30.2 | 7.6 | 30.8 | 13.2 | 259 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 70.1 | 63.5 | 51.3 | 40.2 | 40.2 | 75.3 | 64.4 | 42.0 | 52.1 | 25.1 | 16.7 | 35.6 | 312 |
| Rural | 38.4 | 33.1 | 22.9 | 12.8 | 22.1 | 63.5 | 46.8 | 23.7 | 28.5 | 7.4 | 31.0 | 14.8 | 687 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 63.4 | 54.1 | 33.0 | 23.8 | 36.2 | 70.0 | 52.6 | 36.8 | 44.6 | 12.4 | 20.7 | 22.9 | 149 |
| North East | 31.1 | 23.8 | 14.0 | 9.1 | 18.7 | 61.6 | 41.7 | 24.8 | 22.5 | 6.0 | 30.5 | 17.1 | 219 |
| North West | 27.5 | 20.9 | 13.2 | 5.8 | 12.0 | 54.4 | 39.9 | 16.4 | 15.6 | 3.7 | 40.5 | 9.6 | 356 |
| South East | 83.4 | 83.2 | 66.3 | 58.5 | 39.6 | 80.7 | 68.1 | 57.4 | 64.1 | 44.6 | 15.3 | 43.1 | 74 |
| South South | 76.1 | 74.3 | 63.3 | 32.5 | 47.8 | 86.0 | 77.2 | 40.0 | 66.9 | 20.8 | 6.5 | 37.9 | 120 |
| South West | 85.0 | 83.7 | 80.2 | 67.8 | 65.4 | 93.0 | 83.1 | 44.8 | 73.1 | 32.5 | 5.1 | 36.4 | 81 |
| Mother's education |  |  |  |  |  |  |  |  |  |  |  |  |  |
| No education | 22.7 | 19.4 | 9.8 | 5.6 | 12.8 | 54.7 | 38.9 | 18.7 | 15.6 | 3.8 | 41.1 | 7.3 | 484 |
| Primary | 57.7 | 48.5 | 37.6 | 20.5 | 26.7 | 77.7 | 58.5 | 34.2 | 42.5 | 13.0 | 18.6 | 26.1 | 247 |
| Secondary | 84.1 | 77.8 | 68.4 | 54.0 | 52.5 | 80.4 | 70.9 | 46.8 | 66.2 | 32.4 | 8.4 | 41.5 | 230 |
| Higher | (97.0) | (88.4) | (52.1) | (29.4) | (76.1) | (78.1) | (69.9) | (30.8) | (68.1) | (11.3) | (2.4) | (46.2) | 38 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 22.8 | 21.9 | 15.3 | 7.1 | 12.6 | 61.5 | 43.9 | 20.0 | 15.9 | 3.4 | 36.1 | 11.5 | 206 |
| Second | 30.2 | 27.1 | 17.5 | 7.7 | 16.6 | 61.6 | 41.3 | 23.6 | 22.9 | 3.9 | 34.8 | 13.3 | 202 |
| Middle | 42.8 | 33.8 | 20.8 | 13.3 | 19.0 | 61.0 | 47.0 | 25.1 | 32.0 | 8.9 | 31.8 | 16.1 | 219 |
| Fourth | 59.6 | 48.5 | 35.3 | 22.2 | 37.0 | 67.3 | 57.2 | 26.3 | 41.9 | 11.0 | 22.9 | 25.9 | 185 |
| Highest | 91.4 | 86.9 | 74.6 | 60.6 | 57.7 | 86.7 | 74.7 | 54.4 | 70.7 | 39.9 | 4.3 | 42.3 | 187 |
| Total | 48.3 | 42.6 | 31.7 | 21.4 | 27.8 | 67.2 | 52.3 | 29.4 | 35.9 | 12.9 | 26.5 | 21.3 | 999 |
| Note: Figures in parentheses are based on 25-49 unweighted cases. <br> ${ }^{1}$ Polio 0 is the polio vaccination given at birth. <br> ${ }^{2}$ BCG, measles, and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth) |  |  |  |  |  |  |  |  |  |  |  |  |  |

### 9.5.2 Vaccination in the First Year of Life

Table 9.12 shows the percentage of children age 12-59 months who received specific vaccinations during the first year of life, according to age cohort. There has been little change in vaccination coverage over time. However, the data indicate that the children age 24-35 months at the time of the survey were the most likely of all the cohorts to have received at least one vaccination by 12 months of age. For example, whereas 24 percent of these children received no vaccination during the first year of life, 31 percent of the youngest children age 12-23 months at the time of the survey received no vaccinations, indicating a slight decrease in vaccination rates. In particular, the data indicate a decline in vaccination rates for all three doses of polio.

Table 9.12 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 current age of child, Nigeria 2003

| Current age in months | Percentage of children who received: |  |  |  |  |  |  |  |  |  |  | Percentage with a vaccination card | Number of children |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | DPT |  |  | Polio ${ }^{1}$ |  |  |  | Measles | All ${ }^{2}$ | No vaccinations |  |  |
|  | BCG | 1 | 2 | 3 | 0 | 1 | 2 | 3 |  |  |  |  |  |
| 12-23 | 46.9 | 38.7 | 30.1 | 20.1 | 27.1 | 63.7 | 50.6 | 26.8 | 31.4 | 11.3 | 30.6 | 21.3 | 999 |
| 24-35 | 51.4 | 41.8 | 31.5 | 22.9 | 23.4 | 70.8 | 58.5 | 34.8 | 28.6 | 10.3 | 23.9 | 17.2 | 1,050 |
| 36-47 | 40.5 | 32.8 | 27.1 | 19.8 | 16.3 | 61.4 | 55.8 | 36.2 | 26.6 | 10.3 | 35.8 | 10.1 | 1,067 |
| 48-59 | 41.4 | 36.3 | 29.0 | 18.1 | 18.2 | 65.8 | 60.1 | 34.6 | 32.0 | 8.7 | 30.0 | 8.5 | 899 |
| 12-59 | 46.0 | 38.0 | 30.0 | 20.8 | 21.4 | 66.2 | 56.9 | 33.5 | 30.4 | 10.6 | 29.3 | 14.4 | 4,014 |

Note: Information was obtained from the vaccination card or if there was no written record, from the mother. 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)

### 9.6 Acute Respiratory Infection and Fever

Acute respiratory infection (ARI) is a common cause of illness and death during infancy and childhood. Early diagnosis and treatment with antibiotics can prevent a large proportion of deaths caused by ARI. In the 2003 NDHS, the prevalence of ARI 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 are consistent with ARI. It should be noted that the morbidity data collected are subjective in the sense that they are based on a mother's perception of illness without validation by medical personnel.

Table 9.13 shows that in the two weeks preceding the survey, 10 percent of children experienced symptoms of ARI and 31 percent had a fever. Prevalence peaks at age 6-11 months and then declines among older children. Children of more educated mothers and those living in more economically advantaged households are the least likely to experience these illnesses. There is significant regional variation in prevalence of fever and ARI symptoms.

Among children who experienced symptoms of ARI or fever, treatment was sought from a health facility or health care provider for almost one-third (31 percent). The likelihood of seeking treatment increases as the education of the mother and the economic index of the household increases. The proportion of children ill with fever and/or who had symptoms of ARI for whom treatment was sought ranges from a low of 20 percent in the North East to a high of 53 percent in the South West.

Table 9.13 Prevalence and treatment of symptoms of ARI and fever
Percentage of children under five years of age who had a cough accompanied by short, rapid breathing (symptoms of ARI), and percentage of children who had fever in the two weeks preceding the survey, and percentage of children with symptoms of ARI and/or fever for whom treatment was sought from a health facility or provider, by background characteristics, Nigeria 2003

| Background characteristic | Percentage of children with symptoms of ARI | Percentage of children with fever | Number <br> of children | Among children with symptoms of ARI and/or fever, percentage for whom treatment was sought from a health facility/ provider ${ }^{1}$ | Number <br> of children |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Age in months |  |  |  |  |  |
| <6 | 12.6 | 24.3 | 663 | 24.4 | 196 |
| 6-11 | 16.3 | 41.2 | 668 | 34.3 | 303 |
| 12-23 | 11.8 | 39.5 | 999 | 34.8 | 429 |
| 24-35 | 9.9 | 33.4 | 1,050 | 35.8 | 376 |
| 36-47 | 7.8 | 26.4 | 1,067 | 29.7 | 316 |
| 48-59 | 5.9 | 21.7 | 899 | 21.4 | 210 |
| Sex |  |  |  |  |  |
| Male | 10.5 | 31.0 | 2,717 | 32.1 | 935 |
| Female | 10.1 | 31.1 | 2,628 | 30.6 | 896 |
| Residence |  |  |  |  |  |
| Urban | 7.8 | 27.0 | 1,620 | 40.0 | 484 |
| Rural | 11.4 | 32.8 | 3,726 | 28.3 | 1,347 |
| Region |  |  |  |  |  |
| North Central | 6.7 | 23.9 | 781 | 49.5 | 201 |
| North East | 16.2 | 37.4 | 1,225 | 19.5 | 514 |
| North West | 8.8 | 35.7 | 1,818 | 33.4 | 682 |
| South East | 6.3 | 22.9 | 347 | 36.6 | 89 |
| South South | 12.2 | 29.5 | 684 | 25.1 | 243 |
| South West | 6.8 | 17.2 | 489 | 52.6 | 102 |
| Mother's education |  |  |  |  |  |
| No education | 11.0 | 35.7 | 2,675 | 22.0 | 1,022 |
| Primary | 11.3 | 28.3 | 1,259 | 39.5 | 409 |
| Secondary | 8.4 | 24.2 | 1,215 | 46.4 | 343 |
| Higher | 5.4 | 27.6 | 197 | 51.7 | 57 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 11.0 | 32.8 | 1,162 | 18.9 | 419 |
| Second | 12.4 | 35.0 | 1,116 | 21.5 | 432 |
| Middle | 12.1 | 34.0 | 1,071 | 30.1 | 391 |
| Fourth | 9.2 | 30.5 | 1,024 | 44.5 | 348 |
| Highest | 6.2 | 21.7 | 972 | 54.2 | 240 |
| Total | 10.3 | 31.0 | 5,345 | 31.4 | 1,831 |

### 9.7 Household Hygiene

### 9.7.1 Presence of Materials for Washing Hands

The connection between hand-washing and diarrhoea is well established. Increasing the frequency of hand-washing substantially decreases the occurrence of diarrhoea in young children. The proximity of the materials necessary for washing hands, such as running water, soap or cleanser, and a basin, may lead to more frequent hand-washing. Table 9.14 shows that less than half of households in the country have access to the three specified materials to wash hands ( 43 percent). The presence of these materials is higher in urban than rural areas ( 50 versus 40 percent). Prevalence by region ranges from a high of seven in ten households in the South South and South East to a low of three in ten households in the North West. It should be noted that a quarter of households do not have any hand-washing materials.

| Table 9.14 Hand-washing materials in the household |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of households with hand-washing materials in dwelling,, yard, or plot, by background characteristics, Nigeria 2003 |  |  |  |  |  |  |
| Hand-washing materials |  |  |  |  |  |  |
| Background characteristic | Water/ tap | Soap, ash, or other cleansing agent | Basin | All three handwashing materials | No handwashing materials | Number of households |
| Residence |  |  |  |  |  |  |
| Urban | 64.3 | 66.7 | 66.1 | 49.8 | 22.0 | 2,598 |
| Rural | 63.4 | 55.0 | 53.5 | 39.8 | 27.3 | 4,627 |
| Region |  |  |  |  |  |  |
| North Central | 55.3 | 51.4 | 56.2 | 36.8 | 32.6 | 1,040 |
| North East | 73.3 | 50.2 | 50.1 | 35.3 | 19.6 | 1,185 |
| North West | 56.9 | 55.4 | 36.3 | 29.0 | 31.0 | 1,911 |
| South East | 72.3 | 77.8 | 87.0 | 67.5 | 12.5 | 690 |
| South South | 76.8 | 81.2 | 88.8 | 68.6 | 9.6 | 1,315 |
| South West | 52.4 | 44.6 | 50.9 | 38.0 | 42.2 | 1,083 |
| Source of drinking water |  |  |  |  |  |  |
| Piped | 67.6 | 65.8 | 61.9 | 50.0 | 22.5 | 1,249 |
| Protected well | 68.2 | 71.1 | 71.0 | 56.1 | 18.8 | 1,737 |
| Open well | 60.4 | 47.4 | 40.3 | 30.8 | 32.8 | 2,058 |
| Surface | 58.6 | 52.9 | 60.0 | 38.0 | 27.9 | 1,597 |
| Other | 68.0 | 68.7 | 68.0 | 50.3 | 18.2 | 579 |
| Time to get water |  |  |  |  |  |  |
| In dwelling/yard/plot | 69.1 | 65.3 | 62.2 | 51.5 | 23.1 | 2,046 |
| $<5$ minutes | 63.1 | 64.8 | 55.0 | 38.8 | 21.6 | 319 |
| 5 to 9 minutes | 64.9 | 62.8 | 63.7 | 47.0 | 22.8 | 866 |
| 10 to 29 minutes | 59.3 | 54.1 | 53.5 | 38.1 | 29.5 | 1,780 |
| 30 to 59 minutes | 58.9 | 51.3 | 50.9 | 35.7 | 29.3 | 1,142 |
| $60+$ minutes | 65.6 | 59.6 | 61.6 | 43.3 | 21.7 | 1,011 |
| Total | 63.8 | 59.2 | 58.0 | 43.4 | 25.4 | 7,225 |
| Note: Total includes 5 cases with data missing on source of water and 60 cases with data missing on time to get water. |  |  |  |  |  |  |

### 9.7.2 Disposal of Children's Stools

The proper disposal of children's faeces is extremely important in preventing the spread of disease. If faeces are left uncontained, disease may be spread by direct contact or through animal contact. Table 9.15 presents information on the disposal of faecal matter of children under age five, by background characteristics. Two-thirds of children's stools are usually contained. Children's stools are more likely to be contained in urban than rural areas ( 83 and 61 percent, respectively). There is a positive relationship between mothers' education and children's stool containment.

Table 9.15 Disposal of child's stools
Percent distribution of mothers whose youngest child under five years is living with her by way in which child's faecal matter is disposed of, according to background characteristics and type of toilet facilities in household, Nigeria 2003

| Background characteristic | Stools contained |  |  | Stools uncontained |  |  | Uses diapers |  | Other | Missing | Total | Number of mothers |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Child always uses toilet/ latrine | Thrown into toilet/ latrine | Buried in yard |  |  |  |  |  |  |  |  |  |
|  |  |  |  | Thrown outside dwelling | Thrown outside yard | Rinsed away | Dis-posable | Washable |  |  |  |  |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 9.2 | 72.3 | 1.1 | 4.0 | 5.3 | 3.2 | 1.1 | 1.4 | 0.5 | 1.8 | 100.0 | 1,068 |
| Rural | 5.2 | 52.5 | 3.5 | 15.4 | 16.8 | 2.6 | 0.4 | 1.5 | 0.4 | 1.8 | 100.0 | 2,532 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 7.8 | 37.0 | 1.5 | 19.1 | 22.5 | 2.9 | 1.7 | 6.8 | 0.5 | 0.3 | 100.0 | 531 |
| North East | 3.4 | 69.2 | 0.9 | 8.2 | 15.2 | 1.2 | 0.5 | 0.5 | 0.1 | 0.8 | 100.0 | 793 |
| North West | 4.1 | 69.5 | 3.5 | 9.1 | 8.6 | 1.2 | 0.0 | 0.0 | 0.2 | 3.8 | 100.0 | 1,251 |
| South East | 15.3 | 54.7 | 1.0 | 10.6 | 7.3 | 6.3 | 1.4 | 1.1 | 0.8 | 1.4 | 100.0 | 209 |
| South South | 6.7 | 40.6 | 7.9 | 22.3 | 10.6 | 6.5 | 0.8 | 1.9 | 1.6 | 1.0 | 100.0 | 473 |
| South West | 13.9 | 52.5 | 0.3 | 7.4 | 20.3 | 4.4 | 0.3 | 0.3 | 0.0 | 0.6 | 100.0 | 343 |
| Mother's education |  |  |  |  |  |  |  |  |  |  |  |  |
| No education | 4.6 | 59.7 | 3.3 | 12.6 | 14.8 | 1.7 | 0.0 | 0.8 | 0.3 | 2.3 | 100.0 | 1,833 |
| Primary | 4.8 | 52.5 | 2.7 | 16.1 | 18.4 | 2.9 | 0.1 | 2.0 | 0.4 | 0.1 | 100.0 | 836 |
| Secondary | 10.2 | 61.4 | 2.2 | 8.0 | 7.0 | 5.1 | 1.4 | 1.6 | 0.9 | 2.1 | 100.0 | 798 |
| Higher | 18.8 | 59.2 | 0.0 | 2.3 | 1.9 | 2.2 | 5.8 | 5.9 | 0.0 | 3.9 | 100.0 | 134 |
| Toilet facilities |  |  |  |  |  |  |  |  |  |  |  |  |
| None | 2.5 | 9.3 | 5.3 | 33.5 | 41.2 | 3.5 | 0.4 | 1.9 | 0.5 | 1.9 | 100.0 | 828 |
| Pit latrine | 6.0 | 76.2 | 2.0 | 5.2 | 5.8 | 1.4 | 0.2 | 1.3 | 0.2 | 1.7 | 100.0 | 2,238 |
| Improved pit latrine | 2.9 | 72.1 | 1.1 | 6.8 | 2.0 | 8.4 | 1.6 | 0.0 | 5.0 | 0.0 | 100.0 | 87 |
| Flush toilet | 18.7 | 62.6 | 0.9 | 4.2 | 0.8 | 6.1 | 2.7 | 1.7 | 0.5 | 1.8 | 100.0 | 398 |
| Other | (0.0) | (12.5) | (14.3) | (34.3) | (14.1) | (17.8) | (0.0) | (0.0) | (1.4) | (5.5) | (100.0) | 48 |
| Total | 6.4 | 58.4 | 2.8 | 12.0 | 13.4 | 2.8 | 0.6 | 1.4 | 0.4 | 1.8 | 100.0 | 3,601 |

Note: Figures in parentheses are based on 25-49 unweighted cases. Total includes one case with data missing on toilet facilities.

### 9.8 Diarrhoea

Dehydration from diarrhoea is a major cause of death among young children in Nigeria. In the 2003 NDHS, mothers were asked whether any of their children under five years of age had diarrhoea at any time during the two-week period prior to the survey. If any child had diarrhoea, the mother was asked about feeding practices during the diarrhoeal episode and about what actions were taken to treat the diarrhoea. Table 9.16 shows percentage of children less than five years with diarrhoea in the preceding two weeks before the survey, by background characteristics. Nearly one-fifth of children had diarrhoea in the two weeks preceding the survey.

## Table 9.16 Prevalence of diarrhoea

Percentage of children under five years with diarrhoea in the two weeks preceding the survey, by background characteristics, Nigeria 2003

| Background characteristic | Diarrhoea in the two weeks preceding the survey | Number <br> of children |
| :---: | :---: | :---: |
| Age in months |  |  |
| <6 | 12.8 | 663 |
| 6-11 | 26.6 | 668 |
| 12-23 | 27.2 | 999 |
| 24-35 | 22.8 | 1,050 |
| 36-47 | 14.4 | 1,067 |
| 48-59 | 8.8 | 899 |
| Sex |  |  |
| Male | 19.3 | 2,717 |
| Female | 18.3 | 2,628 |
| Residence |  |  |
| Urban | 14.5 | 1,620 |
| Rural | 20.7 | 3,726 |
| Region |  |  |
| North Central | 14.9 | 781 |
| North East | 35.1 | 1,225 |
| North West | 18.9 | 1,818 |
| South East | 8.6 | 347 |
| South South | 8.0 | 684 |
| South West | 6.4 | 489 |
| Mother's education |  |  |
| No education | 24.0 | 2,675 |
| Primary | 17.2 | 1,259 |
| Secondary | 11.2 | 1,215 |
| Higher | 6.4 | 197 |
| Hand-washing materials in household |  |  |
| Water/tap | 19.8 | 3,478 |
| Soap/ash/other cleansing agent | ent 18.2 | 3,157 |
| Basin | 16.3 | 2,951 |
| All three hand-washing materials | 15.9 | 2,193 |
| None | 16.9 | 1,288 |
| Source of drinking water |  |  |
| Piped | 17.3 | 801 |
| Protected well | 12.6 | 1,107 |
| Open well | 23.9 | 1,921 |
| Surface | 17.2 | 1,112 |
| Other | 19.2 | 402 |
| Wealth quintile |  |  |
| Lowest | 21.7 | 1,162 |
| Second | 23.6 | 1,116 |
| Middle | 19.6 | 1,071 |
| Fourth | 18.9 | 1,024 |
| Highest | 9.0 | 972 |
| Total | 18.8 | 5,345 |

Note: Total includes 2 cases with data missing on source of drinking water.

Children age 6-11 and 12-23 months have the highest prevalence of diarrhoea (27 percent each). Rural children are more likely than urban children to have diarrhoea. The likelihood of children in the North East having diarrhoea is more than five times that of children in the South West ( 35 versus 6 percent). Incidence of diarrhoea is inversely related to educational attainment. There is little variation by the economic status of the household, with the exception of children in households in the highest wealth quintile, who are the least likely to have had diarrhoea.

### 9.8.1 Knowledge of ORS Packets

A simple and effective response to dehydration associated with diarrhoea is a prompt increase in the child's fluid intake through food and oral rehydration therapy (ORT). ORT may include the use of a solution prepared from commercially produced packets of oral rehydration salts (ORS) or a homemade mixture usually prepared from sugar, salt, and water. Table 9.17 shows the proportion of women with children under five years of age who know about ORS packets.

Two-thirds of mothers ( 65 percent) know about ORS packets. There is significant variation by background characteristics. The most striking variation is observed at the regional level: knowledge ranges from a low of 37 percent in the South East to a high of 80 percent in the North West.

### 9.8.2 Diarrhoea Treatment

Mothers of children who had diarrhoea in the two weeks preceding the survey were asked what was done to manage or treat the illness. The results are shown in Table 9.18. Twenty-two percent of mothers reported their children with diarrhoea were taken to a health facility. Less than one-fifth of children (18 percent) were given a solution made from ORS. Twenty-nine percent, however, received either ORS or recommended home fluids (RHF), which are either cereal-based liquids or a mixture of sugar, salt, and water. Forty percent received ORS, RHF, or increased fluids. Other treatments were also common. In particular, half of all children received a pill or syrup, and 15 percent received some other home treatment. One in five children with diarrhoea were given no treatment at all.

The small number of children in the sample who

Table 9.17 Knowledge of ORS packets
Percentage of mothers with births in the five years preceding the survey who know about oral rehydration salts (ORS) packets for treatment of diarrhoea in children, by background characteristics, Nigeria 2003

| Background characteristic | Percentage of mothers who know about ORS packets | Number of mothers |
| :---: | :---: | :---: |
| Age |  |  |
| 15-19 | 54.1 | 356 |
| 20-24 | 62.5 | 850 |
| 25-29 | 67.1 | 1,055 |
| 30-34 | 68.7 | 713 |
| 35-49 | 65.6 | 936 |
| Residence |  |  |
| Urban | 75.5 | 1,144 |
| Rural | 60.5 | 2,766 |
| Region |  |  |
| North Central | 57.0 | 575 |
| North East | 67.7 | 862 |
| North West | 79.7 | 1,341 |
| South East | 36.7 | 222 |
| South South | 38.6 | 544 |
| South West | 72.5 | 367 |
| Education |  |  |
| No education | 65.2 | 1,989 |
| Primary | 60.3 | 918 |
| Secondary | 67.1 | 862 |
| Higher | 76.1 | 143 |
| Wealth quintile |  |  |
| Lowest | 50.0 | 852 |
| Second | 58.4 | 846 |
| Middle | 70.0 | 808 |
| Fourth | 73.9 | 735 |
| Highest | 75.7 | 670 |
| Total | 64.9 | 3,911 |
| ORS = Oral rehydration salts |  |  | had diarrhoea in the two weeks before the survey makes comparisons by region or mother's education difficult. There is a significant differential, however, by residence, with urban children more likely than rural children to have gone to a health facility. For example, 30 percent of urban children were taken to a health care facility compared with just 19 percent of rural children. There is generally a positive correlation between treatment of diarrhoea and the economic status of the household.

Table 9.18 Diarrhoea treatment

Percentage of children under five years of age who had diarrhoea in the two weeks preceding the survey taken for treatment to a health provider, percentage who received oral rehydration therapy (ORT), and percentage given other treatments, by background characteristics, Nigeria 2003

| Background characteristic | Percentage taken to a health provider ${ }^{1}$ | Oral rehydration therapy |  |  |  |  | Other treatments |  |  |  | Missing | No treatment | Number of children with diarrhoea |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | ORS packets | RHF | Either ORS or RHF | $\begin{aligned} & \text { In- } \\ & \text { creased } \\ & \text { fluids } \end{aligned}$ | $\begin{aligned} & \text { ORS, RHF } \\ & \text { or in- } \\ & \text { creased } \\ & \text { fluids } \end{aligned}$ | $\begin{gathered} \text { Pill } \\ \text { or } \\ \text { syrup } \end{gathered}$ | Injection | Intravenous solution | Home remedy/ other |  |  |  |
| Age in months |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <6 | 20.1 | 14.4 | 12.2 | 22.4 | 9.5 | 27.2 | 35.4 | 1.1 | 0.0 | 21.1 | 1.1 | 27.6 | 85 |
| 6-11 | 27.4 | 20.6 | 14.8 | 31.5 | 16.5 | 39.2 | 45.8 | 0.4 | 0.0 | 11.2 | 0.0 | 27.4 | 178 |
| 12-23 | 18.8 | 17.2 | 18.3 | 28.6 | 26.8 | 43.5 | 47.8 | 2.4 | 0.2 | 13.1 | 0.5 | 23.3 | 272 |
| 24-35 | 27.8 | 25.0 | 22.2 | 38.1 | 20.2 | 46.6 | 64.5 | 3.7 | 0.2 | 10.0 | 0.5 | 12.7 | 239 |
| 36-47 | 10.3 | 8.6 | 11.3 | 17.9 | 19.8 | 31.6 | 48.6 | 1.0 | 0.0 | 20.5 | 2.3 | 15.7 | 153 |
| 48-59 | 21.3 | 18.9 | 20.9 | 31.0 | 21.1 | 42.4 | 48.2 | 2.0 | 0.0 | 21.1 | 2.3 | 11.6 | 79 |
| Sex |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Male | 23.9 | 19.8 | 16.5 | 30.1 | 18.8 | 40.2 | 52.9 | 1.8 | 0.1 | 13.9 | 1.1 | 19.1 | 524 |
| Female | 18.8 | 16.5 | 18.0 | 28.7 | 22.2 | 40.2 | 48.0 | 2.2 | 0.1 | 15.1 | 0.7 | 20.5 | 482 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 30.3 | 22.9 | 17.1 | 34.3 | 25.1 | 49.0 | 58.9 | 4.5 | 0.0 | 7.2 | 0.5 | 17.5 | 235 |
| Rural | 18.8 | 16.8 | 17.2 | 27.9 | 19.0 | 37.5 | 48.0 | 1.3 | 0.1 | 16.7 | 1.0 | 20.5 | 771 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 39.7 | 22.3 | 27.3 | 47.0 | 36.0 | 59.9 | 46.4 | 3.6 | 0.5 | 20.7 | 0.0 | 11.4 | 116 |
| North East | 7.6 | 13.8 | 8.9 | 19.7 | 13.9 | 29.0 | 48.9 | 0.2 | 0.0 | 13.9 | 0.6 | 26.3 | 430 |
| North West | 29.8 | 20.5 | 20.0 | 30.5 | 18.0 | 41.8 | 53.1 | 3.1 | 0.0 | 15.2 | 1.9 | 16.8 | 343 |
| South East | (24.9) | (17.4) | (25.3) | (33.7) | (15.3) | (39.4) | (63.8) | (12.1) | (1.6) | (5.0) | (0.0) | (11.4) | 30 |
| South South | (26.8) | (27.7) | (29.9) | (49.1) | (31.1) | (56.9) | (43.0) | (0.0) | (0.0) | (7.3) | (0.0) | (19.0) | 55 |
| South West | (38.9) | (23.3) | (33.4) | (46.6) | (65.1) | (74.3) | (60.1) | (2.4) | (0.0) | (13.3) | (0.0) | (3.4) | 31 |
| Mother's education |  |  |  |  |  |  |  |  |  |  |  |  |  |
| No education | 16.6 | 13.2 | 15.0 | 22.5 | 17.3 | 33.9 | 47.1 | 1.4 | 0.1 | 16.8 | 0.8 | 22.7 | 641 |
| Primary | 24.7 | 22.4 | 18.2 | 35.0 | 23.8 | 45.3 | 54.3 | 2.2 | 0.0 | 10.9 | 0.0 | 17.5 | 216 |
| Secondary | 35.3 | 31.1 | 24.4 | 48.0 | 25.9 | 57.7 | 60.0 | 3.9 | 0.4 | 8.9 | 2.6 | 11.7 | 137 |
| Higher | * | * | * | * | * | * | * | * | * | * | * | * | 13 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 10.3 | 12.6 | 8.6 | 17.2 | 17.9 | 29.5 | 45.8 | 1.4 | 0.0 | 15.3 | 0.7 | 27.2 | 252 |
| Second | 13.1 | 14.8 | 15.7 | 24.1 | 15.2 | 31.2 | 45.4 | 0.9 | 0.0 | 16.7 | 0.9 | 24.4 | 263 |
| Middle | 22.5 | 18.5 | 28.0 | 38.4 | 22.4 | 48.1 | 50.4 | 2.4 | 0.2 | 20.3 | 0.0 | 14.5 | 210 |
| Fourth | 39.2 | 21.1 | 16.8 | 33.8 | 23.2 | 48.6 | 59.5 | 1.2 | 0.3 | 4.7 | 2.5 | 16.3 | 194 |
| Highest | 36.8 | 37.7 | 21.7 | 49.3 | 32.6 | 60.8 | 60.2 | 7.9 | 0.0 | 13.3 | 0.0 | 5.0 | 87 |
| Total | 21.5 | 18.2 | 17.2 | 29.4 | 20.4 | 40.2 | 50.5 | 2.0 | 0.1 | 14.5 | 0.9 | 19.8 | 1,006 |

Note: Oral rehydration therapy (ORT) includes solution prepared from oral rehydration salts (ORS) packets, recommended home fluids (RHF), or increased fluids. 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.
${ }^{1}$ Excludes pharmacy, shop and traditional practitioner

### 9.8.3 Feeding Practices During Diarrhoea

Mothers are encouraged to continue feeding their children normally when the children suffer from diarrhoea and to increase the amount of fluids children are given. These practices help to reduce the likelihood the child will become dehydrated and also minimize the adverse consequences of diarrhoea on the child's nutritional status.

Table 9.19 presents data on feeding practices when a child has diarrhoea. Just one-fifth of children are given more fluids than usual, as recommended. The most common practice is to give the same amount of fluids as usual (41 percent). However, a significant proportion of children are offered less fluid than usual: 22 percent are offered somewhat less and 16 percent are offered much less.

Regarding intake of foods when children are sick with diarrhoea, 37 percent of children are offered the same amount of food, and 8 percent are offered more food than usual. Almost half of children with diarrhoea are offered somewhat less or much less food than usual, or no food at all.

| Table 9.19 Feeding practices during |  |
| :--- | :---: |
| diarrhoea |  |
| Percent distribution of children un- |  |
| der five years who had diarrhoea in |  |
| the two weeks preceding the survey |  |
| by amount of liquids and food of- |  |
| fered compared with normal prac- |  |
| tice, Nigeria 2003 |  |
| Liquid/food |  |
| offered |  |
| Amount of liquids offered |  |
| Same as usual | 40.8 |
| More | 20.4 |
| Somewhat less | 21.6 |
| Much less | 15.5 |
| None | 1.1 |
| Don't know/missing | 0.6 |
|  |  |
| Total | 100.0 |
|  |  |
| Amount of food offered | 36.9 |
| Same as usual | 8.2 |
| More | 25.8 |
| Somewhat less | 16.1 |
| Much less | 5.2 |
| None | 7.6 |
| Never gave food | 0.3 |
| Don't know/missing | 100.0 |
| Total | 1,006 |
| Number of children |  |

### 9.9 Children Health Care by Women’s Status

Status and self-respect can be major determinants of a mother's ability to obtain adequate health care for her children. Table 9.20 shows utilization of child health care services by the mother's level of empowerment, as measured by the three indicators of women's status defined in Chapter 3.

The data indicate that decisionmaking ability has a generally positive relationship with children's access to health care. The more empowered a woman, the more likely her child is to receive services. Justification of wife-beating exhibits a strong negative correlation with access to child health services. There is no clear pattern, however, in the relationship between child's health care and reasons to refuse sex with husband.

Table 9.20 Child health care by women's status
Percentage of children age 12-23 months fully vaccinated, and percentage of children under five years who were ill with a fever, symptoms of ARI and/or diarrhoea, in the two weeks preceding the survey taken to a health provider for treatment, by women's status indicators, Nigeria 2003

| Women's status indicator | Percentage of children 12-23 months fully vaccinated ${ }^{1}$ | Number <br> of children | Percentage of children with fever and/or symptons of ARI taken to a health provider ${ }^{2}$ | Number <br> of children | Percentage of children with diarrhoea taken to a health provider ${ }^{2}$ | Number <br> of children |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |


| Number of decisions in which <br> woman has final say ${ }^{3}$ |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 7.9 | 408 | 28.9 | 801 | 21.8 | 490 |
| $1-2$ | 13.2 | 362 | 32.5 | 630 | 19.6 | 357 |
| $3-4$ | 24.7 | 104 | 35.9 | 192 | 22.0 | 91 |
| 5 | 18.6 | 125 | 33.6 | 206 | 28.4 | 68 |
| Number of reasons to refuse |  |  |  |  |  |  |
| sex with husband |  |  |  |  |  |  |
| 0 | 10.4 | 97 | 34.3 | 136 | 29.3 | 74 |
| $1-2$ | 9.8 | 263 | 30.4 | 473 | 24.2 | 258 |
| $3-4$ | 14.5 | 649 | 31.5 | 1,221 | 19.5 | 674 |
| Number of reasons wife |  |  |  |  |  |  |
| beating is justified |  |  |  |  |  |  |
| 0 | 23.8 | 323 | 42.1 | 433 | 30.0 | 178 |
| $1-2$ | 9.8 | 198 | 33.5 | 398 | 33.2 | 228 |
| $3-4$ | 5.1 | 181 | 28.9 | 324 | 18.1 | 184 |
| $5-6$ | 297 | 24.5 | 676 | 12.8 | 415 |  |
| Total |  |  |  |  |  |  |

${ }^{1}$ Those who have received BCG, measles, and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)
${ }^{2}$ Excludes pharmacy, shops, and traditional practitioner
${ }^{3}$ Either by herself or jointly with others

### 9.10 Perceived Problems in Accessing Health Care

The 2003 NDHS included a series of questions aimed at obtaining information on the problems women perceive as barriers to accessing health care for themselves. This information is particularly important in understanding and addressing the barriers women may face in seeking care in general. To obtain this information, all respondents were asked whether each of the following factors would be a big problem or not for them in obtaining medical advice or treatment when they are sick: knowing where to go, getting permission to go, getting money for treatment, distance to the health facility, availability of transport, not wanting to go alone, and concern that there may not be a female provider.

Almost half of women cite at least one problem in accessing health care (Table 9.21). The most commonly cited problem is getting money for treatment ( 30 percent), followed by distance to health facility and having to take transport ( 24 percent each). Less than one in five women reported the other three problems: concern that there may not be a female provider ( 17 percent), not wanting to go alone ( 14 percent), and knowing where to go for treatment (14 percent). One in ten women say that getting permission to go is a problem (Figure 9.2).

Table 9.21 Problems in accessing health care
Percentage of women who reported they have big problems in accessing health care for themselves when they are sick, by type of problem and background characteristics, Nigeria 2003

| Background characteristic | Problems in accessing health care |  |  |  |  |  |  | Any of the specified problems | Number <br> of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Knowing where to go for treatment | Getting permission to go for treatment | Getting money for treatment | Distance to health facility | Having to take transport | Not wanting to go alone | Concern there may not be a female provider |  |  |
| Age |  |  |  |  |  |  |  |  |  |
| 15-19 | 15.3 | 11.9 | 29.5 | 23.9 | 23.0 | 18.3 | 19.2 | 48.8 | 1,716 |
| 20-29 | 13.2 | 9.6 | 28.7 | 23.0 | 22.4 | 13.4 | 16.5 | 44.8 | 2,876 |
| 30-39 | 13.5 | 9.5 | 30.7 | 25.0 | 24.7 | 12.3 | 17.5 | 45.7 | 1,757 |
| 40-49 | 13.1 | 8.3 | 35.2 | 27.3 | 26.5 | 13.4 | 15.5 | 49.0 | 1,271 |
| Number of living children |  |  |  |  |  |  |  |  |  |
| 0 | 12.6 | 8.8 | 29.8 | 22.4 | 21.4 | 15.3 | 16.0 | 44.7 | 2,499 |
| 1-2 | 15.1 | 11.3 | 28.2 | 24.7 | 23.9 | 14.5 | 18.0 | 46.2 | 2,009 |
| 3-4 | 15.5 | 10.2 | 30.7 | 25.2 | 25.1 | 13.6 | 18.1 | 48.6 | 1,526 |
| $5+$ | 12.1 | 9.5 | 34.0 | 26.5 | 26.1 | 13.0 | 17.1 | 47.9 | 1,586 |
| Marital status |  |  |  |  |  |  |  |  |  |
| Never married | 9.6 | 7.7 | 31.6 | 19.5 | 19.2 | 12.2 | 10.2 | 41.5 | 1,926 |
| Married or living together | 15.3 | 11.0 | 29.4 | 26.0 | 25.4 | 15.2 | 20.0 | 48.1 | 5,336 |
| Divorced, separated, widowed | 12.7 | 4.7 | 40.2 | 26.2 | 24.0 | 11.7 | 12.6 | 51.7 | 358 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 5.1 | 4.0 | 16.9 | 9.5 | 8.5 | 6.0 | 7.8 | 25.6 | 2,629 |
| Rural | 18.3 | 13.0 | 37.6 | 32.2 | 31.8 | 18.6 | 22.1 | 57.6 | 4,991 |
| Region |  |  |  |  |  |  |  |  |  |
| North Central | 5.2 | 4.7 | 32.7 | 18.6 | 18.7 | 7.2 | 6.0 | 39.5 | 1,121 |
| North East | 20.6 | 15.5 | 29.1 | 25.7 | 26.5 | 18.9 | 19.8 | 50.2 | 1,368 |
| North West | 20.1 | 15.5 | 27.1 | 29.4 | 29.0 | 20.6 | 33.5 | 54.3 | 2,095 |
| South East | 10.4 | 4.5 | 35.1 | 21.8 | 14.8 | 3.7 | 4.0 | 43.4 | 737 |
| South South | 13.8 | 8.8 | 47.1 | 34.8 | 35.3 | 19.4 | 16.5 | 60.4 | 1,342 |
| South West | 2.5 | 1.3 | 10.1 | 5.6 | 5.0 | 2.8 | 2.0 | 15.7 | 958 |
| Education |  |  |  |  |  |  |  |  |  |
| No education | 22.4 | 16.9 | 34.1 | 32.0 | 31.8 | 20.8 | 28.3 | 58.6 | 3,171 |
| Primary | 10.7 | 6.6 | 37.1 | 25.9 | 25.5 | 13.1 | 12.3 | 48.8 | 1,628 |
| Secondary | 6.5 | 4.5 | 24.6 | 16.1 | 14.8 | 8.2 | 8.5 | 34.3 | 2,370 |
| Higher | 1.7 | 0.3 | 11.4 | 9.0 | 8.1 | 4.1 | 2.8 | 18.5 | 451 |
| Employment |  |  |  |  |  |  |  |  |  |
| Not employed | 16.1 | 11.9 | 31.2 | 24.6 | 24.7 | 17.5 | 19.9 | 48.4 | 3,177 |
| Working for cash | 11.5 | 8.5 | 26.4 | 22.2 | 21.1 | 11.2 | 15.2 | 42.3 | 3,744 |
| Working, not for cash | 13.8 | 7.9 | 49.1 | 35.1 | 34.6 | 14.9 | 14.2 | 60.4 | 673 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |
| Lowest | 29.7 | 19.3 | 48.9 | 47.8 | 48.9 | 27.8 | 28.7 | 75.1 | 1,414 |
| Second | 19.6 | 15.1 | 39.4 | 33.6 | 33.4 | 20.1 | 26.4 | 62.2 | 1,439 |
| Middle | 12.9 | 10.7 | 32.2 | 23.2 | 21.8 | 14.3 | 18.1 | 47.5 | 1,513 |
| Fourth | 6.1 | 4.6 | 22.8 | 13.5 | 12.3 | 8.0 | 10.1 | 33.7 | 1,526 |
| Highest | 3.1 | 1.7 | 13.1 | 8.2 | 7.0 | 3.8 | 5.4 | 20.8 | 1,728 |
| Total | 13.7 | 9.9 | 30.4 | 24.4 | 23.8 | 14.3 | 17.2 | 46.6 | 7,620 |

Note: Total includes 26 cases with missing information on education.

Figure 9.2 Problems in Accessing Health Care


Getting money for treatment was the problem most commonly reported by women of all backgrounds. The likelihood of citing at least one problem varies by background characteristics. In particular, there is a strong negative correlation between both level of education and wealth quintile and citing at least one problem accessing health care. Furthermore, there are large differentials by residence and region. For example, rural women are more than twice as likely to report at least one of the specified problems as urban women.

### 9.11 Use of Smoking Tobacco

Tobacco smoking during pregnancy increases the risk of having babies with small or low birth weight. Its use at other times adversely affects women's health status and may also adversely affect children's health, particularly in terms of respiratory illness. Table 9.22 shows that smoking is not common among Nigerian women. Ninety-nine percent of women report that they do not use any kind of smoking tobacco, and there is no significant variation by background characteristics.

| Table 9.22 Use of smoking tobacco |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of women who smoke cigarettes or tobacco, by background characteristics and maternity status, Nigeria 2003 |  |  |  |  |  |
|  | Uses tobacco |  |  | Does not use tobacco | Number of women |
| Background characteristic | Cigarettes | Pipe | Other tobacco |  |  |
| Age |  |  |  |  |  |
| 15-19 | 0.3 | 0.0 | 0.0 | 99.6 | 1,716 |
| 20-34 | 0.3 | 0.0 | 0.1 | 99.4 | 3,817 |
| 35-49 | 0.9 | 0.3 | 1.4 | 97.3 | 2,087 |
| Residence |  |  |  |  |  |
| Urban | 0.3 | 0.0 | 0.4 | 99.3 | 2,629 |
| Rural | 0.6 | 0.1 | 0.5 | 98.7 | 4,991 |
| Region |  |  |  |  |  |
| North Central | 0.2 | 0.1 | 0.4 | 99.3 | 1,121 |
| North East | 0.9 | 0.2 | 0.0 | 98.8 | 1,368 |
| North West | 1.1 | 0.1 | 0.3 | 98.4 | 2,095 |
| South East | 0.0 | 0.1 | 2.1 | 97.7 | 737 |
| South South | 0.0 | 0.0 | 0.3 | 99.7 | 1,342 |
| South West | 0.1 | 0.0 | 0.5 | 99.3 | 958 |
| Education |  |  |  |  |  |
| No education | 0.8 | 0.2 | 0.8 | 98.0 | 3,171 |
| Primary | 0.4 | 0.1 | 0.3 | 99.2 | 1,628 |
| Secondary | 0.2 | 0.0 | 0.1 | 99.7 | 2,370 |
| Higher | 0.0 | 0.0 | 0.5 | 99.5 | 451 |
| Maternity status |  |  |  |  |  |
| Pregnant | 0.4 | 0.0 | 0.2 | 99.2 | 868 |
| Breastfeeding (not pregnant) | 0.5 | 0.0 | 0.3 | 99.0 | 1,985 |
| Neither | 0.5 | 0.1 | 0.6 | 98.8 | 4,767 |
| Total | 0.5 | 0.1 | 0.5 | 98.9 | 7,620 |

Malaria is a major public health concern in Nigeria. According to recent estimates, half of the Nigerian population has at least one episode of malaria annually, and the majority of outpatient visits can be attributed to malaria (FMOH, 2001). Plasmodium falciparum, transmitted by the anopheles mosquito, is responsible for the majority of malaria deaths in Nigeria, and the groups most at risk are children under five years of age and pregnant women. Pregnant women are vulnerable because their natural immunity is reduced; thus, they are four times more likely to suffer from complications of malaria than nonpregnant women. Malaria is a cause of pregnancy loss, stillbirth, low birth weight, and neonatal mortality (Jamison et al., 1993). Individuals with sickle cell and other low immune groups are also at higher risk.

Malaria negatively impacts the social and economic development of communities in Nigeria. It is responsible for school absenteeism and low productivity at workplaces and on farms. The Federal Government policy on malaria control in Nigeria focuses on the following main interventions: 1) management of cases, 2) prevention of malaria with insecticide-treated nets (ITN), and 3) use of intermittent preventive treatment (IPT) during pregnancy. Health promotion monitoring and evaluation are cross-cutting activities.

### 10.1 MosQuito Nets

## Ownership of Mosquito Nets

All households in the 2003 Nigeria Demographic and Health Survey (NDHS) were asked whether they own a mosquito net, and if so, how many. Table 10.1 shows the percentage of households with at least one, and 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.

Table 10.1 shows that ownership of mosquito nets is not widespread in Nigeria. Only 12 percent of households report that they own at least one net. Two percent of households report that they own an ITN. Prevalence of mosquito net ownership varies greatly by residence and region. Rural households are three times as likely as urban households to own at least one mosquito net. Furthermore, ownership ranges from less than 1 percent in the South West to 22 percent in the North East. It is notable that the least advantaged household (in terms of the wealth index) have the highest levels of mosquito net ownership. Whereas 23 percent of the households in the lowest quintile own at least one net, only 3 percent of households in the highest quintile report ownership.

## Use of Mosquito Nets

In the 2003 Nigeria NDHS, respondents to the Household Questionnaire were asked about the use of mosquito nets by household members during the previous night. The use of mosquito nets by children under five and pregnant women is of special interest for public health purposes.

Since the prevalence of malaria-carrying mosquitoes varies seasonally, with a peak during and immediately following periods of rainfall, use of mosquito nets may be expected to follow a similar seasonal pattern. The 2003 NDHS fieldwork was conducted from March to August, which is the rainy season in most areas of Nigeria. Thus, the data collection coincided with the period when mosquito nets are most likely to be used.

Table 10.1 Ownership of mosquito nets
Percentage of households with at least one and more than one mosquito net (treated or untreated), and percentage of household that have at least one and more than one insecticide treated net (ITN), by background characteristics, Nigeria 2003

| Bckground characteristic | Percentage of households that have: |  |  |  | Number of households |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | At least one net | More than one net | At least one ITN ${ }^{1}$ | More than one ITN ${ }^{1}$ |  |
| Residence |  |  |  |  |  |
| Urban | 5.4 | 2.7 | 1.0 | 0.4 | 2,598 |
| Rural | 15.5 | 8.7 | 2.9 | 1.5 | 4,627 |
| Region |  |  |  |  |  |
| North Central | 14.9 | 9.6 | 3.9 | 2.7 | 1,040 |
| North East | 22.1 | 12.3 | 1.3 | 0.8 | 1,185 |
| North West | 13.3 | 7.8 | 3.1 | 1.5 | 1,911 |
| South East | 5.8 | 2.1 | 2.4 | 0.8 | 690 |
| South South | 10.5 | 4.9 | 2.0 | 0.7 | 1,315 |
| South West | 0.5 | 0.1 | 0.3 | 0.0 | 1,083 |
| Wealth quintile |  |  |  |  |  |
| Lowest | 23.0 | 13.9 | 4.5 | 3.1 | 1,413 |
| Second | 15.5 | 8.9 | 1.3 | 0.3 | 1,347 |
| Middle | 10.8 | 5.2 | 2.4 | 1.0 | 1,408 |
| Fourth | 8.0 | 4.1 | 2.1 | 1.0 | 1,446 |
| Highest | 3.3 | 1.6 | 1.0 | 0.3 | 1,611 |
| Total | 11.8 | 6.6 | 2.2 | 1.1 | 7,225 |

${ }^{1}$ An insecticide treated net (ITN) is a permanent net that does not require any treatment, a pretreated net obtained in the past six months, or a net that has been soaked with insecticide in the past six months.

Tables 10.2 and 10.3 show the percentages of children under five years of age, all women age 15-49, and pregnant women who slept under a mosquito net the night before the survey and the percentage who slept under an ITN, by background characteristics. Six percent of children under five slept under a mosquito net including 1 percent of children who slept under an ITN. Approximately twice as many rural as urban children slept under a mosquito net ( 7 and 4 percent, respectively). There are marked differences by region; for example, whereas 9 percent of children in the South South and in the North Central slept under a net the night preceding the survey, no children in the South West were reported to have slept under a net.

Six percent of all women and 5 percent of pregnant women slept under a mosquito net the night before the survey, approximately one-fourth of them under an ITN (Table 10.3). Similar to children, women in rural areas are several times more likely than their urban counterparts to have slept under a net. There are also significant differences by region.

Table 10.2 Use of mosquito nets by children
Percentage of children under five years who slept under a mosquito net the night before the survey and percentage who slept under an insecticide treated net (ITN), by background characteristics, Nigeria 2003

| Background characteristic | Percentage of children who slept under a mosquito net the night before the survey |  | Number <br> of children |
| :---: | :---: | :---: | :---: |
|  | Any net | ITN ${ }^{1}$ |  |
| Age |  |  |  |
| <1 | 6.7 | 1.3 | 1,412 |
| 1 | 6.9 | 1.5 | 1,078 |
| 2 | 5.2 | 0.9 | 1,171 |
| 3 | 6.5 | 1.4 | 1,192 |
| 4 | 4.1 | 0.7 | 1,008 |
| Sex |  |  |  |
| Male | 6.3 | 1.1 | 2,986 |
| Female | 5.6 | 1.2 | 2,875 |
| Residence |  |  |  |
| Urban | 3.6 | 0.6 | 1,787 |
| Rural | 7.0 | 1.4 | 4,074 |
| Region |  |  |  |
| North Central | 8.9 | 2.7 | 854 |
| North East | 6.8 | 0.4 | 1,349 |
| North West | 5.0 | 1.7 | 1,965 |
| South East | 4.4 | 1.3 | 365 |
| South South | 8.6 | 0.5 | 774 |
| South West | 0.0 | 0.0 | 554 |
| Total | 5.9 | 1.2 | 5,861 |

${ }^{1}$ An insecticide treated net (ITN) is a permanent net that does not require any treatment, a pretreated net obtained in the past six months, or a net that has been soaked with insecticide in the past six months.

| Percentage of all women and pregnant women age 15-49 who slept under a mosquito net (treated untreated) the night before the survey, and the percentage who slept under an insecticide treated net (ITN), by background characteristics, Nigeria 2003 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage of women who slept under a mosquito net the night before the survey |  | Number of women | Per pregn who a m the n th | ge of omen under o net before ey | Number of pregnant women |
| Background characteristic | Any net | ITN ${ }^{1}$ |  | Any net | ITN ${ }^{1}$ |  |
| Residence |  |  |  |  |  |  |
| Urban | 2.6 | 0.5 | 2,801 | 3.2 | 0.4 | 254 |
| Rural | 7.1 | 1.8 | 5,340 | 6.2 | 1.6 | 629 |
| Region |  |  |  |  |  |  |
| North Central | 8.2 | 2.6 | 1,207 | 9.2 | 1.6 | 108 |
| North East | 8.4 | 0.5 | 1,468 | 8.4 | 1.7 | 197 |
| North West | 5.0 | 2.1 | 2,235 | 4.0 | 1.1 | 352 |
| South East | 2.9 | 1.4 | 774 | 2.0 | 1.5 | 51 |
| South South | 6.6 | 1.0 | 1,434 | 5.0 | 1.5 | 115 |
| South West | 0.3 | 0.1 | 1,023 | 0.0 | 0.0 | 60 |
| Total | 5.6 | 1.4 | 8,141 | 5.4 | 1.3 | 883 |
| ${ }^{1}$ An insecticide treated net (ITN) is a permanent net that does not require any treatment, a pretreated net obtained in the past six months, or a net that has been soaked with insecticide in the past six months. |  |  |  |  |  |  |

### 10.2 Antimalarial Drug Use During Pregnancy

Pregnant women who carry the malaria parasite may be at risk of serious problems that jeopardize their own health, that compromise the health of the foetus, and that increase the likelihood of adverse pregnancy outcomes such as stillbirth, spontaneous abortion, and low birth weight. As a protective measure, in 2001 the Federal Ministry of Health recommended that pregnant women receive IPT using two doses of sulfadoxine-pyrimethamine (SP) during the second and early in the third trimester of pregnancy.

In reference to the pregnancy leading to their last live birth, women in the 2003 NDHS were asked whether any antimalarials were taken during the pregnancy and which drug(s) was taken. Table 10.4 presents the percentage of women who had a birth in the last five years preceding the survey who took an antimalarial or other drug during the most recent pregnancy for prevention, and the percentage who received IPT as part of their antenatal care, by background characteristics.

Twenty percent of women report that they took an antimalarial during their last pregnancy. Another 17 percent report that they took an unknown drug, and 4 percent took paracetamol or herbs to prevent malaria. Only 1 percent received IPT during an antenatal care visit.

Among women who took an antimalarial for prevention during pregnancy, there are significant differentials by background characteristics. Urban women are more than twice as likely as rural women to have taken an antimalarial. By region, prevalence ranges from a low of 8 percent in the North East to a high of 32 percent in the South East.

## Table 10.4 Use of intermittent preventive treatment (IPT) by pregnant women

For the last birth in the five years preceding the survey, percentage for which the mother took antimalarial drugs for prevention during the pregnancy and percentage for which the mother got intermittent preventive treatment (IPT) during an antenatal visit, by background characteristics, Nigeria 2003

| Bckground characteristic | Percentage of women who: |  |  |  | Number of pregnant women |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Took antimalarial for prevention during last pregnancy | Took unknown drug during last pregnancy | Took <br> Paracetamol or herbs during last pregnancy | Received IPT ${ }^{1}$ during ANC visit |  |
| Residence |  |  |  |  |  |
| Urban | 34.0 | 19.3 | 5.7 | 2.0 | 1,144 |
| Rural | 14.8 | 15.7 | 3.4 | 0.6 | 2,766 |
| Region |  |  |  |  |  |
| North Central | 17.1 | 19.2 | 5.3 | 0.7 | 575 |
| North East | 7.9 | 19.8 | 5.1 | 0.9 | 862 |
| North West | 21.4 | 4.0 | 0.8 | 1.2 | 1,341 |
| South East | 31.9 | 32.9 | 2.6 | 0.2 | 222 |
| South South | 29.2 | 30.4 | 3.6 | 1.3 | 544 |
| South West | 31.4 | 22.2 | 13.3 | 1.1 | 367 |
| Total | 20.4 | 16.7 | 4.1 | 1.0 | 3,911 |

${ }^{1}$ Intermittent preventive treatment is preventive treatment with sulfadoxine-pyrimethamine (SP/Fansidar) during an antenatal visit.

Table 10.5 shows the different antimalarial drugs that were taken by the 20 percent of pregnant women who reported preventive use of antimalarials. More than half ( 58 percent) of these women used Daraprim/Metaprim, which has been found to be ineffective as a chemoprophylaxis during pregnancy (FMOH, 2001). Additionally, 39 percent used chloroquine, which was the chemoprophylactic drug of choice until the introduction of IPT in 2001. Although it is only two years since the introduction of the new IPT recommendation, it is worthy of note that 12 percent of the women who took an antimalarial for prevention used SP/Fansidar. Other antimalarials, Halfan and Amodiaquine, were used by 2 and 1 percent of women, respectively. A larger percentage of urban women than rural women used each of the drugs with the exception of chloroquine. More than 4 in 10 women in all regions use Daraprim/Metaprim. Use of Daraprim/Metaprim is highest in the North West, North East, and South South (74, 63, and 51 percent, respectively).

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Table 10.5 Use of specific drugs for Intermittent Preventive Treatment (IPT)
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For mothers who took antimalarial drugs for prevention during the last pregnancy leading to a live birth in the five years preceding the survey, percentage who took a specific drug, by background characteristics, Nigeria 2003

| Bckground characteristic | Percentage of women who took: |  |  |  |  | Number of women who took antimalarial drug |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SP/Fansidar | Chloroquine | Halfan | Daraprim/ Metaprim | Amodiaquine |  |
| Residence |  |  |  |  |  |  |
| Urban | 14.1 | 31.6 | 3.1 | 63.5 | 1.2 | 390 |
| Rural | 9.1 | 46.4 | 1.4 | 51.7 | 0.4 | 408 |
| Region |  |  |  |  |  |  |
| North Central | 6.8 | 55.1 | 1.8 | 40.1 | 0.0 | 99 |
| North East | 17.7 | 25.5 | 0.0 | 63.1 | 0.0 | 68 |
| North West | 15.3 | 26.1 | 2.6 | 74.1 | 0.8 | 286 |
| South East | 13.3 | 36.6 | 8.1 | 41.9 | 0.5 | 71 |
| South South | 6.7 | 46.6 | 1.8 | 51.4 | 0.9 | 159 |
| South West | 8.3 | 58.0 | 0.0 | 45.6 | 2.1 | 115 |
| Total | 11.6 | 39.2 | 2.2 | 57.5 | 0.8 | 798 |

### 10.3 Treatment of Children with Fever or Convulsions

Since the major manifestations of malaria are fever and convulsions or fits, mothers were asked whether their children under age five had had a fever, convulsions, or fit in the two weeks preceding the survey. If reported, the mother was asked if the child was given any drugs.

Table 10.6 shows that 32 percent of children under age five had a fever and/or convulsions in the two weeks preceding the survey. Among those sick with fever/convulsions, one-third took antimalarial drugs, and one-quarter received the drugs the same day as the onset of the fever/convulsions or the following day. There are striking differences in both morbidity and treatment by region. Children in the North East and North West were the most likely to have been ill during the two weeks preceding the survey ( 39 and 36 percent, respectively), while children in the South West were the least likely ( 18 percent). Although children in the South West were least likely to be sick, they were most likely to have received an antimalarial in response to their symptoms. Forty-three percent of sick children in the South West took an antimalarial compared with 27 percent in the North East, one of the regions with the highest levels of morbidity, and just 15 percent in the South East.

| Percentage of children under age five with fever and/or convulsions in the two weeks preceding the survey, and among children with fever and/or convulsions, percentage who took antimalarial drugs and who took the drugs the same/next day, by background characteristics, Nigeria 2003 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage of children with fever/ convulsions | $\begin{aligned} & \text { Number } \\ & \text { of } \\ & \text { children } \end{aligned}$ | Among children with fever and/or convulsions, percentage who: |  | Number of children with fever/ convulsions |
| Bckground characteristic |  |  | Took antimalarial drugs | Took antimalarial drugs same/ next day |  |
| Age |  |  |  |  |  |
| <1 | 33.4 | 1,331 | 29.3 | 19.5 | 445 |
| 1 | 40.0 | 999 | 36.3 | 23.8 | 399 |
| 2 | 34.0 | 1,050 | 41.7 | 32.3 | 356 |
| 3 | 27.4 | 1,067 | 32.3 | 25.3 | 292 |
| 4 | 21.9 | 899 | 27.1 | 23.2 | 196 |
| Sex |  |  |  |  |  |
| Male | 31.6 | 2,717 | 32.5 | 22.9 | 858 |
| Female | 31.6 | 2,628 | 35.2 | 26.4 | 832 |
| Residence |  |  |  |  |  |
| Urban | 27.8 | 1,620 | 38.5 | 30.1 | 450 |
| Rural | 33.3 | 3,726 | 32.2 | 22.7 | 1,239 |
| Region |  |  |  |  |  |
| North Central | 24.2 | 781 | 32.2 | 23.6 | 189 |
| North East | 38.5 | 1,225 | 27.0 | 17.9 | 471 |
| North West | 36.0 | 1,818 | 39.6 | 31.7 | 654 |
| South East | 23.6 | 347 | 14.8 | 13.6 | 82 |
| South South | 30.0 | 684 | 36.2 | 18.8 | 206 |
| South West | 18.0 | 489 | 43.2 | 34.6 | 88 |
| Total | 31.6 | 5,345 | 33.9 | 24.6 | 1,689 |

Table 10.7 presents the percentage of children under five who took antimalarial drugs for fever and/or convulsions in the two weeks preceding the survey, by background characteristics. Ninety-seven percent took the first line drug, chloroquine, 1 percent took the second line drug, Fansidar/SP, and 4 percent took other antimalarials. The data show that children of all age groups received the antimalarials, indicating that equal care is given to children of all ages under five. Almost three-quarters of children received the antimalarial the same day as the onset of symptoms or the next day. Promptness of treatment varies significantly by region.

## Table 10.7 Type and timing of antimalarial drugs

Among children under age five who took antimalarial drugs for fever and/or convulsions in the two weeks preceding the survey, percentage who took first-line drug, second-line drug, or other antimalarial drugs and percentage who took each type of drug the same/next day afer developing fever and/or convulsions, by background characteristics, Nigeria 2003

| Background characteristic | Percentage who took: |  |  |  |  |  | Number of children who took antimalarial drugs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | First-line drug | First-line drug same/ next day | Secondline drug | Second-line drug same/ next day | Other antimalarial | Other antimalarial drug same/ next day |  |
| Age in years |  |  |  |  |  |  |  |
| <1 | 98.4 | 66.0 | 0.4 | 0.0 | 1.6 | 0.5 | 130 |
| 1 | 95.7 | 63.2 | 2.0 | 0.0 | 5.8 | 3.3 | 145 |
| 2 | 96.7 | 75.2 | 1.5 | 1.0 | 5.9 | 3.1 | 149 |
| 3 | 98.7 | 77.0 | 1.0 | 1.0 | 1.3 | 1.3 | 95 |
| 4 | 94.7 | 81.2 | 1.0 | 0.0 | 4.3 | 4.3 | 53 |
| Sex |  |  |  |  |  |  |  |
| Male | 97.2 | 68.8 | 1.2 | 0.0 | 3.1 | 2.0 | 279 |
| Female | 96.8 | 73.0 | 1.3 | 0.8 | 4.8 | 2.8 | 293 |
| Residence |  |  |  |  |  |  |  |
| Urban | 97.8 | 76.5 | 1.5 | 0.4 | 3.9 | 3.2 | 173 |
| Rural | 96.6 | 68.5 | 1.1 | 0.4 | 4.0 | 2.0 | 399 |
| Region |  |  |  |  |  |  |  |
| North Central | 94.3 | 68.5 | 1.3 | 1.3 | 4.5 | 3.5 | 61 |
| North East | 96.4 | 63.1 | 0.4 | 0.0 | 4.0 | 3.0 | 127 |
| North West | 99.4 | 79.2 | 0.7 | 0.7 | 3.5 | 2.2 | 259 |
| South East | (91.7) | (83.3) | (0.0) | (0.0) | (8.3) | (8.3) | 12 |
| South South | 92.9 | 50.6 | 4.8 | 0.0 | 5.7 | 1.2 | 75 |
| South West | (96.7) | (80.2) | (1.3) | (0.0) | (1.9) | (0.0) | 38 |
| Total | 97.0 | 70.9 | 1.2 | 0.4 | 4.0 | 2.4 | 572 |

Note: According to national policy, chloroquine is the first-line drug and SP/Fansidar is the second-line drug. Figures in parentheses are based on 25-49 unweighted cases.

## INFANT FEEDING AND CHILDREN'S AND WOMEN'S NUTRITIONAL STATUS

Nutritional deficiencies have been found to contribute to the high rates of disability, morbidity, and mortality in Nigeria, especially among infants and young children (NPC and UNICEF, 2001). Thus, the importance of adequate nutrition for women and children cannot be overemphasized and remains a great concern in the country.

The 2003 Nigeria Demographic and Health Survey (NDHS) collected data on various factors related to the nutrition of women and children. This chapter examines infant feeding practices, including duration of breastfeeding, use of a feeding bottle with a nipple, introduction of complementary foods, and the intake of micronutrients, such as vitamin A, iron supplements, and iodized salt. The nutritional status of all children under age five and all women age 15-49 is analyzed using anthropometric indices (height and weight measures).

### 11.1 Breastreeding

Initiation of breastfeeding at birth is crucial for the health of both child and mother. Suckling at the breast immediately after birth aids the expulsion of the placenta and reduces the risk of postpartum haemorrhage in the mother, helps maintain the body temperature of the baby, and encourages bonding between the mother and child, which enhances their physical and psychological well-being.

Breast milk, a good source of nutrients and natural immunity for infants, is sufficient for newborns; they need not be given anything else to eat or drink besides breast milk. Giving the newborn the first breast milk, which contains colostrum, and exclusive breastfeeding during the first six months of a child's life are recommended because they protect the infant from disease agents as well as provide all required nutrients.

Table 11.1 shows the percentage of children who were ever breastfed, and among children ever breastfed, the proportion who started breastfeeding within one hour and within one day of birth, and those who received a prelacteal feed. Breastfeeding is almost universal in Nigeria, with 97 percent of children born in the five years preceding the survey having been breastfed. However, just one-third of children were given breast milk within one hour of birth ( 32 percent), and less than two-thirds were given breast milk within 24 hours of birth ( 63 percent), indicating a delay in the initiation of breastfeeding.

Initiation of breastfeeding in the first hour and in the first 24 hours after birth varies by background characteristics. Women who delivered in a health facility and those assisted at delivery by health professionals are more likely to initiate breastfeeding early (within 1 hour or within 24 hours of delivery). There is considerable variation by region, ranging from a low of 13 percent of women in the South West initiating breastfeeding within one hour of giving birth to a high of 58 percent of women in the South East. Only about half of women in the North West and North East start breastfeeding within the first day (48 and 55 percent, respectively), compared with more than seven in ten women in other regions. Furthermore, women with the least education and women in households that are in the lowest quintile of the wealth index initiate breastfeeding later than those with at least some education and those living in households that are ranked higher on the wealth index.

| Table 11.1 Initial breastfeeding |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of children born in the five years preceding the survey who were ever breastfed, and among children ever breastfed, the percentage who started breastfeeding within one hour and within one day of birth, and percentage who received a prelacteal feed, by background characteristics, Nigeria 2003 |  |  |  |  |  |  |
|  | Among all children: |  | Among children ever breastfed, percentage who: |  |  |  |
| Background characteristic | Percentage ever breastfed | $\begin{aligned} & \text { Number } \\ & \text { of } \\ & \text { children } \end{aligned}$ | Started breastfeeding within 1 hour of birth | Started breastfeeding within 1 day of birth ${ }^{1}$ | Received a prelacteal feed ${ }^{2}$ | Number of children ever breastfed |
| Sex |  |  |  |  |  |  |
| Male | 97.0 | 3,186 | 30.9 | 61.2 | 69.7 | 3,090 |
| Female | 97.7 | 3,033 | 32.9 | 64.4 | 67.2 | 2,965 |
| Residence |  |  |  |  |  |  |
| Urban | 97.6 | 1,795 | 34.7 | 73.6 | 63.5 | 1,752 |
| Rural | 97.3 | 4,424 | 30.8 | 58.4 | 70.5 | 4,303 |
| Region |  |  |  |  |  |  |
| North Central | 97.9 | 897 | 46.6 | 83.5 | 39.8 | 878 |
| North East | 96.3 | 1,472 | 25.9 | 54.6 | 83.2 | 1,418 |
| North West | 98.1 | 2,161 | 27.1 | 48.3 | 78.7 | 2,121 |
| South East | 97.1 | 371 | 57.5 | 81.9 | 53.6 | 360 |
| South South | 96.8 | 789 | 40.3 | 77.9 | 49.0 | 763 |
| South West | 97.4 | 529 | 12.7 | 73.4 | 74.2 | 515 |
| Mother's education |  |  |  |  |  |  |
| No education | 97.9 | 3,224 | 27.0 | 50.7 | 78.4 | 3,156 |
| Primary | 96.7 | 1,465 | 35.9 | 72.2 | 63.4 | 1,417 |
| Secondary | 97.0 | 1,316 | 35.9 | 78.0 | 54.4 | 1,277 |
| Higher | 95.8 | 215 | 53.9 | 88.5 | 39.6 | 206 |
| Assistance at delivery |  |  |  |  |  |  |
| Health professional ${ }^{3}$ | 96.9 | 2,253 | 40.0 | 79.7 | 55.8 | 2,182 |
| Traditional birth attendant | t 97.8 | 1,268 | 29.9 | 49.8 | 77.5 | 1,240 |
| Other | 97.4 | 1,593 | 26.0 | 57.4 | 74.7 | 1,552 |
| No one | 97.6 | 1,051 | 27.0 | 52.5 | 77.5 | 1,027 |
| Place of delivery |  |  |  |  |  |  |
| Health facility | 97.1 | 2,025 | 40.3 | 80.9 | 55.2 | 1,967 |
| At home | 97.4 | 4,129 | 28.1 | 54.3 | 75.9 | 4,024 |
| Other | (100.0) | 22 | (29.1) | (80.0) | (38.3) | 22 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 97.7 | 1,394 | 22.4 | 46.8 | 77.8 | 1,363 |
| Second | 96.7 | 1,379 | 30.6 | 54.6 | 72.9 | 1,334 |
| Middle | 96.7 | 1,255 | 36.8 | 65.5 | 67.2 | 1,214 |
| Fourth | 97.7 | 1,157 | 35.4 | 75.8 | 64.4 | 1,131 |
| Highest | 98.2 | 1,033 | 36.5 | 77.2 | 56.2 | 1,014 |
| Total | 97.4 | 6,219 | 31.9 | 62.8 | 68.5 | 6,055 |

Note: Table is based on all births in the past five years whether the children were living or dead at the time of interview. Total includes 54 and 43 children with data missing on assistance at delivery and place of delivery, respectively. Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ 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 before the mother started breastfeeding regularly
${ }^{3}$ Doctor, nurse/midwife, or auxiliary midwife, or CHEW

The practice of giving something other than breast milk in the first three days of life (prelacteal feeding) is discouraged because it limits the frequency of suckling by the infant and exposes the baby to infections. Prelacteal feeding is widely practiced in Nigeria. Approximately seven in ten newborns receive a prelacteal feed. There are differences in prelacteal feeding practices by region, level of education, place of delivery, assistance at delivery, and wealth quintile. The practice is more common among women with little or no education and those living in households in the lowest wealth quintile than among women with higher education and those in households in the highest wealth quintile. In addition, women who received delivery assistance from a health professional and those who delivered in a health facility are less likely to give prelacteal feeds than those who delivered at home or without the assistance of a trained medical professional. These differentials may be due in part to the Baby-Friendly Hospital Initiative, which promotes exclusive breastfeeding and policies that support breastfeeding in hospitals.

### 11.1.1 Age Pattern of Breastfeeding

UNICEF and WHO recommend that children be exclusively breastfed (receive only breast milk) during the first six months of life and that children be given solid and/or semisolid complementary food starting at age six months (WHO and UNICEF, 1998). Children require adequate complementary foods to follow normal growth patterns. Lack of complementary foods (given at the appropriate age) may lead to malnutrition, frequent illness, and even death. However, even after complementary foods have been introduced, UNICEF recommends that breastfeeding continue for at least the first two years of the child's life (NPC and UNICEF, 2001).

Table 11.2 shows the percent distribution of youngest children under age three living with the mother, by breastfeeding status, according to age. In Nigeria, exclusive breastfeeding of infants is not practiced in compliance with the WHO/UNICEF recommendations. The data show that only 17 percent of infants below six months are exclusively breastfed. Indeed, just one-quarter of infants under two months of age are exclusively breastfed. Among children 4-5 months of age, fewer than one in ten is exclusively breastfed. This is a result of early supplementation of breast milk with plain water. Almost half ( 48 percent) of newborns under two months of age receive plain water as well as breast milk. An additional 19 percent receive other milk or liquids.

Complementary feeding also starts early. Among children age 4-5 months, more than one-third (36 percent) receive complementary food in addition to breast milk (Table 11.2). Although complementary feeding is introduced early in Nigeria, not all children are in compliance with UNICEF's recommendation of introducing semisolid and/or solid complementary food at six months of age. One in four children age 6-9 months is either exclusively breastfed or receives breast milk and plain water only. Regarding the duration of any breastfeeding, two-thirds of children age 20-23 months have discontinued breastfeeding.

The use of a bottle with a nipple regardless of the content (formula or other liquid) requires attention in terms of hygiene and handling. Because of inadequate and insufficient cleaning and ease of contamination after cleaning, the nipple may house disease-causing agents. Bottle-feeding is common in Nigeria, even among children who should be exclusively breastfed; 23 percent of children under two months and one-quarter of children age 2-3 months drink from a bottle with a nipple.

| Table 11.2 Breastfeeding status by child's age |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of youngest children under three years living with the mother by breastfeeding status and percentage of children under three years using a bottle with a nipple, according to age in months, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | stfeeding | nd consu | ming: |  |  |  |  |
| Age in months | Not breastfeeding | Exclusively breastfed | Plain water only | Waterbased liquids/ juice | Other milk | Complementary foods | Total | $\begin{aligned} & \text { Number } \\ & \text { of } \\ & \text { children } \end{aligned}$ | Using a bottle with a nipple ${ }^{1}$ | Number of living children |
| $<2$ | 4.0 | 26.2 | 47.5 | 8.9 | 8.6 | 4.7 | 100.0 | 182 | 22.5 | 183 |
| 2-3 | 0.9 | 19.3 | 49.2 | 6.5 | 14.1 | 10.0 | 100.0 | 230 | 25.1 | 231 |
| 4-5 | 0.6 | 8.7 | 38.1 | 9.9 | 7.1 | 35.6 | 100.0 | 247 | 17.6 | 250 |
| 6-7 | 1.3 | 3.9 | 26.5 | 4.4 | 7.3 | 56.6 | 100.0 | 230 | 14.4 | 239 |
| 8-9 | 1.2 | 1.6 | 17.8 | 1.6 | 6.9 | 70.8 | 100.0 | 231 | 16.3 | 240 |
| 10-11 | 4.5 | 2.6 | 10.1 | 2.3 | 0.2 | 80.4 | 100.0 | 184 | 14.7 | 189 |
| 12-15 | 10.1 | 3.8 | 3.9 | 0.6 | 1.3 | 80.2 | 100.0 | 387 | 10.4 | 403 |
| 16-19 | 33.7 | 2.1 | 2.3 | 1.6 | 0.4 | 59.9 | 100.0 | 313 | 6.3 | 323 |
| 20-23 | 65.9 | 0.9 | 0.4 | 0.9 | 0.0 | 31.9 | 100.0 | 248 | 8.3 | 272 |
| 24-27 | 90.9 | 0.3 | 0.0 | 0.0 | 0.0 | 8.8 | 100.0 | 361 | 12.6 | 441 |
| 28-31 | 90.5 | 0.0 | 0.3 | 0.0 | 0.0 | 9.1 | 100.0 | 210 | 5.0 | 303 |
| 32-35 | 94.8 | 0.0 | 0.5 | 0.0 | 0.0 | 4.7 | 100.0 | 154 | 3.2 | 305 |
| <6 | 1.7 | 17.2 | 44.6 | 8.4 | 10.0 | 18.1 | 100.0 | 659 | 21.6 | 663 |
| 6-9 | 1.3 | 2.8 | 22.1 | 3.0 | 7.1 | 63.7 | 100.0 | 460 | 15.3 | 478 |
| Note: Breastfeeding status refers to a 24 -hour period (yesterday and last night). Children classified as breastfeeding and consuming plain water only consume no supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding, and consuming plain water, water-based 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 water-based liquids and who do not receive complementary foods are classified in the water-based liquid category even though they may also get plain water. Any children who get complementary food are classified in that category as long as they are breastfeeding as well. <br> Based on all children under three years |  |  |  |  |  |  |  |  |  |  |

### 11.1.2 Duration and Frequency of Breastfeeding

Table 11.3 shows the median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children born in the three years preceding the survey. The percentages of breastfeeding children under six months who were breastfed at least six times in the 24 hours preceding the survey and mean number of daytime and nighttime feeds, by background characteristics, are also presented.

At the national level, the median duration of any breastfeeding among children born in the three years preceding the survey is 18.6 months (Figure 11.1). The median duration of exclusive breastfeeding is half a month, while the median duration of predominant feeding is 4.6 months (Table 11.3). Predominate breastfeeding refers to either exclusive breastfeeding or receiving plain water, water-based liquids, and/or juice in addition to breast milk.

| Table 11.3 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, Nigeria 2003 |  |  |  |  |  |  |  |  |
|  | Median duration (months) of breastfeeding ${ }^{1}$ |  |  |  | Breastfeeding children under six months ${ }^{2}$ |  |  |  |
| Background characteristic | Any breastfeeding | Exclusive breastfeeding | Predominant breastfeeding ${ }^{3}$ | $\begin{aligned} & \text { Number } \\ & \text { of } \\ & \text { children } \end{aligned}$ | Percentage breastfed $6+$ times in last 24 hours | Mean number of day feeds | Mean number night feeds | $\begin{aligned} & \text { Number } \\ & \text { of } \\ & \text { children } \end{aligned}$ |
| Sex |  |  |  |  |  |  |  |  |
| Male | 18.6 | 0.5 | 4.7 | 1,947 | 96.5 | 7.8 | 6.0 | 326 |
| Female | 18.6 | 0.5 | 4.4 | 1,867 | 98.2 | 7.5 | 5.6 | 306 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 17.2 | 0.5 | 3.8 | 1,137 | 96.7 | 8.0 | 6.5 | 179 |
| Rural | 19.2 | 0.5 | 4.8 | 2,677 | 97.5 | 7.5 | 5.5 | 453 |
| Region |  |  |  |  |  |  |  |  |
| North Central | 19.0 | 0.7 | 3.8 | 553 | 97.6 | 7.8 | 5.3 | 85 |
| North East | 20.5 | 0.4 | 6.6 | 875 | 99.2 | 7.7 | 6.0 | 143 |
| North West | 19.9 | 0.4 | 5.4 | 1,310 | 96.5 | 7.8 | 4.9 | 220 |
| South East | 13.3 | 0.4 | 0.5 | 245 | 97.7 | 6.8 | 7.8 | 33 |
| South South | 15.8 | 0.6 | 2.9 | 503 | 97.8 | 7.7 | 6.6 | 82 |
| South West | 15.9 | 0.7 | 3.4 | 328 | 94.5 | 7.4 | 6.7 | 68 |
| Mother's education |  |  |  |  |  |  |  |  |
| No education | 20.0 | 0.4 | 5.5 | 1,893 | 97.7 | 8.0 | 5.6 | 315 |
| Primary | 18.4 | 0.5 | 3.7 | 901 | 97.6 | 7.7 | 6.3 | 145 |
| Secondary | 16.9 | 0.6 | 3.3 | 887 | 95.9 | 6.8 | 5.8 | 157 |
| Higher | 15.7 | 2.5 | 4.7 | 134 | 100.0 | 8.6 | 5.2 | 15 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 20.2 | 0.5 | 5.4 | 811 | 96.0 | 8.4 | 5.7 | 135 |
| Second | 20.0 | 0.4 | 4.9 | 831 | 97.0 | 7.5 | 5.5 | 133 |
| Middle | 19.1 | 0.5 | 3.6 | 758 | 96.8 | 7.3 | 5.2 | 105 |
| Fourth | 18.4 | 0.7 | 4.4 | 736 | 99.5 | 7.7 | 5.9 | 135 |
| Highest | 14.3 | 0.5 | 3.7 | 679 | 96.9 | 7.3 | 6.4 | 123 |
| Total | 18.6 | 0.5 | 4.6 | 3,815 | 97.3 | 7.7 | 5.8 | 632 |
| Mean for all children | 18.2 | 2.0 | 6.3 | na | na | na | na | na |
| Note: Median and mean durations are based on current status. na $=$ Not applicable |  |  |  |  |  |  |  |  |
| ${ }^{1}$ It is assumed that non-last-born children or last-born child not living with the mother are not currently breastfeeding. <br> ${ }^{2}$ Excludes children who do not have a valid answer on the number of times breastfed |  |  |  |  |  |  |  |  |

There is little variation in exclusive breastfeeding: women of all backgrounds exclusively breastfeed for a median of less than one month, with the exception of women with higher education who exclusively breastfeed for 2.5 months. The median duration of any breastfeeding varies by region, education, and household economic status. The results of the 2003 NDHS confirm the findings of the 1999 NDHS, which followed a similar pattern.

Figure 11.1 Median Duration of Breastfeeding by Background Characteristics


Mothers were asked about the frequency of breastfeeding among children under six months of age in the preceding 24 hours. Table 11.3 shows that almost all children under six months of age are breastfed at least six times per day in Nigeria, which meets the international recommendation (NPC and UNICEF, 2001). The mean number of feeds is eight in the daytime and six at night.

### 11.2 Types of Food Consumed by Children

Table 11.4 shows the percentage of youngest children under three years of age living with the mother who consumed specific foods during the day or night preceding interview. The table shows that 13 percent of breastfeeding infants under six months of age consume infant formula, 11 percent consume milk or other dairy products, and 18 percent consume other liquids. Breastfeeding children under six months also commonly eat food made from grains ( 15 percent). At age 6-9 months, when complementary foods should be introduced, three-quarters of breastfeeding infants receive solid or semisolid foods; 56 percent receive food made from grains; 25 percent receive meat, fish, shellfish, poultry, or eggs; and 24 percent receive fruits or vegetables. Fruits and vegetables rich in vitamin A are consumed by one-fifth of breastfeeding infants 6-9 months old.

At almost one year of age (10-11 months), a higher proportion of breastfeeding children receive these complementary foods. By 20-23 months of age, three in ten breastfeeding children receive other milk products, nine in ten eat foods made from grains, six in ten receive fruits and vegetables, and the same proportion gets eggs and animal products. Less than half receive food with oil or butter added.

| Percentage of children under three years of age living with the mother who consumed specific foods in the day or night preceding the interview, by breastfeeding status and age, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Solid/semisolid foods |  |  |  |  |  | Fruits and vegetables rich in vitamin $A^{3}$ | Any solid or semisolid food | Number of children |
| Child's age in months | Infant formula | Other milk/ cheese/ yogurt | Other liquids ${ }^{1}$ | Food made from grains | Fruits/ vegetables ${ }^{2}$ | Food made from roots/ tubers | Food made from legumes | Meat/ fish/ shellfish/ poultry/ eggs | Food made with oil/fat/ butter |  |  |  |
| BREASTFEEDING CHILDREN |  |  |  |  |  |  |  |  |  |  |  |  |
| $<2$ | 5.5 | 7.2 | 11.9 | 4.2 | 2.0 | 1.7 | 1.3 | 0.3 | 1.8 | 2.0 | 11.6 | 175 |
| 2-3 | 14.6 | 7.3 | 14.5 | 8.9 | 2.0 | 0.8 | 0.9 | 1.2 | 1.9 | 2.0 | 15.2 | 227 |
| 4-5 | 15.7 | 16.5 | 25.1 | 27.1 | 15.1 | 6.5 | 6.3 | 10.3 | 7.3 | 13.5 | 50.2 | 246 |
| 6-7 | 11.3 | 15.6 | 25.5 | 49.6 | 17.6 | 8.5 | 13.4 | 16.6 | 18.7 | 14.2 | 69.1 | 227 |
| 8-9 | 14.1 | 21.7 | 25.5 | 61.5 | 30.8 | 10.4 | 14.1 | 32.8 | 27.3 | 26.0 | 83.0 | 228 |
| 10-11 | 12.3 | 26.4 | 30.6 | 78.3 | 41.3 | 26.9 | 27.5 | 47.0 | 33.0 | 39.4 | 89.3 | 176 |
| 12-15 | 10.6 | 30.8 | 36.1 | 83.6 | 57.6 | 26.7 | 29.3 | 55.2 | 45.0 | 52.9 | 96.4 | 348 |
| 16-19 | 6.0 | 26.5 | 36.5 | 81.4 | 64.2 | 27.2 | 32.5 | 58.2 | 42.6 | 56.6 | 96.2 | 208 |
| 20-23 | 8.5 | 30.3 | 36.7 | 89.3 | 59.6 | 26.9 | 30.1 | 56.6 | 45.6 | 53.6 | 98.8 | 85 |
| 24-35 | 16.0 | 30.5 | 47.1 | 89.5 | 73.1 | 35.0 | 31.3 | 55.3 | 37.6 | 73.1 | 98.9 | 61 |
| $<6$ | 12.6 | 10.7 | 17.8 | 14.5 | 6.9 | 3.2 | 3.1 | 4.4 | 3.9 | 6.3 | 27.5 | 648 |
| 6-9 | 12.7 | 18.7 | 25.5 | 55.6 | 24.2 | 9.5 | 13.8 | 24.7 | 23.1 | 20.1 | 76.1 | 455 |
| NONBREASTFEEDING CHILDREN |  |  |  |  |  |  |  |  |  |  |  |  |
| 16-19 | 11.0 | 37.4 | 57.3 | 83.7 | 78.2 | 37.7 | 35.6 | 79.4 | 40.1 | 72.0 | 99.5 | 105 |
| 20-23 | 3.7 | 32.5 | 40.5 | 86.5 | 74.8 | 46.2 | 39.6 | 73.0 | 50.3 | 66.9 | 99.6 | 163 |
| 24-35 | 9.5 | 40.1 | 51.6 | 88.2 | 75.8 | 40.7 | 36.6 | 71.3 | 57.0 | 71.7 | 99.6 | 664 |

Note: Breastfeeding status and food consumed refer to a 24 -hour recall period (yesterday and last night).
${ }^{1}$ Does not include plain water
${ }^{2}$ Includes fruits and vegetables rich in vitamin A
${ }^{3}$ Includes 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

As previously shown in Table 11.2, few children under age 16 months are not breastfed in Nigeria. Table 11.4 shows that among those who are not breastfed by age $20-23$ months, the proportion receiving milk products is almost the same as among children who are breastfeeding and receiving other milk products. There are only slight differences between breastfeeding and nonbreastfeeding children receiving food made from grains, but the proportion of children receiving other complementary foods is higher among the latter group of children.

Table 11.5 presents the frequency of consumption of specific foods by children less than three years of age in the day or night preceding the interview. Among breastfeeding children age 6-9 months, who should be receiving complementary foods, grains are consumed slightly more than once a day. All other foods are consumed less than once a day. Beginning at age two, grains are received twice a day, as are fruits and vegetables. The frequency of foods consumed by nonbreastfeeding children is similar to that of breastfeeding children.

| Mean number of times specific foods were consumed in the day or night preceding the interview by youngest children under three years of age living with the mother, according to breastfeeding status and age, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Solid | semisolid | foods |  |  |  |
| Child's age in months | Infant formula | Other <br> milk/ cheese/ yogurt | Other liquids ${ }^{1}$ | Food made from grains | Fruits/ vegetables ${ }^{2}$ | Food made from roots/ tubers | Food made from legumes | Meat/ fish/ shellfish/ poultry eggs | Food made with oil/fat/ butter | Fruits and vegetables rich in vitamin $A^{3}$ | Number of children |
| BREASTFEEDING CHILDREN |  |  |  |  |  |  |  |  |  |  |  |
| $<2$ | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 175 |
| 2-3 | 0.4 | 0.1 | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 227 |
| 4-5 | 0.3 | 0.3 | 0.5 | 0.6 | 0.5 | 0.1 | 0.1 | 0.2 | 0.2 | 0.4 | 246 |
| 6-7 | 0.3 | 0.3 | 0.5 | 1.0 | 0.4 | 0.1 | 0.2 | 0.2 | 0.3 | 0.3 | 227 |
| 8-9 | 0.3 | 0.4 | 0.6 | 1.2 | 0.7 | 0.1 | 0.2 | 0.5 | 0.5 | 0.5 | 228 |
| 10-11 | 0.3 | 0.5 | 0.6 | 1.7 | 1.0 | 0.4 | 0.3 | 0.8 | 0.6 | 0.8 | 176 |
| 12-15 | 0.2 | 0.6 | 0.8 | 1.7 | 1.4 | 0.4 | 0.4 | 0.9 | 0.7 | 1.1 | 348 |
| 16-19 | 0.1 | 0.5 | 0.8 | 1.8 | 1.6 | 0.4 | 0.4 | 1.0 | 0.7 | 1.1 | 208 |
| 20-23 | 0.2 | 0.6 | 0.7 | 2.0 | 1.3 | 0.4 | 0.4 | 0.8 | 0.7 | 1.0 | 85 |
| 24-35 | 0.3 | 0.4 | 0.7 | 2.1 | 2.3 | 0.4 | 0.4 | 0.7 | 0.6 | 1.8 | 61 |
| $<6$ | 0.3 | 0.2 | 0.3 | 0.3 | 0.2 | 0.1 | 0.0 | 0.1 | 0.1 | 0.2 | 648 |
| 6-9 | 0.3 | 0.4 | 0.5 | 1.1 | 0.6 | 0.1 | 0.2 | 0.4 | 0.4 | 0.4 | 455 |
| NONBREASTFEEDING CHILDREN |  |  |  |  |  |  |  |  |  |  |  |
| 16-19 | 0.2 | 0.7 | 1.3 | 1.6 | 2.0 | 0.7 | 0.4 | 1.5 | 0.8 | 1.5 | 105 |
| 20-23 | 0.1 | 0.5 | 0.9 | 1.9 | 2.1 | 0.7 | 0.5 | 1.3 | 1.1 | 1.5 | 163 |
| 24-35 | 0.2 | 0.7 | 1.1 | 1.9 | 2.1 | 0.5 | 0.4 | 1.2 | 1.0 | 1.6 | 664 |
| Note: Breastfeeding status and food consumed refer to a 24 -hour recall period (yesterday and last night). <br> ${ }^{1}$ Does not include plain water <br> ${ }^{2}$ Includes fruits and vegetables rich in vitamin A <br> ${ }^{3}$ Includes 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 |  |  |  |  |  |  |  |  |  |  |  |

Table 11.6 shows the average number of days specific foods were consumed by youngest children under age three in the seven days preceding the survey. Among breastfeeding children, less than age six months, plain water is consumed about six days a week. Food from grains is given one day a week. All other types of food or drink were given less than one day a week. Breastfeeding children age 6-9 months drank plain water daily in the week preceding the interview. They consumed food made from grains almost four days a week. Meat, fish, shellfish, poultry or eggs were consumed less than two days a week, as were foods made with oil, fat, or butter.

The mean number of days that various nutritious foods are consumed by children who are no longer breastfeeding should be higher than for children who are breastfeeding. Among children 16 months and older, most semisolid or solid foods and fruits and vegetables rich in vitamin A are consumed with greater frequency among nonbreastfeeding than breastfeeding children.

Table 11.6 Frequency of foods consumed by children in preceding seven days
Mean number of days specific foods were consumed in the seven days preceding the interview by youngest children under three years of age living with the mother, according to breastfeeding status and age, Nigeria 2003

| Child's age in months | Liquids |  |  |  |  |  | Solid/semisolid foods |  |  |  |  |  |  |  |  |  | Number <br> of children |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | Food made from grains | Food made from roots/ tubers | Fruits and vegetables not rich in vitamin A | Food made form legumes | Cheese/ yogurt | Meat/ fish/ shellfish/ poultry/ eggs | Food made with oil/ fat/ butter | Fruit and vegetables rich in vitamin A |  |  |  |
|  |  |  |  |  |  |  | Pumpkin/ red or yellow yams or squash/ carrots/ red sweet potatoes |  |  |  |  |  |  | Green leafy vegetables | Mango/ <br> papaya/ other local fruits rich in vitamin A |  |
|  | Plain water | Infant formula | Other milk | Fruit juice | Herbal tea | Other liquids |  |  |  |  |  |  |  |  |  |  |
| BREASTFEEDING CHILDREN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <2 | 5.0 | 0.4 | 0.5 | 0.1 | 0.8 | 0.1 | 0.3 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 175 |
| 2-3 | 5.7 | 1.0 | 0.4 | 0.0 | 0.6 | 0.2 | 0.6 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 227 |
| 4-5 | 6.4 | 1.0 | 0.8 | 0.2 | 0.9 | 0.6 | 1.9 | 0.3 | 0.2 | 0.3 | 0.2 | 0.5 | 0.4 | 0.3 | 0.4 | 0.3 | 246 |
| 6-7 | 6.7 | 0.8 | 0.7 | 0.3 | 0.7 | 0.6 | 3.2 | 0.4 | 0.4 | 0.6 | 0.2 | 1.0 | 1.1 | 0.2 | 0.6 | 0.3 | 227 |
| 8-9 | 6.8 | 0.9 | 0.8 | 0.5 | 0.8 | 1.0 | 4.1 | 0.6 | 0.8 | 1.1 | 0.4 | 1.7 | 1.6 | 0.4 | 0.9 | 0.6 | 228 |
| 10-11 | 6.8 | 0.8 | 1.1 | 0.4 | 0.9 | 1.0 | 5.3 | 1.3 | 1.1 | 1.3 | 0.6 | 2.7 | 2.1 | 0.7 | 1.7 | 0.8 | 176 |
| 12-15 | 6.8 | 0.5 | 0.7 | 0.6 | 0.7 | 1.4 | 5.6 | 1.3 | 1.2 | 1.4 | 1.0 | 3.0 | 2.6 | 1.1 | 1.5 | 1.4 | 348 |
| 16-19 | 6.8 | 0.3 | 0.8 | 0.5 | 0.8 | 1.7 | 5.6 | 1.4 | 1.5 | 1.6 | 1.0 | 3.3 | 2.7 | 1.2 | 1.9 | 1.7 | 208 |
| 20-23 | 6.8 | 0.6 | 0.7 | 0.6 | 0.8 | 1.4 | 6.0 | 1.3 | 1.1 | 1.7 | 0.9 | 2.8 | 2.7 | 0.7 | 2.0 | 1.2 | 85 |
| 24-35 | 6.8 | 0.7 | 0.9 | 0.6 | 0.9 | 1.9 | 6.6 | 1.3 | 1.3 | 1.3 | 1.1 | 3.1 | 2.4 | 0.8 | 2.6 | 2.1 | 61 |
| <6 | 5.8 | 0.8 | 0.6 | 0.1 | 0.8 | 0.3 | 1.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 648 |
| 6-9 | 6.8 | 0.9 | 0.8 | 0.4 | 0.8 | 0.8 | 3.7 | 0.5 | 0.6 | 0.8 | 0.3 | 1.4 | 1.4 | 0.3 | 0.7 | 0.5 | 455 |
|  |  |  |  |  |  |  | NON | BREAST | FEEDING | CHILDR |  |  |  |  |  |  |  |
| 16-19 | 6.4 | 0.9 | 1.7 | 0.8 | 0.9 | 2.7 | 5.2 | 2.2 | 2.1 | 1.8 | 0.9 | 4.9 | 2.3 | 1.8 | 2.4 | 1.7 | 105 |
| 20-23 | 6.7 | 0.2 | 1.1 | 1.0 | 0.7 | 1.9 | 5.4 | 2.3 | 1.9 | 2.2 | 0.6 | 4.4 | 3.0 | 1.5 | 2.4 | 1.9 | 163 |
| 24-35 | 6.6 | 0.5 | 1.3 | 0.9 | 0.7 | 2.5 | 5.9 | 2.1 | 2.0 | 1.8 | 1.2 | 4.1 | 3.5 | 1.4 | 2.7 | 2.1 | 664 |
| Total | 6.6 | 0.5 | 1.3 | 0.9 | 0.7 | 2.4 | 5.6 | 2.1 | 2.0 | 1.9 | 1.0 | 4.2 | 3.3 | 1.5 | 2.6 | 2.0 | 997 |

Note: Breastfeeding status refers to a 24 -hour recall period (yesterday and last night).

### 11.3 Micronutrient Supplementation

Micronutrients are necessary for normal body function and play a vital role in ensuring good health. Children can receive micronutrients from foods, food fortification, and direct supplementation. Deficiency of these elements contributes to childhood morbidity and mortality. The 2003 NDHS collected various data useful for assessing the intake of micronutrients by women and young children.

### 11.3.1 Use of Iodized Salt in Households

Disorders induced by dietary iodine deficiency constitute a major global nutrition concern. A lack of sufficient iodine can lead to goiter, hypothyroidism, impaired mental and physical development, and diminished school performance. Iodine deficiency in the feotus leads to increased rates of abortion, stillbirths, congenital anomalies, cretinism, psychomotor defects, and neonatal mortality. Iodine deficiency can be avoided by using salt that has been fortified with iodine (iodized salt). Fortified salt, which contains 15 parts per million of iodine, prevents iodine deficiency.

The survey undertook a rapid test, using a test kit supplied by UNICEF, to assess whether the household was using iodized salt for cooking. The data presented in Table 11.7 are based on the 94 percent of households where salt was tested. Almost all households in Nigeria use adequately iodized salt (97 percent). The region with the lowest prevalence of adequately iodized salt is North Central (93 percent).

Table 11.7 lodization of household salt
Percent distribution of households by level of iodine in salt (parts per million), according to background characteristics, Nigeria 2003

| Background characteristic | Level of iodine in household salt: |  |  | Total | Number of households tested | Percentage of households tested | Percentage of households with no salt | Number of households |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | None (0 ppm) | Inadequate (<15 ppm) | Adequate (15+ ppm) |  |  |  |  |  |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 0.9 | 0.6 | 98.5 | 100.0 | 2,398 | 92.3 | 5.3 | 2,598 |
| Rural | 2.2 | 1.2 | 96.7 | 100.0 | 4,354 | 94.1 | 2.9 | 4,627 |
| Region |  |  |  |  |  |  |  |  |
| North Central | 5.7 | 1.6 | 92.7 | 100.0 | 966 | 92.9 | 4.4 | 1,040 |
| North East | 0.9 | 0.3 | 98.8 | 100.0 | 1,095 | 92.4 | 5.2 | 1,185 |
| North West | 0.7 | 1.1 | 98.2 | 100.0 | 1,758 | 92.0 | 3.1 | 1,911 |
| South East | 2.6 | 0.4 | 97.0 | 100.0 | 640 | 92.6 | 3.3 | 690 |
| South South | 1.0 | 1.0 | 98.0 | 100.0 | 1,261 | 95.9 | 3.4 | 1,315 |
| South West | 0.9 | 1.1 | 98.0 | 100.0 | 1,032 | 95.3 | 3.4 | 1,083 |
| Total | 1.7 | 1.0 | 97.3 | 100.0 | 6,752 | 93.5 | 3.8 | 7,225 |

### 11.3.2 Micronutrient Status of Young Children

Vitamin A is a micronutrient that is essential for the proper development of children's immune and visual systems. It is present in certain fruits and vegetables, such as pumpkin, red or yellow yams or squash, carrots, green leafy vegetables, mango, and paw-paw. Women in Nigeria should receive vitamin A supplements after childbirth. This enhances the micronutrient status of the mothers and their breastfeeding children and, consequently, the survival status of the child.

Table 11.8 shows the percentage of the youngest children under three years of age who consumed fruits and vegetables rich in vitamin A in the seven days preceding the survey. The data show that 43 percent of children ate such foods. The consumption of fruits and vegetables rich in vitamin A varies considerably by the age of the child and breastfeeding status. Although children under six months are recommended to receive no complementary foods, 6 percent received fruits and vegetables rich in vitamin A. The proportion increases from 21 percent among children age 6-9 months to 72 percent among children age 24-35 months. Nonbreastfeeding children are more than twice as likely to consume fruits and vegetables rich in vitamin A as breastfeeding children. This is expected since nonbreastfeeding children are older and should receive more complementary foods than the younger breastfeeding children. The consumption of fruits and vegetables rich in vitamin A is lowest in North Central (29 percent) and highest in South East (56 percent).

| Table 11.8 Micronutrient intake among children |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Percentage of youngest children under age three living with the mother who consumed fruits and vegetables rich in vitamin A in the seven days preceding the survey, and percentage of children age 6-59 months who received vitamin A supplements in the six months preceding the survey, by background characteristics, Nigeria 2003 |  |  |  |  |
|  | Children under age three living with the mother |  | Children age 6-59 months |  |
| Background characteristic | Percentage who consumed fruits and vegetables rich in vitamin $\mathrm{A}^{1}$ | Number of children | Percentage who received vitamin A supplements |  |
| Age in months |  |  |  |  |
| $<6$ | 6.4 | 659 | na | na |
| 6-9 | 20.8 | 460 | 30.8 | 478 |
| 10-11 | 40.1 | 184 | 32.6 | 189 |
| 12-23 | 58.7 | 949 | 31.2 | 999 |
| 24-35 | 71.8 | 724 | 40.0 | 1,050 |
| 36-47 | na | na | 31.2 | 1,067 |
| 48-59 | na | na | 34.1 | 899 |
| Sex |  |  |  |  |
| Male | 40.7 | 1,497 | 34.3 | 2,370 |
| Female | 46.0 | 1,480 | 33.2 | 2,312 |
| Birth order |  |  |  |  |
| 1 | 43.0 | 597 | 36.5 | 939 |
| 2-3 | 41.2 | 907 | 36.2 | 1,471 |
| 4-5 | 44.7 | 675 | 37.7 | 1,046 |
| 6+ | 44.7 | 798 | 25.3 | 1,226 |
| Breastfeeding status |  |  |  |  |
| Breastfeeding | 30.0 | 1,980 | 27.8 | 1,397 |
| Not breastfeeding Missing | 70.3 | 980 | 36.5 | 3,229 |
| Missing |  | 16 | 23.7 | 55 |
| Residence |  |  |  |  |
| Urban | 49.4 | 907 | 48.9 | 1,438 |
| Rural | 40.7 | 2,070 | 27.0 | 3,244 |
| Region |  |  |  |  |
| North Central | 29.2 | 437 | 32.4 | 693 |
| North East | 43.3 | 671 | 25.1 | 1,075 |
| North West | 44.7 | 1,046 | 15.2 | 1,584 |
| South East | 55.6 | 175 | 60.4 | 312 |
| South South | 50.5 | 378 | 55.8 | 597 |
| South West | 42.8 | 269 | 76.4 | 421 |
| Mother's education |  |  |  |  |
| No education | 41.3 | 1,501 | 16.8 | 2,340 |
| Primary | 41.8 | 685 | 40.4 | 1,106 |
| Secondary | 47.6 | 690 | 58.8 | 1,053 |
| Higher | 53.7 | 101 | 65.6 | 182 |
| Mother's age at birth |  |  |  |  |
| $<20$ | 44.2 | 540 | 24.0 | 816 |
| 20-24 | 43.6 | 720 | 35.4 | 1,310 |
| 25-29 | 42.0 | 799 | 39.6 | 1,185 |
| 30-34 | 42.1 | 470 | 32.2 | 712 |
| 35-49 | 45.6 | 448 | 33.5 | 660 |
| Wealth quintile |  |  |  |  |
| Lowest | 42.6 | 630 | 18.4 | 1,977 |
| Middle | 46.3 | 599 | 24.5 | 959 |
| Fourth | 40.2 | 568 | 43.6 | 887 |
| Highest | 47.7 | 536 | 64.9 | 847 |
| Total | 43.3 | 2,977 | 33.7 | 4,682 |
| Note: Information on vitamin A supplements is based on mother's recall. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed. $\mathrm{na}=$ Not applicable <br> ${ }^{1}$ Includes pumpkin, red or yellow yams or squash, carrots, red sweet potatoes, green leafy vegetables, mango, papaya, and other locally grown fruits and vegetables that are rich in vitamin A |  |  |  |  |

Table 11.8 also shows that one-third of children age 6-59 months received vitamin A supplements in the six months preceding the survey. Children residing in urban areas and in the south are much more likely to receive vitamin A supplementation than those in rural areas and in the north. There is a positive relationship between mother's education and supplementation. Vitamin A supplementation ranges from a low of 17 percent for children of women with no education to a high of 66 percent for children of the most educated mothers. Less than one-quarter of children living in households in the three lowest wealth quintiles receive vitamin A supplementation, compared with 44 percent of children in the fourth quintile and 65 percent of children in the highest quintile.

### 11.3.3 Micronutrient Intake Among Women

A mother's nutritional status during pregnancy is important both for the child's intrauterine development and for protection against maternal morbidity and mortality. Table 11.9 shows that only onefifth of women who gave birth in the five years preceding the survey received a vitamin A dose within two months of giving birth. There is variation in postpartum vitamin A supplementation by age at birth, residence, region, level of education, and wealth quintile. Supplementation is higher among women over 20 years of age than among younger women and much higher among women in the south than in the north. Urban women are more than twice as likely as rural women to have received a postpartum vitamin A dose. Furthermore, there is a positive relationship between education and household economic status and postpartum vitamin A supplementation.

Night blindness is an indicator of severe vitamin A deficiency, and pregnant women are especially prone to suffer from it. Table 11.9 shows that 8 percent of women with a recent birth reported that they experienced night blindness. After adjusting for women who also reported vision problems during the day, an estimated 2 percent of women suffered from night blindness. The small percentages make it difficult to examine variation among subgroups of Nigeria's population.

Anaemia usually results from a nutritional deficiency of iron, folate, vitamin $\mathrm{B}_{12}$, or some other nutrients. Anaemia may have detrimental effects on the health of women and children and may become an underlying cause of maternal mortality and perinatal mortality. Anaemia also results in an increased risk of premature delivery and low birth weight. Early detection of anaemia can help to prevent complications related to pregnancy and delivery, as well as child-development problems. Anaemia is a serious concern for young children because it can result in impaired cognitive performance, behavioural and motor development, coordination, language development, and scholastic achievement, as well as increased morbidity from infectious diseases. It is recommended that iron tablets be taken daily for at least three months during pregnancy. Thus, information on the prevalence of iron supplementation can be useful for the development of health-intervention programs, such as iron-fortification programs, designed to prevent anaemia.

The 2003 NDHS asked women who had a recent birth whether they received or purchased any iron tablets during the last pregnancy. If so, the woman was asked to report the number of days that the tablets were actually taken during that pregnancy. Table 11.9 shows that one-fifth of women ( 21 percent) reported taking iron supplements for at least 90 days during the pregnancy, which is the recommended supplementation. Forty percent of women received no iron at all.

There is significant variation by background characteristics. Almost half of women in rural areas did not receive any iron supplementation, which is more than twice the proportion in urban areas. Pregnant women living in the South West are the most likely subgroup to have taken iron for at least 90 days (63 percent). This compares with just 10 percent of women in the North West. Iron supplementation is positively correlated with education and household economic status.

| Table 11.9 Micronutrient intake among mothers |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Among women who gave birth in the five years preceding the survey, percentage who received a vitamin A dose in the two months after delivery, percentage who had night blindness during pregnancy, and percent distribution by whether iron tablets or syrup were taken during pregnancy for specific numbers of days, by background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |
| Background characteristic | Received vitamin A dose postpartum ${ }^{1}$ | Suffered <br> night blindnes <br> during pregnancyReported Adjusted ${ }^{2}$ |  | Number of days took iron tablets or syrup during pregnancy |  |  |  |  | Total | Number of women |
|  |  |  |  | None | <60 | 60-89 | 90+ | Don't know/ missing |  |  |
| Age at birth |  |  |  |  |  |  |  |  |  |  |
| <20 | 11.1 | 7.3 | 2.7 | 48.5 | 25.4 | 5.1 | 13.6 | 7.4 | 100.0 | 719 |
| 20-24 | 18.4 | 7.5 | 3.1 | 40.5 | 23.9 | 6.6 | 20.9 | 8.1 | 100.0 | 921 |
| 25-29 | 24.2 | 7.1 | 1.5 | 34.7 | 25.7 | 6.2 | 24.1 | 9.3 | 100.0 | 965 |
| 30-34 | 20.3 | 8.9 | 1.4 | 37.5 | 25.4 | 4.8 | 23.3 | 9.0 | 100.0 | 628 |
| 35-49 | 23.2 | 8.0 | 2.1 | 38.8 | 25.6 | 3.4 | 23.5 | 8.7 | 100.0 | 678 |
| Number of children ever born |  |  |  |  |  |  |  |  |  |  |
| 1 | 19.4 | 5.6 | 1.1 | 37.5 | 26.9 | 6.0 | 20.9 | 8.7 | 100.0 | 803 |
| 2-3 | 21.1 | 7.2 | 2.4 | 36.6 | 25.6 | 6.5 | 24.4 | 6.8 | 100.0 | 1,102 |
| 4-5 | 23.4 | 8.9 | 2.7 | 37.5 | 25.3 | 5.6 | 22.4 | 9.1 | 100.0 | 874 |
| 6+ | 15.4 | 8.5 | 2.4 | 46.1 | 23.5 | 3.7 | 17.3 | 9.5 | 100.0 | 1,132 |
| Residence |  |  |  |  |  |  |  |  |  |  |
| Urban | 33.0 | 5.6 | 0.9 | 19.7 | 28.1 | 6.2 | 35.2 | 10.7 | 100.0 | 1,144 |
| Rural | 14.1 | 8.5 | 2.7 | 48.1 | 24.0 | 5.0 | 15.4 | 7.6 | 100.0 | 2,766 |
| Region |  |  |  |  |  |  |  |  |  |  |
| North Central | 18.5 | 5.6 | 0.1 | 29.8 | 23.8 | 6.5 | 17.1 | 22.8 | 100.0 | 575 |
| North East | 11.5 | 11.1 | 3.8 | 45.2 | 25.0 | 6.7 | 20.6 | 2.6 | 100.0 | 862 |
| North West | 6.5 | 4.9 | 2.4 | 58.8 | 23.2 | 3.4 | 9.5 | 5.0 | 100.0 | 1,341 |
| South East | 51.7 | 5.3 | 0.3 | 4.0 | 39.4 | 5.3 | 30.9 | 20.4 | 100.0 | 222 |
| South South | 33.6 | 11.0 | 1.9 | 29.7 | 34.1 | 5.6 | 22.9 | 7.8 | 100.0 | 544 |
| South West | 48.0 | 9.3 | 2.3 | 9.4 | 13.1 | 7.4 | 63.4 | 6.7 | 100.0 | 367 |
| Education |  |  |  |  |  |  |  |  |  |  |
| No education | 8.1 | 7.4 | 2.8 | 58.8 | 20.8 | 3.8 | 10.3 | 6.4 | 100.0 | 1,989 |
| Primary | 25.5 | 9.0 | 1.5 | 27.5 | 29.1 | 6.8 | 25.7 | 10.9 | 100.0 | 918 |
| Secondary | 34.7 | 7.5 | 2.0 | 14.0 | 29.5 | 7.1 | 38.1 | 11.3 | 100.0 | 862 |
| Higher | 51.1 | 3.8 | 0.0 | 8.3 | 36.0 | 8.0 | 42.2 | 5.5 | 100.0 | 143 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |
| Lowest | 10.3 | 15.5 | 5.5 | 61.0 | 21.0 | 3.2 | 8.1 | 6.7 | 100.0 | 852 |
| Second | 10.4 | 5.4 | 1.6 | 61.1 | 19.3 | 3.2 | 11.2 | 5.2 | 100.0 | 846 |
| Middle | 13.7 | 5.8 | 1.2 | 39.4 | 28.5 | 6.7 | 15.2 | 10.3 | 100.0 | 808 |
| Fourth | 24.2 | 5.0 | 1.1 | 21.8 | 30.3 | 6.8 | 29.0 | 12.1 | 100.0 | 735 |
| Highest | 45.2 | 5.6 | 1.0 | 6.0 | 28.4 | 7.8 | 49.1 | 8.8 | 100.0 | 670 |
| Total | 19.6 | 7.7 | 2.2 | 39.8 | 25.2 | 5.4 | 21.2 | 8.5 | 100.0 | 3,911 |
| Note: For women with two or more live births in the five-year period, data refer to the most recent birth. <br> ${ }^{1}$ In the first two months after delivery <br> ${ }^{2}$ Women who reported night blindness but did not report difficulty with vision during the day |  |  |  |  |  |  |  |  |  |  |

### 11.4 Nutritional Status of Children

Malnutrition places children at increased risk of morbidity and mortality and has also been shown to be related to impaired mental development. Anthropometry provides one of the most important indicators of children's nutritional status. Height and weight measurements were obtained for all children born in the five years preceding the 2003 NDHS. The height and weight data are used to compute the following three summary indices of nutritional status: height-for-age, weight-for-height, and weight-for-age. The indices are expressed as standardized scores (Z-scores) or standard deviation units from the median for the international reference population recommended by WHO. Children who fall more than two stan-
dard deviations below the reference median ( -2 SD ) are regarded as undernourished, while those who fall more than three standard deviations below the reference median (-3 SD) are considered severely undernourished. Table 11.10 shows the nutritional status of children under five years of age, by background characteristics.

Children whose height-for-age is below -2 SD from the median of the reference population are considered stunted or short for their age. Stunting is the outcome of failure to receive adequate nutrition over an extended period and is also affected by recurrent or chronic illness. Almost two in five children are short for their age; half of these undernourished children are severely stunted.

Children whose weight-for-height is below -2 SD from the median of the reference population are considered wasted (or thin). Wasting represents the failure to receive adequate nutrition in the period immediately before the survey and typically is the result of a recent episode of illness, especially diarrhoea, or a rapid deterioration in the food supply. Almost one in ten children is wasted.

Children whose weight-for-age is below -2 SD from the median of the reference population are considered underweight. The measure reflects the effects of both acute and chronic malnutrition. Twentynine percent of all children are underweight; almost one in three of these children is severely underweight.

Nutritional status varies substantially by background characteristics. The impact of weaning can be seen in younger children, whose nutritional status deteriorates after six months of age, when children are being weaned. Rural children and children of younger or less educated mothers are disadvantaged in terms of nutritional status. Children living in the North West stand out as being particularly disadvantaged in terms of nutritional status (Figure 11.2).


| Table 11.10 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, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |
| Background characteristic | Height-for-age (stunted) |  |  | Weight-for-height (wasted) |  |  | Weight-for-age (underweight) |  |  | Number of children |
|  | Percentage below -3 SD | Percentage below -2 SD $^{1}$ | Mean z-score -SD | Percentage below -3 SD | Percentage below -2 SD $^{1}$ | Mean z-score -SD | Percentage below -3 SD | Percentage below -2 SD $^{1}$ | Mean z-score -SD |  |
| Age in months |  |  |  |  |  |  |  |  |  |  |
| <6 | 2.7 | 7.4 | -0.0 | 2.9 | 7.9 | 0.1 | 0.5 | 6.6 | 0.2 | 527 |
| 6-9 | 9.3 | 24.7 | -0.9 | 3.5 | 14.2 | -0.5 | 6.8 | 20.4 | -1.1 | 425 |
| 10-11 | 17.1 | 36.2 | -1.4 | 1.6 | 9.8 | -0.3 | 10.9 | 31.7 | -1.4 | 179 |
| 12-23 | 24.9 | 49.4 | -2.0 | 4.0 | 15.0 | -0.7 | 15.6 | 41.4 | -1.8 | 889 |
| 24-35 | 21.7 | 43.3 | -1.6 | 1.5 | 5.9 | -0.4 | 11.3 | 34.8 | -1.3 | 972 |
| 36-47 | 21.7 | 43.9 | -1.7 | 1.7 | 8.0 | -0.3 | 8.0 | 26.6 | -1.3 | 985 |
| 48-59 | 23.6 | 41.3 | -1.7 | 0.7 | 6.4 | -0.3 | 5.8 | 27.9 | -1.3 | 812 |
| Sex |  |  |  |  |  |  |  |  |  |  |
| Male | 20.3 | 40.8 | -1.5 | 2.2 | 9.3 | -0.4 | 9.3 | 29.2 | -1.2 | 2,390 |
| Female | 18.2 | 35.9 | -1.4 | 2.2 | 9.2 | -0.4 | 8.4 | 28.1 | -1.2 | 2,399 |
| Birth order ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |
| 1 | 16.3 | 36.9 | -1.4 | 2.2 | 9.3 | -0.4 | 8.2 | 28.5 | -1.2 | 885 |
| 2-3 | 18.9 | 36.1 | -1.4 | 1.9 | 9.6 | -0.3 | 9.3 | 28.5 | -1.2 | 1,392 |
| 4-5 | 20.2 | 35.7 | -1.4 | 2.0 | 8.0 | -0.4 | 9.1 | 28.1 | -1.2 | 1,009 |
| 6+ | 22.0 | 45.0 | -1.7 | 2.6 | 10.0 | -0.4 | 9.4 | 29.9 | -1.3 | 1,143 |
| Birth interval in months ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |
| First birth ${ }^{3}$ | 16.3 | 36.8 | -1.4 | 2.2 | 9.4 | -0.4 | 8.2 | 28.6 | -1.2 | 888 |
| <24 | 27.1 | 44.5 | -1.8 | 2.1 | 9.1 | -0.4 | 12.1 | 33.0 | -1.4 | 808 |
| 24-47 | 19.1 | 38.8 | -1.5 | 2.1 | 8.7 | -0.4 | 8.8 | 29.1 | -1.2 | 2,092 |
| 48+ | 15.7 | 32.1 | -1.2 | 2.4 | 11.0 | -0.3 | 7.2 | 22.7 | -1.0 | 641 |
| Size at birth ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |
| Very small | 27.7 | 50.4 | -1.9 | 2.6 | 15.0 | -0.6 | 16.6 | 42.2 | -1.6 | 243 |
| Small | 21.4 | 42.2 | -1.6 | 2.4 | 12.3 | -0.7 | 13.8 | 37.9 | -1.6 | 353 |
| Average or larger | 18.9 | 37.4 | -1.4 | 2.2 | 8.6 | -0.3 | 8.1 | 27.1 | -1.2 | 3,801 |
| Residence |  |  |  |  |  |  |  |  |  |  |
| Urban | 12.9 | 28.8 | -1.1 | 1.6 | 8.3 | -0.4 | 6.8 | 22.2 | -1.0 | 1,553 |
| Rural | 22.3 | 42.9 | -1.6 | 2.5 | 9.7 | -0.4 | 9.9 | 31.8 | -1.3 | 3,236 |
| Region |  |  |  |  |  |  |  |  |  |  |
| North Central | 11.3 | 31.4 | -1.1 | 1.2 | 5.5 | -0.4 | 4.9 | 19.6 | -1.0 | 758 |
| North East | 21.6 | 43.0 | -1.6 | 1.2 | 7.9 | -0.4 | 9.5 | 33.1 | -1.4 | 1,089 |
| North West | 34.4 | 55.3 | -2.2 | 3.8 | 12.5 | -0.3 | 14.7 | 42.9 | -1.6 | 1,452 |
| South East | 5.3 | 19.7 | -0.5 | 0.7 | 4.9 | 0.0 | 2.1 | 8.5 | -0.3 | 338 |
| South South | 6.3 | 20.9 | -0.7 | 2.5 | 11.1 | -0.5 | 6.4 | 18.0 | -0.9 | 643 |
| South West | 8.6 | 24.6 | -1.0 | 2.1 | 8.6 | -0.4 | 4.7 | 19.1 | -1.0 | 510 |
| Mother's education ${ }^{4}$ |  |  |  |  |  |  |  |  |  |  |
| No education | 28.7 | 50.0 | -2.0 | 2.2 | 10.2 | -0.4 | 11.7 | 37.6 | -1.5 | 2,172 |
| Primary | 15.9 | 36.6 | -1.4 | 2.6 | 9.4 | -0.4 | 8.6 | 26.1 | -1.2 | 1,105 |
| Secondary | 7.3 | 22.4 | -0.8 | 2.3 | 6.9 | -0.3 | 5.3 | 16.9 | -0.8 | 1,068 |
| Higher | 2.3 | 7.1 | -0.3 | 0.6 | 10.3 | -0.3 | 2.1 | 8.9 | -0.5 | 194 |
| Mother's age ${ }^{4}$ |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 18.0 | 40.8 | -1.5 | 4.1 | 12.0 | -0.4 | 10.6 | 31.2 | -1.3 | 294 |
| 20-24 | 23.9 | 41.8 | -1.7 | 2.2 | 8.5 | -0.4 | 11.3 | 34.5 | -1.4 | 913 |
| 25-29 | 18.4 | 36.7 | -1.4 | 2.6 | 9.1 | -0.3 | 8.8 | 27.9 | -1.1 | 1,389 |
| 30-34 | 19.7 | 37.7 | -1.4 | 1.8 | 9.6 | -0.4 | 8.8 | 29.2 | -1.2 | 903 |
| 35-49 | 17.0 | 37.5 | -1.4 | 1.9 | 9.0 | -0.4 | 7.1 | 23.5 | -1.2 | 1,039 |
| Mother's status |  |  |  |  |  |  |  |  |  |  |
| Mother interviewed | 19.5 | 38.5 | -1.5 | 2.2 | 9.3 | -0.4 | 9.0 | 28.8 | -1.2 | 4,429 |
| Mother not interviewed but in household | 16.4 | 34.8 | -1.4 | 5.9 | 8.4 | -0.3 | 8.3 | 26.4 | -1.1 | 110 |
| Mother not interviewed and not in the household ${ }^{5}$ | 16.1 | 38.1 | -1.2 | 0.8 | 8.1 | -0.4 | 6.4 | 27.2 | -1.1 | 247 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |
| Lowest | 26.4 | 48.8 | -1.8 | 2.4 | 10.4 | -0.4 | 10.8 | 34.8 | -1.4 | 977 |
| Second | 26.0 | 47.7 | -1.9 | 2.8 | 11.2 | -0.4 | 12.0 | 37.5 | -1.5 | 971 |
| Middle | 22.5 | 44.2 | -1.6 | 2.6 | 8.1 | -0.3 | 10.3 | 30.7 | -1.3 | 954 |
| Fourth | 15.8 | 32.5 | -1.3 | 1.6 | 8.2 | -0.4 | 7.8 | 26.6 | -1.2 | 934 |
| Highest | 5.2 | 17.9 | -0.6 | 1.6 | 8.2 | -0.3 | 3.4 | 13.4 | -0.7 | 952 |
| Total | 19.2 | 38.3 | -1.5 | 2.2 | 9.2 | -0.4 | 8.9 | 28.7 | -1.2 | 4,789 |

Note: Table is based on children who stayed in the household the night before the interview. Each of the indices is expressed in standard deviation (SD) units from the median of the NCHS/CDC/WHO International Reference Population. The percentage of children who are more than three or more than two standard deviations below the median of the reference population ( -3 SD and -2 SD ) are considered malnourished. Table is based on children with valid dates of birth (month and year) and valid measurements (height and weight). Total includes 25 cases with missing information on size at birth.
${ }_{2}^{1}$ Includes children who are below -3 SD
${ }^{2}$ Excludes children whose mothers were not interviewed
${ }_{4}^{3}$ First-born twins (triplets, etc.) are counted as first births because they do not have a previous birth interval.
${ }^{4}$ For women who were not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers were not listed in the household schedule
${ }^{5}$ Includes children whose mothers are dead

### 11.5 Nutritional Status of Women

The 2003 NDHS collected anthropometric data from all women age 15-49. Women's nutritional status is important both as an indicator of overall health and as a predictor of pregnancy outcome for both mother and child. Two indices of women's nutritional status-height and body mass index (BMI)—are presented in Table 11.11.

Maternal height is a measure of past nutritional status and reflects in part the cumulative effect of social and economic outcomes on access to nutritional foods during childhood and adolescence. It can be used to predict the risks associated with difficult deliveries since small stature is often associated with small pelvis size and a greater likelihood of obstructed labor. Short stature is also correlated with low birth weight in infants, high risk of stillbirths, and high rates of miscarriage. The height below which a woman is considered to be at nutritional risk is in the range of 140 to 150 centimeters. The mean height of Nigerian women is 158 centimeters, and varies little by background characteristics. However, short stature is more prevalent among teenagers, with 5 percent of women age 15-19 below 145 centimeters tall.

The BMI, which incorporates both height and weight and provides a better measure of thinness and obesity than weight alone, is defined as weight in kilograms divided by the square of the height in meters $\left(\mathrm{kg} / \mathrm{m}^{2}\right)$. For the BMI, a cutoff of 18.5 has been recommended for indicating chronic energy deficiency among nonpregnant women. To avoid bias in the measurement of women's nutritional status, pregnant women and women who had given birth in the two months preceding the survey were excluded from the calculation of weight and body mass measures. Table 11.11 shows that the mean BMI of Nigerian women (22.3) falls well within the internationally accepted normal range. Almost two-thirds of women (64 percent) have BMIs in the normal range, 15 percent are thin, and 2 percent are severely thin. The youngest women are the most likely subgroup to be thin; one-quarter of women age 15-19 have a BMI of less than 18.5. There is significant regional variation, with the prevalence of thinness ranging from 7 percent in the North Central to 23 percent in the North East.

The BMI is also used to evaluate the proportion of women who are overweight or obese. A cutoff point of 25.0 has been recommended for defining overweight, while 30.0 is the cutoff point for defining obesity. According to the 2003 NDHS, one-fifth of Nigerian women weigh more than they should: 15 percent are overweight, and 6 percent are obese. There is a strong relationship between age and high BMI. For example, only 7 percent of women age 15-19 are overweight or obese, compared with one-third (34 percent) of women age 45-49. There are marked variations by residence, education, and household economic status.

Table 11.11 Nutritional status of women by background characteristics
Among women age 15-49, mean height, percentage under 145 cm , mean body mass index (BMI), and percentage with specific BMI levels, by background characteristics, Nigeria 2003

| Background characteristic | Height |  |  | Body mass index $\mathrm{BMI}^{1}\left(\mathrm{~kg} / \mathrm{m}^{2}\right)$ |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean height in cm | Percentage 145 cm | Number of women | Mean BMI | $\begin{gathered} \text { Normal } \\ \hline \\ 18.5- \\ 24.9 \\ \text { (normal) } \end{gathered}$ | Thin |  |  |  | Overweight/obese |  |  | Number of women |
|  |  |  |  |  |  | $\begin{aligned} & <18.5 \\ & \text { (thin) } \end{aligned}$ | $\begin{gathered} 17.0- \\ 18.4 \\ \text { (mildly } \\ \text { thin) } \end{gathered}$ | $\begin{gathered} 16.0- \\ 16.9 \\ \text { (moderately } \\ \text { thin) } \end{gathered}$ | $\begin{aligned} & <16.0 \\ & \text { (severely) } \\ & \text { thin) } \end{aligned}$ | $\geq 25.0$ <br> (overweight/ obese) | $\begin{gathered} 25.0- \\ 29.9 \\ \text { (over- } \\ \text { weight) } \end{gathered}$ | 30.0 or higher (obese) |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 155.8 | 4.5 | 1,641 | 20.5 | 69.0 | 24.5 | 17.5 | 4.0 | 3.0 | 6.5 | 5.5 | 0.9 | 1,504 |
| 20-24 | 158.4 | 1.1 | 1,461 | 21.8 | 71.2 | 14.4 | 10.2 | 3.1 | 1.2 | 14.3 | 11.3 | 3.1 | 1,201 |
| 25-29 | 159.0 | 0.9 | 1,347 | 22.6 | 65.0 | 11.9 | 8.7 | 2.4 | 0.8 | 23.1 | 17.6 | 5.5 | 1,080 |
| 30-34 | 158.9 | 1.5 | 924 | 23.2 | 62.7 | 10.4 | 7.4 | 1.9 | 1.2 | 26.9 | 18.2 | 8.6 | 746 |
| 35-39 | 159.0 | 1.0 | 795 | 23.7 | 55.0 | 12.7 | 10.0 | 1.3 | 1.4 | 32.3 | 21.8 | 10.5 | 664 |
| 40-44 | 158.8 | 0.7 | 667 | 23.5 | 56.2 | 13.1 | 9.0 | 3.4 | 0.7 | 30.7 | 20.9 | 9.8 | 620 |
| 45-49 | 157.8 | 2.3 | 559 | 23.8 | 57.4 | 9.2 | 4.5 | 2.7 | 2.0 | 33.5 | 22.2 | 11.3 | 546 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 159.0 | 1.3 | 2,544 | 23.2 | 59.2 | 13.1 | 9.1 | 2.4 | 1.6 | 27.7 | 18.1 | 9.6 | 2,258 |
| Rural | 157.6 | 2.2 | 4,850 | 21.8 | 67.1 | 16.3 | 11.6 | 3.1 | 1.6 | 16.6 | 13.0 | 3.6 | 4,105 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 157.8 | 1.5 | 1,086 | 23.1 | 70.3 | 6.6 | 5.3 | 1.0 | 0.3 | 23.1 | 16.9 | 6.2 | 944 |
| North East | 158.2 | 1.6 | 1,320 | 21.4 | 62.9 | 23.0 | 16.1 | 4.3 | 2.7 | 14.1 | 10.4 | 3.7 | 1,095 |
| North West | 157.2 | 2.5 | 2,022 | 21.5 | 65.3 | 19.7 | 12.9 | 4.3 | 2.5 | 15.0 | 10.7 | 4.2 | 1,630 |
| South East | 158.8 | 2.9 | 707 | 23.6 | 57.9 | 8.2 | 6.2 | 1.4 | 0.5 | 33.9 | 25.5 | 8.4 | 648 |
| South South | 158.3 | 1.3 | 1,308 | 22.9 | 64.2 | 11.1 | 8.7 | 1.6 | 0.8 | 24.7 | 16.8 | 8.0 | 1,173 |
| South West | 159.1 | 1.6 | 950 | 22.3 | 62.5 | 16.7 | 11.9 | 3.1 | 1.7 | 20.8 | 15.0 | 5.9 | 872 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |
| No education | 157.5 | 2.1 | 3,052 | 21.6 | 65.4 | 19.8 | 13.5 | 4.2 | 2.1 | 14.8 | 11.2 | 3.5 | 2,503 |
| Primary | 157.3 | 2.5 | 1,606 | 22.6 | 64.8 | 12.8 | 9.4 | 1.9 | 1.4 | 22.4 | 16.4 | 6.0 | 1,385 |
| Secondary | 158.7 | 1.7 | 2,312 | 22.5 | 64.6 | 13.1 | 9.6 | 2.2 | 1.2 | 22.3 | 16.1 | 6.2 | 2,080 |
| Higher | 161.1 | 0.0 | 425 | 25.0 | 53.7 | 4.9 | 2.9 | 0.8 | 1.2 | 41.4 | 24.7 | 16.7 | 394 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 157.2 | 3.6 | 1,364 | 21.1 | 67.8 | 21.5 | 14.6 | 4.1 | 2.8 | 10.7 | 8.6 | 2.1 | 1,141 |
| Second | 157.4 | 1.3 | 1,386 | 21.3 | 70.0 | 18.2 | 12.8 | 3.6 | 1.8 | 11.8 | 9.0 | 2.8 | 1,155 |
| Middle | 157.4 | 2.1 | 1,464 | 22.0 | 66.7 | 16.0 | 11.2 | 3.4 | 1.3 | 17.4 | 12.7 | 4.6 | 1,238 |
| Fourth | 158.1 | 1.6 | 1,492 | 22.5 | 65.2 | 13.1 | 9.8 | 1.8 | 1.5 | 21.7 | 15.9 | 5.8 | 1,300 |
| Highest | 159.7 | 1.1 | 1,688 | 24.0 | 54.7 | 9.2 | 6.5 | 1.8 | 0.9 | 36.1 | 24.5 | 11.6 | 1,528 |
| Total | 158.0 | 1.9 | 7,394 | 22.3 | 64.3 | 15.2 | 10.7 | 2.9 | 1.6 | 20.5 | 14.8 | 5.8 | 6,362 |

[^11]
## HIV/AIDS AND OTHER SEXUALLY TRANSMITTED INFECTIONS

Acquired immunodeficiency syndrome (AIDS) is one of the world's most serious public health concerns, and it poses an enormous challenge to most countries, especially developing countries such as Nigeria. The first case of human immunodeficiency virus (HIV) infection in Nigeria was recorded in 1986, and since then, rates of infection have been increasing.

Estimates of HIV prevalence have increased from 1.8 percent in 1991 to 4.5 percent in 1996, and the 2001 National HIV/Syphilis Sentinel Survey estimated a national HIV seroprevalence rate of 5.8 percent (FMOH, 2001). Regional prevalence rates varied significantly, from a high of 7.7 percent in the South South to a low of 3.3 percent in the North West.

The greatest concern is the projected mortality due to AIDS over the next few years and its socioeconomic consequences. Projections of annual deaths caused by AIDS have increased in Nigeria from less than 50,000 in 1999 to about 350,000 by 2003-2004. The number of Nigerian children orphaned as a result of parental AIDS deaths is projected to be near 2 million in 2003-2004. AIDS deaths have economic, health, and social consequences for everyone in the country. The magnitude of the problem has renewed the vigour of the Federal Government of Nigeria to review the national HIV/AIDS policy.

The future course of the Nigerian AIDS epidemic will depend on the efforts of individuals, development partners, local and international nongovernmental organizations (NGOs), religious groups, and traditional institutions to curb the pandemic. A three-year HIV/AIDS Emergency Action Plan (HEAP) was initiated by the Federal Government of Nigeria (FGN) in 2001. The FGN has created the National Action Committee on AIDS (NACA) to do extensive work in collaboration with international development partners and local and international NGOs to mitigate the effects of HIV/AIDS. Strategies employ a multisectoral approach, working at national, state, and local government levels.

Data obtained from the 2003 Nigeria Demographic and Health Survey (NDHS) provide an invaluable resource for witnessing levels and trends of important factors related to HIV/AIDS. These data are intended to inform policy makers and programme planners in their strategies for programme planning and evaluation. This chapter presents information about knowledge, attitudes, and practices related to prevention and control of HIV/AIDS and care of people living with the virus.

### 12.1 Knowledge of Ways to Avoid HIV/AIDS

Table 12.1 shows that awareness of AIDS in Nigeria is higher among men than women, with 97 percent of men and 86 percent of women reporting that they have "heard of AIDS." There is little variation in knowledge among men by background characteristics; however, there are significant differences among women. The lowest level of AIDS awareness is among women living in households ranked lowest on the wealth index ( 70 percent). Knowledge of AIDS among women ranges from a low of 76 percent in the North East to a high of 96 percent in the South East. Awareness of AIDS is universal for men and women with higher education (100 percent).

Two aspects of AIDS-related behaviour that AIDS prevention programmes focus their messages on are the use of condoms and limiting the number of sexual partners or staying faithful to one partner. These are considered programmatically important ways to prevent HIV transmission. To ascertain whether programmes have effectively communicated these messages, interviewers asked respondents

| Table 12.1 Knowledge of AIDS |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Percentage of women and men who have heard of AIDS, by background characteristics, Nigeria 2003 |  |  |  |  |
|  | Women |  | Men |  |
| Background characteristic | Has heard of AIDS | Number of respondents | Has heard of AIDS | $\begin{gathered} \begin{array}{c} \text { Number } \\ \text { of } \\ \text { respondents } \end{array} \end{gathered}$ |
| Age |  |  |  |  |
| 15-19 | 82.8 | 1,716 | 92.9 | 453 |
| 20-24 | 87.4 | 1,494 | 97.8 | 426 |
| 25-29 | 89.7 | 1,382 | 98.2 | 328 |
| 30-39 | 87.9 | 1,757 | 99.0 | 519 |
| 40-49 | 84.0 | 1,271 | 97.4 | 367 |
| 15-24 | 84.9 | 3,210 | 95.3 | 880 |
| Marital status |  |  |  |  |
| Never married | 88.4 | 1,926 | 95.7 | 1,048 |
| Ever had sex | 94.5 | 838 | 98.9 | 489 |
| Never had sex | 83.6 | 1,087 | 93.0 | 559 |
| Married/living together | 85.4 | 5,336 | 98.4 | 1,006 |
| Divorced/separated/ widowed | 88.1 | 358 | (96.4) | 40 |
| Residence |  |  |  |  |
| Urban | 94.7 | 2,629 | 99.0 | 792 |
| Rural | 81.9 | 4,991 | 95.9 | 1,301 |
| Region |  |  |  |  |
| North Central | 84.5 | 1,121 | 97.1 | 313 |
| North East | 75.7 | 1,368 | 97.3 | 377 |
| North West | 86.6 | 2,095 | 99.3 | 529 |
| South East | 95.5 | 737 | 99.3 | 192 |
| South South | 90.3 | 1,342 | 92.1 | 385 |
| South West | 90.3 | 958 | 97.7 | 296 |
| Education |  |  |  |  |
| No education | 77.9 | 3,171 | 95.9 | 385 |
| Primary | 86.6 | 1,628 | 92.8 | 519 |
| Secondary | 94.8 | 2,370 | 99.0 | 932 |
| Higher | 100.0 | 451 | 100.0 | 257 |
| Wealth quintile |  |  |  |  |
| Lowest | 69.6 | 1,414 | 92.3 | 362 |
| Second | 79.9 | 1,439 | 95.8 | 360 |
| Middle | 88.5 | 1,513 | 99.1 | 392 |
| Fourth | 92.8 | 1,526 | 97.2 | 452 |
| Highest | 97.7 | 1,728 | 99.5 | 527 |
| Total | 86.3 | 7,620 | 97.0 | 2,093 |
| Note: Figures in parentheses are based on 25-49 unweighted cases. |  |  |  |  |

about these behaviours as ways of avoiding AIDS. If respondents reported that AIDS could be avoided, they were asked how "a person could avoid getting the HIV virus." Two types of questions were asked about ways to avoid getting infected. First, an open-ended question was asked, and respondents were allowed to give all of the ways to avoid HIV/AIDS that they know of without prompting. Next, women and men were asked specific questions on whether condom use and (in a separate question) whether limiting their sexual activity to just one partner can reduce their chances of getting AIDS. Results are presented in Table 12.2.

| Table 12.2 Knowledge of HIV prevention methods |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of women and men who, in response to a prompted question, say that people can reduce the risk of getting the AIDS virus by using condoms and by having sex with just one partner who is not infected and who has no other partners, by background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |
|  | Women |  |  |  | Men |  |  |  |
|  | Knowledge of HIV prevention by: |  |  |  | Knowledge of HIV prevention by: |  |  |  |
| Background characteristic | Using condoms | Limiting sex to one uninfected partner | Using condoms and limiting sex to one uninfected partner ${ }^{1}$ | Number <br> of <br> women | Using condoms | Limiting sex to one uninfected partner | Using condoms and limiting sex to one uninfected partner ${ }^{1}$ | Number of men |
| Age |  |  |  |  |  |  |  |  |
| 15-19 | 38.6 | 53.3 | 36.5 | 1,716 | 58.2 | 64.8 | 52.0 | 453 |
| 20-24 | 47.8 | 63.0 | 44.9 | 1,494 | 67.8 | 80.6 | 65.1 | 426 |
| 25-29 | 51.3 | 64.4 | 49.3 | 1,382 | 69.2 | 86.7 | 65.4 | 328 |
| 30-39 | 46.6 | 61.4 | 44.1 | 1,757 | 67.2 | 87.3 | 64.0 | 519 |
| 40-49 | 39.1 | 58.0 | 37.1 | 1,271 | 54.1 | 82.8 | 52.1 | 367 |
| 15-24 | 42.9 | 57.8 | 40.4 | 3,210 | 62.8 | 72.4 | 58.4 | 880 |
| Marital status |  |  |  |  |  |  |  |  |
| Never married | 47.9 | 63.0 | 45.6 | 1,926 | 65.9 | 75.6 | 61.3 | 1,048 |
| Ever had sex | 59.7 | 72.9 | 57.2 | 838 | 77.7 | 84.7 | 74.1 | 489 |
| Never had sex | 38.7 | 55.4 | 36.7 | 1,087 | 55.5 | 67.7 | 50.1 | 559 |
| Married/living together | 43.3 | 58.7 | 41.1 | 5,336 | 60.3 | 84.6 | 57.7 | 1,006 |
| Divorced/separated/ widowed | 46.8 | 60.4 | 43.7 | 358 | (74.8) | (87.5) | (72.5) | 40 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 57.5 | 73.0 | 54.5 | 2,629 | 70.6 | 83.1 | 65.3 | 792 |
| Rural | 37.8 | 53.0 | 35.9 | 4,991 | 59.0 | 78.4 | 56.4 | 1,301 |
| Region |  |  |  |  |  |  |  |  |
| North Central | 34.7 | 55.6 | 33.8 | 1,121 | 68.1 | 83.8 | 66.6 | 313 |
| North East | 34.7 | 50.6 | 34.0 | 1,368 | 47.5 | 80.2 | 45.7 | 377 |
| North West | 48.8 | 59.8 | 44.7 | 2,095 | 69.8 | 83.1 | 62.0 | 529 |
| South East | 43.6 | 77.3 | 42.2 | 737 | 79.4 | 85.1 | 75.5 | 192 |
| South South | 48.8 | 58.0 | 47.1 | 1,342 | 50.4 | 68.2 | 49.8 | 385 |
| South West | 56.3 | 67.4 | 52.4 | 958 | 73.5 | 83.4 | 69.0 | 296 |
| Education |  |  |  |  |  |  |  |  |
| No education | 33.0 | 48.0 | 30.8 | 3,171 | 44.9 | 73.0 | 41.9 | 385 |
| Primary | 43.3 | 56.1 | 40.8 | 1,628 | 54.2 | 74.8 | 52.2 | 519 |
| Secondary | 55.6 | 72.5 | 53.4 | 2,370 | 71.4 | 82.4 | 66.7 | 932 |
| Higher | 73.7 | 91.1 | 70.5 | 451 | 80.5 | 93.8 | 76.4 | 257 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 25.0 | 37.1 | 23.6 | 1,414 | 42.1 | 66.5 | 40.4 | 362 |
| Second | 31.1 | 46.5 | 29.1 | 1,439 | 57.5 | 79.0 | 54.7 | 360 |
| Middle | 47.5 | 61.9 | 45.2 | 1,513 | 68.4 | 86.5 | 65.3 | 392 |
| Fourth | 53.4 | 67.9 | 50.3 | 1,526 | 64.4 | 82.2 | 61.8 | 452 |
| Highest | 61.8 | 80.7 | 59.2 | 1,728 | 77.4 | 84.0 | 70.6 | 527 |
| Total | 44.6 | 59.9 | 42.3 | 7,620 | 63.4 | 80.2 | 59.8 | 2,093 |
| Note: Figures in parentheses based on 25-49 unweighted cases. <br> ${ }^{1}$ Corresponds to UNAIDS Knowledge Indicator 1 "Knowledge of HIV prevention methods" |  |  |  |  |  |  |  |  |

Knowledge of prevention of AIDS is not quite as widespread as knowledge of the disease itself. Limiting the number of sexual partners is acknowledged by more Nigerians of all backgrounds as a means to avoid AIDS, compared with use of condoms. Forty-five percent of women and 63 percent of men report knowledge of condom use for HIV/AIDS protection. On the other hand, six in ten women and eight in ten men report knowing that limiting the number of sexual partners is a way to avoid HIV/AIDS.

More men than women know about condom use and limiting partners as ways to avoid AIDS, although patterns of knowledge by background characteristics are similar for both women and men. The youngest women and men (age 15-19) are somewhat less likely than older women and men to know these specific ways to avoid transmission of HIV. This is important because sexual debut often occurs before age 20. Variation by education is particularly striking among both women and men. Knowledge of condom use to avoid AIDS ranges from a low of 33 percent among women with no education to a high of 74 percent among those with higher education. Knowledge among men increases steadily with education as well, from a low of 45 percent among men with no education to a high of 81 percent among men with higher education.

### 12.2 Beliefs about AIDS

The 2003 NDHS also inquired about common misconceptions regarding AIDS and HIV transmission. Respondents were asked whether they think it is possible for a healthy-looking person to have the AIDS virus; results are presented in Tables 12.3.1 and 12.3.2 by background characteristics. The tables also present the percentage of the population who know that the common misconceptions regarding transmission of AIDS are not true, in particular, that a person cannot get AIDS from mosquito bites, from witchcraft or other supernatural means, or from sharing food with a person who has AIDS. The tables also show the percentage of the population who know both that it is possible for a healthy-looking person to have AIDS and that the two most common misconceptions regarding transmission (AIDS can be transmitted via mosquito bites or by supernatural means) are not true.

Once again, levels of knowledge are higher among men than among women, and the greatest variability in knowledge is seen by level of education. Overall, about half of women ( 53 percent) and nearly three-quarters of men ( 73 percent) know that a healthy-looking person can have AIDS. There are greater gaps in knowledge regarding modes of transmission than knowledge of whether or not a healthylooking person can have the AIDS virus. For each of the misconceptions regarding transmission of AIDS, approximately four in ten women know that it is not really a mode of transmission; the percentages for men are slightly higher. Respondents who know that a healthy-looking person can have the AIDS virus and who also reject the two most common misconceptions regarding transmission of the AIDS virus are in the minority: 21 percent of women and 28 percent of men. There is room for growth in educating the population about the modes of transmission of the AIDS virus. The lowest levels of knowledge are among persons with no education or primary education.

Table 12.3.1 Beliefs about AIDS: women
Percentage of women who, in response to a prompted question, correctly reject local misconceptions about AIDS transmission or prevention, and who know that a healthy-looking person can have the AIDS virus, by background characteristics, Nigeria 2003

| Background characteristic | Percentage of women who know that: |  |  |  | Percentage who reject two most common misconceptions and say that a healthy-looking person can have the AIDS virus ${ }^{1}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A healthylooking person can have the AIDS virus | AIDS cannot be transmitted by mosquito bites | AIDS cannot be transmitted by witchcraft or other supernatural means | A person cannot become infected by sharing food with someone with AIDS |  | Number of women |
| Age |  |  |  |  |  |  |
| 15-19 | 46.3 | 32.1 | 36.0 | 40.5 | 17.0 | 1,716 |
| 20-24 | 59.4 | 41.9 | 42.3 | 50.6 | 24.8 | 1,494 |
| 25-29 | 59.0 | 40.3 | 43.8 | 49.6 | 22.7 | 1,382 |
| 30-39 | 53.0 | 36.8 | 41.2 | 43.8 | 20.7 | 1,757 |
| 40-49 | 50.6 | 33.6 | 36.7 | 40.8 | 19.1 | 1,271 |
| 15-24 | 52.4 | 36.7 | 38.9 | 45.2 | 20.6 | 3,210 |
| Marital status |  |  |  |  |  |  |
| Never married | 58.8 | 41.2 | 43.4 | 51.8 | 23.7 | 1,926 |
| Ever had sex | 69.2 | 45.8 | 46.9 | 59.5 | 28.0 | 838 |
| Never had sex | 50.7 | 37.7 | 40.7 | 45.9 | 20.4 | 1,087 |
| Married/living together | er 51.4 | 35.5 | 39.3 | 42.3 | 19.9 | 5,336 |
| Divorced/separated/ widowed | 54.3 | 33.1 | 32.2 | 46.6 | 17.6 | 358 |
| Residence |  |  |  |  |  |  |
| Urban | 68.6 | 49.8 | 51.1 | 59.0 | 29.9 | 2,629 |
| Rural | 45.4 | 30.0 | 34.1 | 37.5 | 15.9 | 4,991 |
| Region |  |  |  |  |  |  |
| North Central | 43.3 | 26.3 | 29.8 | 35.6 | 11.9 | 1,121 |
| North East | 45.4 | 25.5 | 35.2 | 35.0 | 16.6 | 1,368 |
| North West | 52.3 | 43.2 | 42.5 | 48.0 | 23.7 | 2,095 |
| South East | 67.1 | 52.7 | 57.4 | 64.8 | 33.5 | 737 |
| South South | 53.6 | 31.3 | 30.3 | 42.2 | 14.3 | 1,342 |
| South West | 68.4 | 47.3 | 53.3 | 52.0 | 29.9 | 958 |
| Education |  |  |  |  |  |  |
| No education | 40.4 | 28.1 | 31.8 | 32.7 | 14.9 | 3,171 |
| Primary | 48.4 | 30.5 | 35.0 | 36.0 | 15.8 | 1,628 |
| Secondary | 66.9 | 45.7 | 48.7 | 59.4 | 25.7 | 2,370 |
| Higher | 92.2 | 75.1 | 69.5 | 87.2 | 54.3 | 451 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 33.0 | 19.1 | 21.0 | 23.3 | 9.7 | 1,414 |
| Second | 41.4 | 25.3 | 30.4 | 31.2 | 14.2 | 1,439 |
| Middle | 51.8 | 34.5 | 41.3 | 42.2 | 18.0 | 1,513 |
| Fourth | 57.6 | 43.3 | 44.1 | 52.8 | 22.5 | 1,526 |
| Highest | 77.8 | 57.4 | 58.6 | 69.5 | 36.2 | 1,728 |
| Total | 53.4 | 36.9 | 40.0 | 44.9 | 20.8 | 7,620 |

Note: The two most common local misconceptions involve transmission by mosquito bites and by witchcraft or other supernatural means.
${ }^{1}$ Corresponds to UNAIDS Knowledge Indicator 2 "No incorrect beliefs about AIDS"

Table 12.3.2 Beliefs about AIDS: men
Percentage of men who, in response to a prompted question, correctly reject local misconceptions about AIDS transmission or prevention, and who know that a healthy-looking person can have the AIDS virus, by background characteristics, Nigeria 2003

| Background characteristic | Percentage of men who know that: |  |  |  | Percentage who reject two most common misconceptions and say that a healthy-looking person can have the AIDS virus ${ }^{1}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A healthyooking person can have the AIDS virus | AIDS cannot be transmitted by mosquito bites | AIDS cannot be transmitted by witchcraft or other supernatural means | A person cannot become infected by sharing food with someone with AIDS |  | Number of men |
| Age |  |  |  |  |  |  |
| $15-19$ | 55.8 | 32.9 | 47.9 | 45.2 | 17.3 | 453 |
| 20-24 | 74.2 | 44.4 | 55.7 | 64.1 | 29.1 | 426 |
| 25-29 | 82.6 | 49.4 | 58.6 | 67.7 | 33.2 | 328 |
| 30-39 | 81.9 | 53.5 | 54.8 | 65.0 | 35.1 | 519 |
| 40-49 | 72.6 | 42.7 | 53.9 | 53.6 | 25.3 | 367 |
| 15-24 | 64.7 | 38.5 | 51.7 | 54.4 | 23.0 | 880 |
| Marital status |  |  |  |  |  |  |
| Never married | 69.7 | 43.7 | 54.9 | 61.0 | 27.6 | 1,048 |
| Ever had sex | 79.8 | 52.0 | 59.5 | 70.5 | 34.0 | 489 |
| Never had sex | 60.9 | 36.5 | 50.8 | 52.7 | 21.9 | 559 |
| Married/living together | er 76.5 | 45.1 | 53.3 | 56.4 | 28.5 | 1,006 |
| Divorced/separated/ widowed | (80.5) | (55.5) | (45.4) | (68.3) | (27.2) | 40 |
| Residence |  |  |  |  |  |  |
| Urban | 82.1 | 55.0 | 59.0 | 68.4 | 37.5 | 792 |
| Rural | 67.8 | 38.3 | 50.8 | 53.2 | 22.2 | 1,301 |
| Region |  |  |  |  |  |  |
| North Central | 67.9 | 35.7 | 47.0 | 53.1 | 18.2 | 313 |
| North East | 69.5 | 47.5 | 44.5 | 51.4 | 20.0 | 377 |
| North West | 77.5 | 38.9 | 59.3 | 56.5 | 25.2 | 529 |
| South East | 82.3 | 42.6 | 47.4 | 73.9 | 28.5 | 192 |
| South South | 64.4 | 46.5 | 52.8 | 60.3 | 33.1 | 385 |
| South West | 81.3 | 59.6 | 69.3 | 67.8 | 46.6 | 296 |
| Education |  |  |  |  |  |  |
| No education | 59.2 | 30.4 | 45.7 | 44.5 | 14.8 | 385 |
| Primary | 67.1 | 38.0 | 43.5 | 46.2 | 19.6 | 519 |
| Secondary | 77.7 | 46.9 | 56.9 | 64.9 | 29.9 | 932 |
| Higher | 89.8 | 71.1 | 76.5 | 84.8 | 58.0 | 257 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 55.9 | 26.5 | 40.0 | 36.8 | 11.7 | 362 |
| Second | 67.2 | 34.7 | 45.5 | 47.8 | 18.8 | 360 |
| Middle | 72.3 | 39.9 | 58.0 | 61.1 | 23.2 | 392 |
| Fourth | 80.0 | 54.8 | 56.7 | 64.7 | 34.1 | 452 |
| Highest | 83.9 | 58.7 | 63.8 | 75.3 | 43.9 | 527 |
| Total | 73.2 | 44.6 | 53.9 | 59.0 | 28.0 | 2,093 |

Note: The two most common local misconceptions involve transmission by mosquito bites and by witchcraft or other supernatural means. Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ Corresponds to UNAIDS Knowledge Indicator 2 "No incorrect beliefs about AIDS"

### 12.3 Stigma and Discrimination

Knowledge and beliefs about AIDS affect how people treat others whom they know to be living with HIV. To ascertain the level to which people are accepting of others who are living with HIV, the 2003 NDHS asked several questions regarding behavioural treatment of persons with AIDS. Results are presented in Tables 12.4.1 and 12.4.2, which excludes the 14 percent of women and 3 percent of men who reported that they have never heard of an illness called AIDS. Respondents were asked whether or not they would be willing to take on the care of a relative with HIV in their own household. Overall, four in ten respondents reported that they would be willing to care for a sick relative in their own household. Only one-quarter of respondents in the South West reported that they would do so.

| Table 12.4.1 Accepting attitudes towards those living with HIV: women |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of women expressing accepting attitudes toward people with HIV, by background characteristics, Nigeria 2003 |  |  |  |  |  |  |
| Percentage of women who: |  |  |  |  |  |  |
| Background characteristic | Are <br> willing to care for a family member with HIV at home | Would buy fresh vegetables from shopkeeper with AIDS | Believe HIV-positive female teacher should be allowed to keep teaching | Believe HIV-positive status of a family member does not need to remain a secret | Percentage expressing accepting attitudes on all four measures ${ }^{1}$ | Number of women who have heard of HIV/AIDS |
| Age |  |  |  |  |  |  |
| 15-19 | 41.8 | 19.3 | 23.6 | 54.2 | 2.1 | 1,420 |
| 20-24 | 45.8 | 21.8 | 24.7 | 56.7 | 3.0 | 1,305 |
| 25-29 | 41.4 | 21.2 | 25.3 | 63.0 | 4.4 | 1,240 |
| 30-39 | 45.5 | 19.1 | 22.0 | 64.5 | 3.6 | 1,545 |
| 40-49 | 44.6 | 15.8 | 18.5 | 67.1 | 3.4 | 1,067 |
| 15-24 | 43.7 | 20.5 | 24.2 | 55.4 | 2.5 | 2,725 |
| Marital status |  |  |  |  |  |  |
| Never married | 47.3 | 26.3 | 27.4 | 55.3 | 4.5 | 1,702 |
| Ever had sex | 51.0 | 31.6 | 32.3 | 56.1 | 6.1 | 793 |
| Never had sex | 44.0 | 21.8 | 23.2 | 54.6 | 3.2 | 909 |
| Married/living together | 42.3 | 17.3 | 21.6 | 62.7 | 2.7 | 4,559 |
| Divorced/separated/ widowed | 47.1 | 15.5 | 19.3 | 64.1 | 4.5 | 316 |
| Residence |  |  |  |  |  |  |
| Urban | 46.1 | 26.1 | 27.7 | 59.0 | 4.1 | 2,490 |
| Rural | 42.5 | 15.6 | 20.1 | 62.0 | 2.8 | 4,087 |
| Region |  |  |  |  |  |  |
| North Central | 47.5 | 18.5 | 16.9 | 58.5 | 2.9 | 947 |
| North East | 51.0 | 12.7 | 20.3 | 68.3 | 3.6 | 1,036 |
| North West | 47.5 | 18.7 | 25.9 | 55.5 | 2.6 | 1,813 |
| South East | 59.8 | 26.7 | 29.2 | 49.8 | 2.7 | 704 |
| South South | 32.5 | 22.2 | 23.7 | 68.1 | 5.2 | 1,212 |
| South West | 26.4 | 21.2 | 20.6 | 64.6 | 2.5 | 865 |
| Education |  |  |  |  |  |  |
| No education | 43.7 | 12.1 | 18.7 | 61.9 | 2.1 | 2,470 |
| Primary | 38.8 | 16.1 | 18.2 | 64.4 | 2.2 | 1,410 |
| Secondary | 44.5 | 25.8 | 27.3 | 58.2 | 4.3 | 2,246 |
| Higher | 57.3 | 40.4 | 39.9 | 57.1 | 8.4 | 451 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 37.1 | 10.6 | 14.2 | 62.7 | 1.1 | 984 |
| Second | 44.0 | 12.2 | 19.4 | 63.9 | 3.2 | 1,150 |
| Middle | 42.6 | 15.3 | 22.6 | 66.9 | 2.5 | 1,339 |
| Fourth | 45.3 | 22.2 | 23.2 | 61.1 | 3.6 | 1,415 |
| Highest | 47.3 | 30.9 | 30.6 | 52.7 | 4.9 | 1,689 |
| Total | 43.8 | 19.6 | 23.0 | 60.9 | 3.3 | 6,577 |

To assess personal attitudes towards others known to be living with AIDS, the 2003 NDHS asked respondents whether they would be willing to purchase fresh vegetables from a seller who has the AIDS virus, whether they believe a female teacher who has the AIDS virus should be permitted to continue teaching, and whether or not they would want the status of a family member with the AIDS virus to remain a secret. These results are also presented in Tables 12.4.1 and 12.4.2. Only 20 percent of women and 28 percent of men say that they would purchase fresh vegetables from a person with the AIDS virus. Only 23 percent of women and 27 percent of men believe that a female teacher with the AIDS virus should be allowed to continue teaching in school. A majority of respondents ( 61 percent of women and 70 percent of men), however, say that they believe that the HIV-positive status of a family member does not need to remain a secret.

| Percentage of men expressing accepting attitudes toward people with HIV, by background characteristics, Nigeria 2003 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of men who: |  |  |  |  |  |  |
| Background characteristic | Are <br> willing to care for a family member with HIV at home | Would buy fresh vegetables from shopkeeper with AIDS | Believe HIV-positive female teacher should be allowed to keep teaching | Believe HIV-positive status of a family member does not need to remain a secret | Percentage expressing accepting attitudes on all four measures ${ }^{1}$ | Number of men who have heard of HIV/AIDS |
| Age |  |  |  |  |  |  |
| $15-19$ | 34.8 | 19.3 | 15.5 | 59.4 | 3.1 | 421 |
| 20-24 | 39.8 | 30.4 | 27.5 | 73.3 | 5.9 | 417 |
| 25-29 | 43.4 | 36.3 | 32.0 | 72.0 | 7.8 | 322 |
| 30-39 | 44.4 | 29.6 | 33.2 | 74.2 | 9.1 | 514 |
| 40-49 | 36.7 | 26.6 | 25.4 | 71.8 | 6.6 | 357 |
| 15-24 | 37.3 | 24.8 | 21.5 | 66.3 | 4.5 | 838 |
| Marital status |  |  |  |  |  |  |
| Never married | 39.6 | 29.1 | 24.7 | 66.6 | 6.2 | 1,003 |
| Ever had sex | 45.1 | 35.4 | 28.8 | 74.5 | 9.3 | 484 |
| Never had sex | 34.6 | 23.2 | 20.9 | 59.3 | 3.3 | 519 |
| Married/living together | 40.2 | 27.0 | 29.0 | 73.4 | 7.0 | 990 |
| Divorced/separated/ widowed | (42.3) | (32.2) | (24.0) | (81.6) | (4.9) | 38 |
| Residence |  |  |  |  |  |  |
| Urban | 35.1 | 34.2 | 32.3 | 68.0 | 7.1 | 784 |
| Rural | 43.0 | 24.3 | 23.4 | 71.6 | 6.2 | 1,247 |
| Region |  |  |  |  |  |  |
| North Central | 56.6 | 21.3 | 20.0 | 73.0 | 5.7 | 304 |
| North East | 31.4 | 31.7 | 25.0 | 72.3 | 6.3 | 367 |
| North West | 42.1 | 27.9 | 31.5 | 63.6 | 5.0 | 525 |
| South East | 36.0 | 24.3 | 33.7 | 58.8 | 4.6 | 191 |
| South South | 46.9 | 33.0 | 29.2 | 69.6 | 13.9 | 355 |
| South West | 23.3 | 28.0 | 20.3 | 84.6 | 2.8 | 289 |
| Education |  |  |  |  |  |  |
| No education | 35.1 | 18.6 | 22.0 | 67.2 | 2.8 | 369 |
| Primary | 36.3 | 22.0 | 20.5 | 71.7 | 4.4 | 482 |
| Secondary | 40.6 | 26.9 | 26.9 | 71.2 | 6.3 | 923 |
| Higher | 51.4 | 58.1 | 45.0 | 68.1 | 16.8 | 257 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 36.4 | 13.3 | 16.4 | 67.9 | 1.2 | 334 |
| Second | 40.6 | 25.5 | 22.8 | 74.8 | 5.9 | 345 |
| Middle | 48.6 | 28.8 | 26.8 | 73.4 | 7.3 | 388 |
| Fourth | 32.6 | 30.5 | 24.4 | 70.2 | 6.6 | 439 |
| Highest | 41.4 | 36.9 | 38.1 | 66.2 | 9.8 | 524 |
| Total | 39.9 | 28.2 | 26.8 | 70.2 | 6.6 | 2,031 |
| Note: Figures in parentheses are based on 25-49 unweighted cases. |  |  |  |  |  |  |

The percentage of the population expressing the most accepting attitudes towards persons living with the AIDS virus is presented in the last percentage column of the table. This is the percentage of respondents who reported in the affirmative for all four behaviours presented in the table: they would care for an HIV-positive family member in their own home, they would buy fresh vegetables from a shopkeeper with AIDS, they would allow an HIV-positive teacher to continue teaching, and they would not keep the HIV-positive status of a family member a secret. Only 3 percent of women and 7 percent of men report acceptance on all four indicators.

### 12.4 Knowledge of Mother-to-Child Transmission

AIDS education programmes include not only informing the population on how to avoid becoming infected with HIV, but also informing them what people living with the illness can do to prevent its transmission to other people. Table 12.5 shows the percentage of respondents who know that HIV can be transmitted from a mother to her child via breastfeeding. Overall, about half of the population know that mother-to-child transmission of HIV is possible through breastfeeding. This knowledge increases with increasing education. Few people (less than one in ten) know that a woman living with HIV can take drugs during pregnancy to reduce the risk of transmission.

| 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 trans mission (MTCT) of HIV can be reduced by the mother taking special drugs during pregnancy, by background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Women |  |  |  | Men |  |  |  |
| Background characteristic | HIV can be transmitted by breastfeeding | Risk of MTCT can be reduced by mother taking drugs during pregnancy | HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking drugs during pregnancy ${ }^{1}$ | Number of women | HIV can be transmitted by breastfeeding | Risk of MTCT can be reduced by mother taking drugs during pregnancy | HIV can be transmitted by breastfeeding and risk of MTCT can be reduced by mother taking drugs during pregnancy ${ }^{1}$ | Number of men |
| Age |  |  |  |  |  |  |  |  |
| 15-19 | 40.8 | 5.2 | 4.5 | 1,716 | 44.6 | 3.7 | 3.2 | 453 |
| 20-24 | 48.9 | 7.0 | 5.9 | 1,494 | 62.3 | 6.2 | 5.5 | 426 |
| 25-29 | 50.8 | 7.7 | 6.6 | 1,382 | 65.0 | 6.1 | 3.9 | 328 |
| 30-39 | 45.5 | 5.6 | 4.4 | 1,757 | 60.3 | 10.4 | 8.3 | 519 |
| 40-49 | 44.7 | 5.4 | 4.7 | 1,271 | 50.9 | 10.7 | 9.6 | 367 |
| 15-24 | 44.6 | 6.1 | 5.1 | 3,210 | 53.2 | 4.9 | 4.3 | 880 |
| Marital status |  |  |  |  |  |  |  |  |
| Never married | 53.1 | 6.3 | 5.1 | 1,926 | 55.0 | 5.9 | 4.7 | 1,048 |
| Ever had sex | 62.8 | 7.4 | 5.6 | 838 | 64.9 | 6.3 | 5.1 | 489 |
| Never had sex | 45.7 | 5.4 | 4.7 | 1,087 | 46.4 | 5.7 | 4.3 | 559 |
| Married/living together | 43.4 | 6.0 | 5.2 | 5,336 | 57.7 | 9.2 | 7.8 | 1,006 |
| Divorced/separated/ widowed | 45.1 | 7.1 | 5.1 | 358 | (57.5) | (4.3) | (4.3) | 40 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 57.1 | 8.2 | 6.7 | 2,629 | 57.4 | 8.4 | 7.4 | 792 |
| Rural | 40.1 | 5.0 | 4.4 | 4,991 | 55.8 | 6.9 | 5.4 | 1,301 |
| Region |  |  |  |  |  |  |  |  |
| North Central | 48.3 | 7.7 | 7.4 | 1,121 | 70.2 | 8.5 | 7.9 | 313 |
| North East | 34.6 | 5.3 | 4.5 | 1,368 | 50.5 | 10.5 | 8.4 | 377 |
| North West | 33.0 | 7.3 | 6.0 | 2,095 | 56.5 | 7.9 | 6.5 | 529 |
| South East | 64.2 | 6.9 | 4.8 | 737 | 58.8 | 8.8 | 5.4 | 192 |
| South South | 58.8 | 5.5 | 4.5 | 1,342 | 60.9 | 2.9 | 2.9 | 385 |
| South West | 55.8 | 3.3 | 2.8 | 958 | 41.7 | 6.9 | 5.6 | 296 |
| Education |  |  |  |  |  |  |  |  |
| No education | 28.9 | 4.1 | 3.6 | 3,171 | 42.4 | 4.7 | 4.3 | 385 |
| Primary | 45.2 | 4.7 | 4.2 | 1,628 | 45.7 | 5.1 | 3.4 | 519 |
| Secondary | 63.5 | 7.6 | 6.3 | 2,370 | 64.4 | 5.7 | 5.0 | 932 |
| Higher | 76.3 | 18.0 | 13.4 | 451 | 69.6 | 23.0 | 18.8 | 257 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 26.6 | 2.2 | 1.7 | 1,414 | 41.5 | 4.7 | 4.6 | 362 |
| Second | 34.0 | 3.4 | 3.1 | 1,439 | 51.8 | 6.4 | 6.4 | 360 |
| Middle | 45.4 | 6.1 | 5.2 | 1,513 | 62.3 | 8.8 | 5.5 | 392 |
| Fourth | 52.0 | 7.0 | 6.0 | 1,526 | 58.9 | 5.9 | 4.9 | 452 |
| Highest | 66.9 | 10.9 | 8.9 | 1,728 | 63.2 | 10.4 | 8.5 | 527 |
| Total | 45.9 | 6.1 | 5.2 | 7,620 | 56.4 | 7.5 | 6.2 | 2,093 |

[^12]
### 12.5 HIV Testing and Counselling

The 2003 NDHS asked all respondents who have heard of AIDS whether or not they have ever been tested for the illness, how long ago they were tested, and whether they received the test results the most recent time they were tested. Table 12.6 shows that 6 percent of women and 14 percent of men have ever been tested and received the results of their HIV test. Only 3 percent of women and 6 percent of men have been tested and received results during the 12 months preceding the survey. The likelihood of having been tested and receiving the results has a strong positive correlation with education and the wealth index. The vast majority of the population (approximately eight in ten) have never been tested for HIV.

Table 12.6 Population who had an HIV test and received test results
Percent distribution of women and men by HIV testing status, and percentage of women and men who were tested for HIV and received test results in the past 12 months, according to background characteristics, Nigeria 2003

| Background characteristic | Women |  |  |  |  |  |  | Men |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Ever tested |  | Never tested | Don't know/ missing | Total | Percentage who were tested and received results in past 12 months | Number of women | Ever tested |  | Never tested | Don't know/ missing | Total | Percentage who were tested and received results in past 12 months | Number of men |
|  | Received results | No results |  |  |  |  |  | Received results | No results |  |  |  |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 2.5 | 0.4 | 80.0 | 17.2 | 100.0 | 1.7 | 1,716 | 3.2 | 1.1 | 88.6 | 7.1 | 100.0 | 1.3 | 453 |
| 20-24 | 6.9 | 0.5 | 79.9 | 12.7 | 100.0 | 3.3 | 1,494 | 10.5 | 0.8 | 86.5 | 2.2 | 100.0 | 7.5 | 426 |
| 25-29 | 11.4 | 1.1 | 77.0 | 10.5 | 100.0 | 5.3 | 1,382 | 12.5 | 0.5 | 85.2 | 1.8 | 100.0 | 7.1 | 328 |
| 30-39 | 6.9 | 0.9 | 79.9 | 12.3 | 100.0 | 3.2 | 1,757 | 22.0 | 0.6 | 76.3 | 1.2 | 100.0 | 8.1 | 519 |
| 40-49 | 5.0 | 0.4 | 78.6 | 16.0 | 100.0 | 1.8 | 1,271 | 19.1 | 1.5 | 76.9 | 2.6 | 100.0 | 5.6 | 367 |
| 15-24 | 4.5 | 0.4 | 79.9 | 15.1 | 100.0 | 2.5 | 3,210 | 6.7 | 0.9 | 87.6 | 4.7 | 100.0 | 4.3 | 880 |
| Marital status |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Never married | 6.7 | 0.5 | 81.1 | 11.6 | 100.0 | 3.8 | 1,926 | 9.2 | 0.9 | 85.6 | 4.4 | 100.0 | 5.2 | 1,048 |
| Ever had sex | 12.8 | 0.9 | 80.9 | 5.5 | 100.0 | 7.3 | 838 | 17.0 | 1.0 | 80.8 | 1.3 | 100.0 | 10.0 | 489 |
| Never had sex | 2.1 | 0.3 | 81.3 | 16.4 | 100.0 | 1.0 | 1,087 | 2.3 | 0.8 | 89.9 | 7.0 | 100.0 | 1.0 | 559 |
| Married/living together | 6.1 | 0.7 | 78.5 | 14.7 | 100.0 | 2.6 | 5,336 | 18.1 | 0.9 | 79.4 | 1.6 | 100.0 | 6.4 | 1,006 |
| Divorced/separated/ widowed | 8.6 | 0.6 | 79.0 | 11.9 | 100.0 | 4.9 | 358 | (16.3) | (0.0) | (80.1) | (3.6) | (100.0) | (9.2) | 40 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 11.8 | 0.7 | 82.1 | 5.4 | 100.0 | 5.3 | 2,629 | 16.3 | 0.8 | 81.7 | 1.2 | 100.0 | 7.5 | 792 |
| Rural | 3.6 | 0.6 | 77.6 | 18.2 | 100.0 | 1.8 | 4,991 | 11.9 | 0.9 | 83.0 | 4.1 | 100.0 | 4.9 | 1,301 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 5.3 | 0.5 | 78.7 | 15.5 | 100.0 | 3.2 | 1,121 | 18.9 | 1.0 | 77.1 | 2.9 | 100.0 | 9.6 | 313 |
| North East | 1.3 | 0.1 | 74.3 | 24.3 | 100.0 | 0.7 | 1,368 | 12.6 | 1.8 | 82.8 | 2.7 | 100.0 | 6.0 | 377 |
| North West | 1.1 | 0.1 | 85.0 | 13.8 | 100.0 | 0.4 | 2,095 | 4.2 | 0.8 | 94.2 | 0.7 | 100.0 | 1.2 | 529 |
| South East | 22.9 | 0.2 | 72.4 | 4.5 | 100.0 | 9.3 | 737 | 25.4 | 0.4 | 73.5 | 0.7 | 100.0 | 11.5 | 192 |
| South South | 9.3 | 1.6 | 79.4 | 9.7 | 100.0 | 5.3 | 1,342 | 13.8 | 0.2 | 78.0 | 7.9 | 100.0 | 5.7 | 385 |
| South West | 9.8 | 1.7 | 78.7 | 9.7 | 100.0 | 4.0 | 958 | 17.8 | 0.7 | 78.8 | 2.7 | 100.0 | 6.6 | 296 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| No education | 0.8 | 0.2 | 76.7 | 22.2 | 100.0 | 0.3 | 3,171 | 2.0 | 1.0 | 93.0 | 4.1 | 100.0 | 1.1 | 385 |
| Primary | 3.7 | 1.0 | 81.7 | 13.6 | 100.0 | 2.0 | 1,628 | 11.2 | 1.1 | 80.5 | 7.2 | 100.0 | 4.6 | 519 |
| Secondary | 12.2 | 0.7 | 81.8 | 5.2 | 100.0 | 5.5 | 2,370 | 14.6 | 0.8 | 83.7 | 1.0 | 100.0 | 6.1 | 932 |
| Higher | 25.0 | 2.2 | 72.8 | 0.0 | 100.0 | 12.7 | 451 | 32.3 | 0.8 | 66.5 | 0.4 | 100.0 | 15.0 | 257 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 1.2 | 0.1 | 68.2 | 30.6 | 100.0 | 0.4 | 1,414 | 6.1 | 1.5 | 84.7 | 7.7 | 100.0 | 2.9 | 362 |
| Second | 1.6 | 0.7 | 77.6 | 20.1 | 100.0 | 1.0 | 1,439 | 5.9 | 0.6 | 89.3 | 4.2 | 100.0 | 2.3 | 360 |
| Middle | 2.3 | 0.6 | 85.5 | 11.5 | 100.0 | 1.3 | 1,513 | 9.2 | 1.7 | 88.1 | 0.9 | 100.0 | 3.7 | 392 |
| Fourth | 6.5 | 0.7 | 85.6 | 7.2 | 100.0 | 2.5 | 1,526 | 15.7 | 0.0 | 81.4 | 2.8 | 100.0 | 6.7 | 452 |
| Highest | 18.2 | 1.1 | 78.2 | 2.5 | 100.0 | 8.9 | 1,728 | 25.3 | 0.8 | 73.2 | 0.7 | 100.0 | 11.4 | 527 |
| Total | 6.4 | 0.7 | 79.2 | 13.8 | 100.0 | 3.0 | 7,620 | 13.6 | 0.9 | 82.5 | 3.0 | 100.0 | 5.9 | 2,093 |

[^13]An appropriate opportunity for educating women about HIV/AIDS arises when they go for an antenatal visit during pregnancy. Table 12.7 shows the percentage of women who received any information or counselling regarding AIDS during an antenatal visit, among women who gave birth during the two years preceding the survey. Overall, almost one-quarter of women received counselling about HIV/AIDS during an antenatal care visit. A majority of women in the South East and South West (about six in ten) received AIDS counselling. Among women in other regions, those who received any information were in the minority, especially in the North East and North West, where less than two in ten women received counselling about HIV/AIDS regarding AIDS. The percentage of women who received information or counseling during an antenatal care visit rises steadily with increasing education and increasing wealth quintile.

### 12.6 Sexual Negotiation, Attitudes, and Communication

In an effort to assess the ability of women to negotiate safer sex with a spouse who has a sexually transmitted infection (STI), all respondents were asked two attitudinal questions. They were asked whether a wife is justified in refusing to have sex with her husband if she knows her husband has an STI and whether such a wife is justified in asking that her husband use a condom. Overall, about nine in ten Nigerians report that a woman may either refuse to have sex with her husband or ask him to wear a condom if she knows he has an STI (Table 12.8). More men than women report that a woman is justified in either behaviour, although both men and women are more likely to report that a woman may refuse to have sex than to propose using a condom. While there is no particular pattern in attitudes by education, the percentage of people who believe that a woman can propose condom use increases with increasing the education. Regions in which people are the least likely to believe a woman can propose condom use are in South South among men and in the North Central among women.


Men's attitudes towards condoms directly affect their inclination to use them. Men were asked whether they agree with a series of statements regarding condoms; results are presented in Table 12.9. Thirty percent of men agreed with the statement that condoms are inconvenient to use, and thirty-seven percent agreed with the statement that condoms reduce sexual pleasure. Most men know that condoms cannot be reused, although one-quarter agreed with the statement that condoms break easily. Thirty percent of men agreed with the statement that a woman has no right to tell a man to use a condom. Sixtythree percent of men agree with the statement that a condom protects against disease. These questions were asked regardless of whether or not the respondent had ever used a condom.

Table 12.9 Men's attitude toward condoms
Percentage of men who agree with specific statements about condoms, by background characteristics, Nigeria 2003

| Background characteristic | Percentage of men who agree with the following statements: |  |  |  |  |  |  | Number of men |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Condoms diminish a man's sexual pleasure | A condom is very inconvenient to use | A condom can be reused | A condom protects against disease | A woman has no right to tell a man to use a condom | Condoms break easily | Condoms are expensive |  |
| Age |  |  |  |  |  |  |  |  |
| 15-19 | 23.5 | 16.4 | 5.8 | 46.4 | 23.9 | 16.1 | 6.9 | 453 |
| 20-24 | 38.1 | 30.0 | 9.8 | 68.1 | 37.1 | 23.3 | 10.9 | 426 |
| 25-29 | 47.6 | 38.5 | 9.4 | 74.4 | 33.4 | 31.8 | 16.9 | 328 |
| 30-39 | 42.8 | 36.1 | 8.6 | 69.9 | 28.5 | 30.2 | 10.1 | 519 |
| 40-49 | 37.2 | 27.7 | 7.9 | 58.5 | 26.2 | 20.4 | 6.7 | 367 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 36.0 | 26.3 | 7.1 | 67.8 | 26.3 | 24.3 | 7.7 | 792 |
| Rural | 38.3 | 31.4 | 9.0 | 60.4 | 31.6 | 24.3 | 11.4 | 1,301 |
| Region |  |  |  |  |  |  |  |  |
| North Central | 32.9 | 24.2 | 6.6 | 68.7 | 15.0 | 20.2 | 7.7 | 313 |
| North East | 42.5 | 32.3 | 3.1 | 59.4 | 25.5 | 19.6 | 5.0 | 377 |
| North West | 52.1 | 53.3 | 23.1 | 76.0 | 72.8 | 39.0 | 18.9 | 529 |
| South East | 34.2 | 19.9 | 1.4 | 51.5 | 10.0 | 27.4 | 19.1 | 192 |
| South South | 27.8 | 15.6 | 3.2 | 50.7 | 11.7 | 17.9 | 4.2 | 385 |
| South West | 24.2 | 13.2 | 1.1 | 63.1 | 9.2 | 14.6 | 4.9 | 296 |
| Education |  |  |  |  |  |  |  |  |
| No education | 36.6 | 36.0 | 14.7 | 52.5 | 44.2 | 22.1 | 12.8 | 385 |
| Primary | 36.2 | 30.6 | 8.1 | 59.8 | 33.2 | 24.0 | 9.8 | 519 |
| Secondary | 35.9 | 25.6 | 6.3 | 64.8 | 24.1 | 23.9 | 8.5 | 932 |
| Higher | 46.8 | 31.6 | 6.0 | 79.9 | 20.6 | 29.6 | 11.7 | 257 |
| Condom use |  |  |  |  |  |  |  |  |
| Used at last sex | 47.5 | 27.3 | 5.4 | 96.5 | 20.2 | 26.2 | 13.6 | 253 |
| Ever used (not at last sex) | 65.8 | 41.3 | 6.5 | 93.0 | 19.6 | 39.0 | 11.5 | 310 |
| Never used | 30.0 | 27.5 | 9.1 | 51.6 | 33.2 | 21.0 | 9.1 | 1,530 |
| Marital status |  |  |  |  |  |  |  |  |
| Never married | 32.5 | 24.2 | 6.4 | 59.4 | 26.3 | 20.4 | 9.0 | 1,048 |
| Ever had sex | 46.9 | 31.0 | 7.2 | 76.6 | 21.2 | 25.4 | 12.0 | 489 |
| Never had sex | 19.9 | 18.2 | 5.7 | 44.3 | 30.7 | 16.0 | 6.4 | 559 |
| Married or living together | 42.3 | 35.1 | 10.1 | 66.4 | 33.4 | 28.3 | 11.2 | 1,006 |
| Divorced/separated/ widowed | (44.3) | (27.2) | (11.3) | (81.4) | (20.1) | (25.3) | (6.5) | 40 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 33.5 | 29.1 | 13.7 | 49.7 | 33.5 | 24.4 | 14.0 | 362 |
| Second | 39.8 | 33.0 | 11.1 | 59.7 | 38.7 | 26.2 | 11.4 | 360 |
| Middle | 43.9 | 38.6 | 8.1 | 70.9 | 41.1 | 26.4 | 11.8 | 392 |
| Fourth | 33.6 | 27.6 | 5.6 | 63.3 | 25.9 | 19.9 | 5.2 | 452 |
| Highest | 37.0 | 22.2 | 5.0 | 68.8 | 15.3 | 25.2 | 9.2 | 527 |
| Total | 37.4 | 29.5 | 8.3 | 63.2 | 29.6 | 24.3 | 10.0 | 2,093 |

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

In addition to asking about attitudes, the 2003 NDHS also directly asked respondents whether or not they have ever discussed ways to prevent getting the virus that causes AIDS with their partners. Table 12.10 presents these data for women and men who are currently married or living with a partner. Nationally, 36 percent of married women and 58 percent of married men say that they have discussed prevention of AIDS with their partners. In all regions, percentages reporting AIDS prevention discussion with their partners are higher among men than among women.

Although discussion of AIDS with partners is far from universal, Nigerians are accepting of communication regarding AIDS. Nine in ten Nigerians report that discussion of AIDS in the media and other venues is acceptable (data not shown). This is true for women and men and across educational and regional characteristics. People overwhelmingly approve (over 90 percent) discussion of AIDS in the newspaper, on the radio, on television, in churches, in mosques, at home, and in schools.

| Table 12.10 Discussion of HIV/AIDS with partner |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percent distribution of women and men who are currently married or living with a partner by whether they ever discussed HIV/AIDS prevention with their husband/partner, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Women |  |  |  |  |  | Men |  |  |  |  |  |
| Background characteristic | Ever discussed HIV/AIDS prevention | Never discussed HIV/AIDS prevention | Don't know/ missing | Has not heard of AIDS | Total | Number of women | Ever discussed HIV/AIDS prevention | Never discussed HIV/AIDS prevention | Don't know/ missing | Has not heard of AIDS | Total | Number of men |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 23.6 | 55.9 | 0.4 | 20.1 | 100.0 | 545 | * | * | * | * | * | 5 |
| 20-24 | 36.6 | 47.2 | 0.3 | 15.8 | 100.0 | 911 | 52.3 | 44.3 | 0.0 | 3.4 | 100.0 | 60 |
| 25-29 | 43.1 | 44.9 | 0.5 | 11.5 | 100.0 | 1,146 | 50.7 | 48.5 | 0.0 | 0.8 | 100.0 | 142 |
| 30-39 | 36.9 | 50.4 | 0.3 | 12.4 | 100.0 | 1,611 | 61.4 | 37.4 | 0.2 | 1.1 | 100.0 | 447 |
| 40-49 | 34.2 | 48.5 | 0.6 | 16.7 | 100.0 | 1,123 | 57.0 | 40.7 | 0.2 | 2.2 | 100.0 | 352 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 50.2 | 44.9 | 0.8 | 4.1 | 100.0 | 1,633 | 68.1 | 31.6 | 0.2 | 0.0 | 100.0 | 327 |
| Rural | 30.1 | 50.6 | 0.3 | 19.1 | 100.0 | 3,703 | 52.5 | 45.1 | 0.1 | 2.4 | 100.0 | 679 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 38.6 | 43.2 | 0.0 | 18.2 | 100.0 | 754 | 60.2 | 35.2 | 0.0 | 4.6 | 100.0 | 139 |
| North East | 23.7 | 52.2 | 0.1 | 24.1 | 100.0 | 1,122 | 45.0 | 53.2 | 0.1 | 1.7 | 100.0 | 241 |
| North West | 26.0 | 59.4 | 0.9 | 13.7 | 100.0 | 1,880 | 52.8 | 46.8 | 0.2 | 0.2 | 100.0 | 305 |
| South East | 61.9 | 34.6 | 0.6 | 2.8 | 100.0 | 368 | 72.9 | 26.5 | 0.6 | 0.0 | 100.0 | 85 |
| South South | 51.7 | 39.0 | 0.1 | 9.2 | 100.0 | 664 | 63.2 | 32.5 | 0.0 | 4.2 | 100.0 | 115 |
| South West | 58.1 | 34.9 | 0.5 | 6.5 | 100.0 | 548 | 75.4 | 24.6 | 0.0 | 0.0 | 100.0 | 121 |
| Education |  |  |  |  |  |  |  |  |  |  |  |  |
| No education | 21.1 | 56.7 | 0.5 | 21.8 | 100.0 | 2,877 | 41.5 | 55.5 | 0.0 | 3.1 | 100.0 | 284 |
| Primary | 42.4 | 47.1 | 0.6 | 9.9 | 100.0 | 1,175 | 55.3 | 41.9 | 0.2 | 2.5 | 100.0 | 286 |
| Secondary | 61.5 | 35.4 | 0.2 | 2.9 | 100.0 | 1,046 | 69.9 | 29.8 | 0.3 | 0.0 | 100.0 | 300 |
| Higher | 78.6 | 21.4 | 0.0 | 0.0 | 100.0 | 238 | 68.7 | 31.3 | 0.0 | 0.0 | 100.0 | 136 |
| Total | 36.2 | 48.8 | 0.4 | 14.5 | 100.0 | 5,336 | 57.6 | 40.7 | 0.1 | 1.6 | 100.0 | 1,006 |

Note: An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

### 12.7 High-Risk Sex and Condom Use

Engaging in sexual intercourse with someone other than a spouse or a partner with whom one is living is considered high-risk sexual activity in terms of transmitting an STI. If a person does have sex with a nonmarital, noncohabiting partner, the risk of contracting HIV can be reduced by using condoms. Table 12.11 shows the percentage of women and men who had sex with a partner other than with whom they are married or living, among all women and men who reported having sex at some time in the 12 months preceding the survey. Those who had engaged in sex with a nonmarital, noncohabiting partner were then asked whether they used a condom the last time they engaged in sex with such a partner.

Table 12.11 High-risk sex and condom use at last high-risk sex: women and men age 15-49
Among women and men reporting sexual activity in the past 12 months, percentage who had sex with a nonmarital, noncohabiting partner (high-risk sex) in the past 12 months, and among these women and men, percentage who say they used a condom the last time they had sex with a nonmarital, noncohabiting partner, by background characteristics, Nigeria 2003

| Background characteristic | Women |  |  |  | Men |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage engaging in highrisk sex in the past 12 months $^{1}$ | Number of women sexually active in the past 12 months | Percentage who used condom at last highrisk $\operatorname{sex}^{2}$ | Number of women who had high-risk sex in past <br> 12 months | Percentage engaging in highrisk sex in the past 12 months ${ }^{1}$ | Number of men sexually active in the past 12 months | Percentage who used condom at last highrisk sex ${ }^{2}$ | Number of men who had high-risk sex in past 12 months |


| Age |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15-19 | 34.6 | 819 | 22.0 | 283 | 94.1 | 83 | 32.8 | 78 |
| 20-24 | 25.8 | 1,167 | 26.0 | 301 | 72.4 | 218 | 53.0 | 158 |
| 25-29 | 10.6 | 1,243 | 29.3 | 131 | 55.7 | 254 | 43.8 | 141 |
| 30-39 | 4.8 | 1,579 | 14.9 | 76 | 23.3 | 477 | 48.0 | 111 |
| 40-49 | 4.0 | 1,045 | (8.3) | 42 | 14.4 | 341 | 56.9 | 49 |
| 15-24 | 29.4 | 1,987 | 24.0 | 585 | 78.4 | 301 | 46.3 | 236 |
| Marital status |  |  |  |  |  |  |  |  |
| Never married | 99.5 | 672 | 25.8 | 669 | 99.5 | 374 | 45.9 | 372 |
| Married/living together | 1.3 | 4,989 | 6.2 | 64 | 14.6 | 970 | 50.7 | 141 |
| Divorced/separated/ widowed | 52.1 | 193 | 17.5 | 101 | (81.9) | 29 | (40.4) | 23 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 19.1 | 1,939 | 30.4 | 371 | 46.3 | 479 | 59.4 | 222 |
| Rural | 11.8 | 3,915 | 17.5 | 463 | 35.3 | 894 | 38.2 | 316 |
| Region |  |  |  |  |  |  |  |  |
| North Central | 15.3 | 755 | 23.8 | 115 | 52.9 | 216 | 43.0 | 114 |
| North East | 4.3 | 1,122 | 5.7 | 48 | 31.3 | 286 | 35.2 | 90 |
| North West | 1.7 | 1,898 | (24.3) | 31 | 6.5 | 317 | (29.6) | 21 |
| South East | 30.3 | 486 | 21.9 | 147 | 44.5 | 105 | 75.6 | 47 |
| South South | 36.9 | 988 | 19.6 | 364 | 60.4 | 247 | 37.8 | 149 |
| South West | 21.1 | 605 | 40.9 | 128 | 58.0 | 201 | 63.0 | 116 |
| Education |  |  |  |  |  |  |  |  |
| No education | 2.4 | 2,795 | 4.2 | 67 | 10.6 | 293 | (23.0) | 31 |
| Primary | 11.6 | 1,209 | 10.9 | 140 | 32.0 | 354 | 33.3 | 113 |
| Secondary | 34.1 | 1,504 | 25.5 | 513 | 56.6 | 527 | 48.6 | 299 |
| Higher | 32.9 | 346 | 39.4 | 114 | 47.5 | 198 | 66.0 | 94 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 8.0 | 1,151 | 11.9 | 92 | 33.6 | 247 | 18.7 | 83 |
| Second | 8.4 | 1,176 | 11.6 | 99 | 23.0 | 244 | 34.7 | 56 |
| Middle | 11.4 | 1,145 | 14.3 | 130 | 32.6 | 269 | 47.4 | 88 |
| Fourth | 19.4 | 1,120 | 24.2 | 218 | 55.4 | 256 | 48.3 | 142 |
| Highest | 23.4 | 1,262 | 34.0 | 296 | 47.2 | 357 | 63.6 | 168 |
| Total | 14.2 | 5,855 | 23.2 | 834 | 39.1 | 1,373 | 46.9 | 537 |

Note: Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ Corresponds to UNAIDS Sexual Behaviour Indicator 1 "High-risk sex in the last year"
${ }^{2}$ Corresponds to UNAIDS Sexual Behaviour Indicator 2 "Condom use at last high-risk sex"

A larger proportion of men than women reported having had high-risk sex at some time in the past 12 months ( 39 percent of men versus 14 percent of women). Less than half of all men ( 47 percent) and less than one-quarter ( 23 percent) of women reported using a condom the last time they had sex with a nonmarital, noncohabiting partner. Fifteen percent of men who are currently married or cohabiting report having had sex with a nonmarital, noncohabiting partner in the past 12 months. The percentage of respondents who have had sex with a nonmarital, noncohabiting partner increases with increasing education for both women and men, as does the percentage who used a condom the last time they had sex with such a partner.

The prevalence of high-risk sex among sexually active young people is presented in Table 12.12, along with condom use at last high-risk sex. Overall, 29 percent of women and 78 percent of men age 1524 engaged in high-risk sex in the 12 months preceding the survey. Among young people who had highrisk sex, approximately one-quarter of women and slightly less than half of men used a condom at last high-risk sex. The percentage of young women engaging in high-risk sex increases steadily with increasing education, as does reported use of condoms. There is an insufficient number of cases of men to allow for analysis by education.

| Among women and men age 15-24 reporting sexual activity in the past 12 months, percentage who had sexual relations with a nonmarital, noncohabiting partner (high-risk sex) in the past 12 months, and among these young women and men, percentage who say they used a condom the last time they had sex with a nonmarital, noncohabiting partner, by background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Women |  |  |  | Men |  |  |  |
| Background characteristic | Percentage engaging in highrisk sex in the past 12 months | Number of women sexually active in the past 12 months | Percentage used condom at last highrisk sex ${ }^{1}$ | Number of women 15-24 who had highrisk sex in the past 12 months | Percentage engaging in highrisk sex in the past 12 months | Number of men sexually active in the past 12 months | Percentage used condom at last highrisk sex ${ }^{1}$ | Number of men 15-24 who had highrisk sex in the past 12 months |
| Age |  |  |  |  |  |  |  |  |
| 15-19 | 34.6 | 819 | 22.0 | 283 | 94.1 | 83 | 32.8 | 78 |
| 20-24 | 25.8 | 1,167 | 26.0 | 301 | 72.4 | 218 | 53.0 | 158 |
| Marital status |  |  |  |  |  |  |  |  |
| Never married | 99.7 | 533 | 25.3 | 532 | 99.2 | 232 | 46.5 | 231 |
| Ever married | 3.7 | 1,454 | (11.4) | 53 | 7.4 | 68 | * | 5 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 40.7 | 588 | 33.5 | 239 | 85.9 | 115 | 61.7 | 99 |
| Rural | 24.7 | 1,399 | 17.4 | 345 | 73.7 | 186 | 35.2 | 137 |
| Region |  |  |  |  |  |  |  |  |
| North Central | 35.1 | 252 | 20.5 | 88 | 91.7 | 59 | 41.0 | 54 |
| North East | 8.1 | 389 | (5.8) | 31 | (70.9) | 46 | (25.6) | 32 |
| North West | 2.0 | 674 | * | 13 | (19.5) | 49 | * | 9 |
| South East | 70.0 | 153 | 24.6 | 107 | (98.8) | 22 | (71.6) | 22 |
| South South | 70.6 | 364 | 19.3 | 257 | 94.5 | 70 | 39.3 | 66 |
| South West | 56.7 | 154 | 47.6 | 88 | 93.7 | 55 | 66.3 | 52 |
| Education |  |  |  |  |  |  |  |  |
| No education | 3.4 | 874 | * | 30 | (16.4) | 24 | * | 4 |
| Primary | 25.4 | 353 | 11.9 | 90 | 59.4 | 62 | (28.5) | 37 |
| Secondary | 59.8 | 687 | 25.1 | 411 | 89.8 | 192 | 45.8 | 173 |
| Higher | 75.4 | 73 | 44.1 | 55 | * | 23 | * | 22 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 16.9 | 384 | 14.0 | 65 | 64.9 | 68 | (22.8) | 44 |
| Second | 20.4 | 376 | 12.6 | 77 | 68.7 | 46 | (29.2) | 32 |
| Middle | 21.8 | 439 | 12.6 | 96 | 60.3 | 45 | (47.9) | 27 |
| Fourth | 36.1 | 422 | 24.0 | 152 | 93.9 | 69 | 47.5 | 65 |
| Highest | 53.3 | 366 | 37.5 | 195 | 93.7 | 72 | 67.7 | 68 |
| Total | 29.4 | 1,987 | 24.0 | 585 | 78.4 | 301 | 46.3 | 236 |
| Note: 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. <br> ${ }^{1}$ Corresponds to UNAIDS Young People's Sexual Behaviour Indicator 5 "Young people using a condom at last high-risk sex" |  |  |  |  |  |  |  |  |

Substantial regional variation exists among young women who are sexually active. Most young women in the South East and the South South (seven in ten) who are sexually active have sex with noncohabiting partners. Only 19 to 25 percent of these women used a condom the last time they had sex. Women in the North East and the North West who have been sexually active with a noncohabiting partner are in a small minority. Figure 12.1 shows the distribution of young people age $15-24$ with regard to sexual activity with cohabiting and noncohabiting partners. Nationally, most young women who are sexually active have a partner with whom they are living, while most young men who are sexually active are not living with their partners. On the other hand, young men who are sexually active are a smaller population than young women who are sexually active.

Figure 12.1 High-Risk Sex among Cohabiting and Noncohabiting Young Women and Men


Table 12.13 shows that 3 percent of men report having had sex with a prostitute in the 12 months preceding the survey. Approximately half ( 48 percent) of the men who had sex with a prostitute used a condom (data not shown).

| Table 12.13 Paid sex in past year |  |  |
| :---: | :---: | :---: |
| Percentage of men reporting sex with a prostitute in the past 12 months, by background characteristics, Nigeria 2003 |  |  |
| Background characteristic | Percentage reporting sex with prostitute in past 12 months ${ }^{1}$ | Number of men |
| Age |  |  |
| 15-19 | 1.8 | 453 |
| 20-24 | 3.9 | 426 |
| 25-29 | 3.3 | 328 |
| 30-39 | 3.0 | 519 |
| 40-49 | 2.5 | 367 |
| 15-24 | 2.8 | 880 |
| Marital status |  |  |
| Never married | 2.7 | 1,048 |
| Married/living together | 2.4 | 1,006 |
| Divorced/separated/ widowed | (17.9) | 40 |
| Residence |  |  |
| Urban | 1.8 | 792 |
| Rural | 3.5 | 1,301 |
| Region |  |  |
| North Central | 0.7 | 313 |
| North East | 6.3 | 377 |
| North West | 1.8 | 529 |
| South East | 2.5 | 192 |
| South South | 3.8 | 385 |
| South West | 1.7 | 296 |
| Education |  |  |
| No education | 2.9 | 385 |
| Primary | 3.2 | 519 |
| Secondary | 3.0 | 932 |
| Higher | 1.6 | 257 |
| Wealth quintile |  |  |
| Lowest | 6.5 | 362 |
| Second | 2.5 | 360 |
| Middle | 1.9 | 392 |
| Fourth | 2.2 | 452 |
| Highest | 2.0 | 527 |
| Total | 2.9 | 2,093 |
| Note: Figures in parentheses are based on 25-49 un weighted cases. <br> ${ }^{1}$ Corresponds to UNAIDS Sexual Behaviour Indicator 3 "Commercial sex in the last year" |  |  |

### 12.8 Sexual Behaviour among Young People

Promoting change in sexual behaviour is a key feature of many HIV/AIDS prevention programmes. Those who are not yet sexually active or those who have recently made their sexual debut are thought to be accepting of programmes focusing on behaviour change. Thus, the next several tables focus on young women and men age 15-24 and the sexual behaviours that affect their risk of exposure to HIV.

One of the strategies for reducing the risk of contracting an STI is for young persons to delay the age at which they become sexually active. Table 12.14 shows the percentage of young people who have had sex by exact ages 15 and 18, by background characteristics. One-fifth of women age 15-19 had sex before the age of 15 , and half of women age $20-24$ had sex by the time they were age 18 . Proportions of

| Table 12.14 Age at first sex among young women and men |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of women and men age 15-24 who have had sex by exact age 15 and 18 , by background characteristics, Nigeria 2003 |  |  |  |  |  |  |
| Background characteristic | Women |  |  | Men |  |  |
|  | Percent who had sex by exact age |  | Number of women age 15-24 | Percent who had sex by exact age |  | Number of men age 15-24 |
|  | 15 | 18 |  | 15 | 18 |  |
| Age |  |  |  |  |  |  |
| 15-17 | 21.5 | na | 988 | 5.3 | na | 237 |
| 18-19 | 18.6 | 52.2 | 728 | 10.8 | 28.8 | 216 |
| 15-19 | 20.3 | na | 1,716 | 7.9 | na | 453 |
| 20-22 | 20.3 | 53.5 | 1,061 | 5.9 | 23.8 | 298 |
| 23-24 | 23.3 | 55.6 | 433 | 3.0 | 18.8 | 128 |
| 20-24 | 21.2 | 54.1 | 1,494 | 5.1 | 22.3 | 426 |
| Marital status |  |  |  |  |  |  |
| Never married | 6.4 | na | 1,685 | 6.4 | na | 809 |
| Ever married | 36.5 | na | 1,525 | 8.3 | na | 70 |
| Residence |  |  |  |  |  |  |
| Urban | 10.7 | na | 1,093 | 5.3 | na | 351 |
| Rural | 25.8 | na | 2,117 | 7.3 | na | 529 |
| Region |  |  |  |  |  |  |
| North Central | 16.8 | na | 486 | 12.2 | na | 143 |
| North East | 31.0 | na | 543 | 3.6 | na | 118 |
| North West | 36.1 | na | 815 | 3.1 | na | 224 |
| South East | 4.3 | na | 332 | 7.5 | na | 82 |
| South South | 14.0 | na | 630 | 9.2 | na | 186 |
| South West | 4.3 | na | 405 | 4.1 | na | 127 |
| Education |  |  |  |  |  |  |
| No education | 41.5 | na | 1,008 | 4.0 | na | 100 |
| Primary | 21.3 | na | 626 | 5.4 | na | 198 |
| Secondary | 7.7 | na | 1,442 | 7.8 | na | 536 |
| Higher | 0.3 | na | 134 | 1.6 | na | 46 |
| Wealth quintile |  |  |  |  |  |  |
| Lowest | 35.2 | na | 537 | 9.4 | na | 166 |
| Second | 29.3 | na | 542 | 2.8 | na | 148 |
| Middle | 21.9 | na | 695 | 6.9 | na | 150 |
| Fourth | 17.1 | na | 707 | 7.8 | na | 224 |
| Highest | 6.0 | na | 729 | 5.1 | na | 192 |
| Total | 20.7 | na | 3,210 | 6.5 | na | 880 |

Note: Percentage who had sex by exact age 18 are not analyzed by background characteristics because respondents age 15-17 have not yet lived to age 18 and thus cannot contribute to the denominator.
na $=$ Not applicable
men who initiated sexual activity by these ages are significantly lower. Over one-third ( 37 percent) of ever-married women age 15-24 first had sex before the age of 15 . Initiation into sex at such young ages is not nearly as common among the never-married. Among the never-married, just 6 percent of both men and women had sex by age 15 . The percentage of women who had sex before age 15 declines with increasing education, from 42 percent among women with no education, to less than 1 percent among women with higher education.

The 2003 NDHS asked respondents whether or not they know of a place to obtain condoms. Table 12.15 presents statistics on whether or not young women and men age 15-24 know of at least one source, other than their family or friends. Overall, young women are less than half as likely as young men to know of a source for condoms, although there is a great deal of variation by background characteristics.

| Percentage of women and men age 15-24 who know at least one source for male condoms, Nigeria 2003 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Women |  | Men |  |
| Background characteristic | Know a source for male condoms | Number of women age 15-24 | Know a source for male condoms | Number of men age 15-24 |
| Age |  |  |  |  |
| 15-19 | 19.0 | 1,716 | 49.9 | 453 |
| 20-24 | 29.8 | 1,494 | 66.9 | 426 |
| 15-24 | 24.0 | 3,210 | 58.1 | 880 |
| Marital status |  |  |  |  |
| Never married | 33.4 | 1,685 | 59.6 | 809 |
| Ever had sex | 52.8 | 646 | 80.0 | 307 |
| Never had sex | 21.3 | 1,039 | 47.1 | 502 |
| Ever married | 13.7 | 1,525 | 41.6 | 70 |
| Residence |  |  |  |  |
| Urban | 35.2 | 1,093 | 67.0 | 351 |
| Rural | 18.3 | 2,117 | 52.2 | 529 |
| Region |  |  |  |  |
| North Central | 21.2 | 486 | 56.2 | 143 |
| North East | 10.5 | 543 | 52.9 | 118 |
| North West | 6.2 | 815 | 42.0 | 224 |
| South East | 33.9 | 332 | 77.9 | 82 |
| South South | 38.1 | 630 | 55.7 | 186 |
| South West | 51.3 | 405 | 84.4 | 127 |
| Education |  |  |  |  |
| No education | 3.5 | 1,008 | 17.5 | 100 |
| Primary | 14.8 | 626 | 37.9 | 198 |
| Secondary | 38.7 | 1,442 | 71.1 | 536 |
| Higher | 64.0 | 134 | 81.7 | 46 |
| Wealth quintile |  |  |  |  |
| Lowest | 6.7 | 537 | 35.1 | 166 |
| Second | 11.8 | 542 | 45.5 | 148 |
| Middle | 16.1 | 695 | 59.6 | 150 |
| Fourth | 30.0 | 707 | 61.8 | 224 |
| Highest | 47.5 | 729 | 82.5 | 192 |
| Total | 24.0 | 3,210 | 58.1 | 880 |

Knowledge of a source for condoms increases greatly with increasing education among both women and men. Very few young women with no education report knowing a source (4 percent), but this figure climbs to nearly two-thirds of young women with higher education knowing of a source ( 64 percent). Regional variation is also significant. Twice as many young men in the South West as in the North West know of a source ( 84 and 42 percent, respectively). Regional variation is even more dramatic among young women, ranging from 6 percent in the North West to 51 percent in the South West.

The percentage of young people who used a condom the first time they had sex is presented in Table 12.16, among those who have ever had sexual intercourse. Only 6 percent of women and 17 percent of men age $15-24$ reported using a condom the first time they had sex. Among young, never-married men, one-fifth reported using a condom the first time they had sex, even though almost half reported doing so the last time they had sex (see Table 12.17). Young women and men with higher education are the most likely to have used a condom the first time they had sex, as are women and men in the South West.

| Among women and men age 15-24 who have ever had sex, percentage who used a condom the first time they ever had sex, by background characteristics Nigeria 2003 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Women |  | Men |  |
| Background characteristic | Used a condom at first sex ${ }^{1}$ | Number of women age 15-24 who have ever had sex | Used a condom at first sex ${ }^{1}$ | Number of men age 15-24 who have ever had sex |
| Age |  |  |  |  |
| 15-19 | 6.5 | 877 | 10.6 | 112 |
| 20-24 | 6.4 | 1,291 | 19.6 | 265 |
| Marital status |  |  |  |  |
| Never married | 17.6 | 646 | 20.2 | 307 |
| Ever married | 1.7 | 1,523 | 2.8 | 70 |
| Residence |  |  |  |  |
| Urban | 12.1 | 654 | 27.3 | 139 |
| Rural | 4.0 | 1,514 | 10.9 | 239 |
| Region |  |  |  |  |
| North Central | 7.1 | 301 | 12.4 | 74 |
| North East | 0.5 | 411 | 8.2 | 56 |
| North West | 0.6 | 690 | 6.4 | 56 |
| South East | 16.9 | 169 | 27.5 | 36 |
| South South | 8.0 | 407 | 11.5 | 89 |
| South West | 26.5 | 191 | 39.9 | 66 |
| Education |  |  |  |  |
| No education | 0.3 | 909 | (0.0) | 32 |
| Primary | 3.0 | 400 | 8.7 | 78 |
| Secondary | 11.8 | 775 | 17.0 | 242 |
| Higher | 39.3 | 85 | (62.1) | 26 |
| Wealth quintile |  |  |  |  |
| Lowest | 2.0 | 417 | 7.7 | 84 |
| Second | 1.5 | 405 | 8.3 | 52 |
| Middle | 2.4 | 474 | 10.5 | 61 |
| Fourth | 6.8 | 451 | 18.3 | 87 |
| Highest | 19.8 | 421 | 33.0 | 94 |
| Total | 6.4 | 2,169 | 16.9 | 378 |

Note: Figures in parentheses are based on 25-49 unweighted cases.
${ }^{1}$ Corresponds to UNAIDS Young People's Sexual Behaviour Indicator 6 "Condom use at first sex"

Table 12.17 presents the percentage of never-married young women and men who had sex in the 12 months preceding the survey, as well as the percentage who used a condom the last time they had sex. Three out of ten never-married respondents age 15-24 had sex in the past 12 months ( 32 percent of women and 29 percent of men). About half of the men reported using a condom during last sexual intercourse, and one-quarter of the women reported doing so. There are no urban-rural differences among young persons as to whether or not they have had premarital sex, but urban women and men are about twice as likely to have used a condom the last time they had sex.

Table 12.17 Prevalence of premarital sex in the past year and use of a condom during premarital sex among young women and men
Among never-married women and men age 15-24, percentage who had sex in the past 12 months, and, among those who had premarital sex in the past 12 months, percentage who used a condom at last sex, by background characteristics, Nigeria 2003

| Background characteristic | Never-married women |  |  |  | Never-married men |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Had sex in past 12 months ${ }^{1}$ | Number of nevermarried women 15-24 | Used condom at last $\operatorname{sex}^{2}$ | Number of women 15-24 sexually active in the past 12 months | Had sex in past 12 months ${ }^{1}$ | Number of nevermarried men 15-24 | Used condom at last $s e x^{2}$ | Number of men $15-24$ sexually active in the past 12 months |
| Age |  |  |  |  |  |  |  |  |
| 15-19 | 23.3 | 1,145 | 23.0 | 267 | 17.4 | 448 | 32.8 | 78 |
| 20-24 | 49.4 | 540 | 27.0 | 267 | 42.8 | 361 | 53.7 | 154 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 31.1 | 708 | 35.9 | 220 | 29.4 | 332 | 63.6 | 98 |
| Rural | 32.0 | 977 | 17.4 | 313 | 28.2 | 477 | 34.3 | 135 |
| Region |  |  |  |  |  |  |  |  |
| North Central | 29.0 | 282 | 21.2 | 82 | 38.7 | 138 | 41.5 | 53 |
| North East | 15.0 | 162 | (6.6) | 24 | 29.6 | 103 | (27.2) | 30 |
| North West | 5.4 | 136 | * | 7 | 4.9 | 184 | * | 9 |
| South East | 37.1 | 282 | 24.1 | 104 | 26.8 | 82 | (71.6) | 22 |
| South South | 46.8 | 497 | 19.2 | 233 | 36.6 | 182 | 39.0 | 67 |
| South West | 25.3 | 326 | 50.5 | 83 | 42.3 | 121 | 65.8 | 51 |
| Education |  |  |  |  |  |  |  |  |
| No education | 16.9 | 119 | * | 20 | 2.9 | 78 | * | 2 |
| Primary | 24.3 | 329 | 11.1 | 80 | 20.8 | 171 | (24.2) | 35 |
| Secondary | 33.9 | 1,124 | 25.7 | 381 | 33.5 | 515 | 46.6 | 172 |
| Higher | 46.0 | 113 | 46.4 | 52 | 48.9 | 46 | * | 22 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 28.9 | 188 | 14.1 | 54 | 30.6 | 142 | (23.0) | 43 |
| Second | 31.7 | 221 | 13.8 | 70 | 23.9 | 134 | (29.2) | 32 |
| Middle | 26.5 | 325 | 10.8 | 86 | 20.1 | 132 | (46.5) | 26 |
| Fourth | 33.8 | 405 | 24.5 | 137 | 28.8 | 217 | 47.4 | 62 |
| Highest | 34.1 | 545 | 39.4 | 186 | 36.8 | 186 | 69.2 | 68 |
| Total | 31.6 | 1,685 | 25.0 | 533 | 28.7 | 809 | 46.7 | 232 |

Note: 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.
${ }^{1}$ Corresponds to UNAIDS Young People's Sexual Behaviour Indicator 2 "Young people having premarital sex"
${ }^{2}$ Corresponds to UNAIDS Young People's Sexual Behaviour Indicator 3 "Young people using a condom during premarital sex"

Age-mixing in sexual relationships is a major factor in the spread of HIV/AIDS. If a younger, uninfected partner has sex with an older, infected partner, this can introduce the virus into a younger, uninfected cohort. Table 12.18 shows the percentage of teenage women who had a partner ten or more years their senior. One in five women age $15-17$ who have had high-risk sexual intercourse did so with someone ten or more years their senior.

| Table 12.18 Age mixing in sexual relationships |  |  |
| :---: | :---: | :---: |
| Among women age 15-19 who had nonmarital sex in the past12 months, percentage who had nonmarital sex with a man 10 |  |  |
|  |  |  |
| or more years older than themselves, by background characteristics, Nigeria 2003 |  |  |
|  |  | Number of |
|  | Percentage who had | women age 15-19 who had |
|  | nonmarital | nonmarital |
|  | sex with | sex in |
| Background | a man 10+ | the past |
| characteristic | years older ${ }^{1}$ | 12 months |
| Age |  |  |
| 15-17 | 21.3 | 122 |
| 18-19 | 4.2 | 161 |
| Marital status |  |  |
| Never married | 10.3 | 265 |
| Ever married | * | 18 |
| Residence |  |  |
| Urban | 14.7 | 110 |
| Rural | 9.6 | 173 |
| Region |  |  |
| North Central | (25.5) | 45 |
| North East | * | 13 |
| North West | * | 5 |
| South East | 12.8 | 55 |
| South South | 8.7 | 133 |
| South West | (4.2) | 33 |
| Education |  |  |
| No education | * | 14 |
| Primary | (12.2) | 48 |
| Secondary | 12.2 | 211 |
| Higher | , | 11 |
| Wealth quintile |  |  |
| Lowest | (10.1) | 29 |
| Second | (3.3) | 42 |
| Middle | (10.8) | 46 |
| Fourth | 19.0 | 79 |
| Highest | 9.8 | 86 |
| Total | 11.6 | 283 |
| Note: 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. <br> Corresponds to UNAIDS Young People's Sexual Behaviour Indicator 7 "Age-mixing in sexual relationships" (among the last three partners in the past 12 months) |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Those who are sexually active can reduce their risk of exposure to HIV by limiting the number of partners with whom they engage in sexual contact. Table 12.19 shows the percentage of women and men age 15-24 who have had sex with more than one partner in the past 12 months. The percentage of young people with multiple partners is fairly low. Overall, 2 percent of women and 8 percent of men age 15-24 have had sex with more than one person in the past 12 months. Differentials by region are more marked: 7 percent of women in the South South and 16 percent of men in the North East have had more than one partner.

| Among women and men age 15-24, percentage who have had sex with more than one partner in the past 12 months, by background characteristics, Nigeria 2003 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Women |  | Men |  |
| Background characteristic | Percentage who had $2+$ partners in the past 12 months ${ }^{1}$ | Number <br> of <br> women age 15-24 | Percentage who had $2+$ partners in the past 12 months ${ }^{1}$ | $\begin{aligned} & \text { Number } \\ & \text { of } \\ & \text { men } \\ & \text { age } 15-24 \end{aligned}$ |
| Age |  |  |  |  |
| 15-19 | 0.9 | 1,716 | 4.9 | 453 |
| 20-24 | 3.8 | 1,494 | 12.2 | 426 |
| Marital status |  |  |  |  |
| Never married | 2.9 | 1,685 | 8.8 | 809 |
| Ever married | 1.5 | 1,525 | 4.4 | 70 |
| Residence |  |  |  |  |
| Urban | 2.5 | 1,093 | 7.2 | 351 |
| Rural | 2.1 | 2,117 | 9.3 | 529 |
| Region |  |  |  |  |
| North Central | 1.1 | 486 | 9.0 | 143 |
| North East | 1.2 | 543 | 15.8 | 118 |
| North West | 0.6 | 815 | 1.8 | 224 |
| South East | 1.5 | 332 | 6.7 | 82 |
| South South | 7.2 | 630 | 9.9 | 186 |
| South West | 1.1 | 405 | 11.6 | 127 |
| Education |  |  |  |  |
| No education | 0.9 | 1,008 | 1.3 | 100 |
| Primary | 1.7 | 626 | 5.3 | 198 |
| Secondary | 3.0 | 1,442 | 10.7 | 536 |
| Higher | 6.7 | 134 | 11.1 | 46 |
| Wealth quintile |  |  |  |  |
| Lowest | 1.9 | 537 | 9.5 | 166 |
| Second | 1.5 | 542 | 10.3 | 148 |
| Middle | 2.0 | 695 | 6.4 | 150 |
| Fourth | 2.9 | 707 | 6.5 | 224 |
| Highest | 2.6 | 729 | 9.8 | 192 |
| Total | 2.2 | 3,210 | 8.4 | 880 |
| ${ }^{1}$ Corresponds to UNAIDS Young People's Sexual Behaviour Indicator 4 "Young people having multiple partners in last year" |  |  |  |  |

Figure 12.2 shows the distribution of young people age $15-24$ by the number of partners they had in the past 12 months and by whether or not they used a condom. Seven percent of men age 20-24 had sex with more than one partner and did not use a condom the last time they had sex; this is true for only 3 percent of women age 20-24. Two-thirds of women age 20-24 did not use a condom the last time they had sex, but they had sex with only one partner in the past 12 months. Nearly 40 percent of men age 20-24 reported that they had never had sex, and an additional 11 percent had had sex, but not in the past 12 months.

Figure 12.2 Abstinence, Being Faithful, and Using Condoms Among Young Women and Men


### 12.9 Sexually Transmitted Infections

It is important for people experiencing symptoms of STIs to be able to recognize them and seek appropriate treatment. People who do not know the symptoms may fail to recognize that they need treatment and, consequently, may not seek help. All 2003 NDHS respondents were asked whether they had ever heard about infections other than HIV that can be transmitted through sexual contact. Those who had heard of an STI were then asked to state what symptoms a man or a woman with an STI (other than HIV) might have.

Table 12.20 .1 shows that 55 percent of women have never heard of STIs. One-fifth of all women could identify a symptom a man might have, and one-fifth could identify a symptom a woman might have. Knowledge of STIs among men is higher. Most men have heard of an STI (71 percent), although not all who have heard of STIs could identify a symptom a man or woman with an STI might experience. Thirty-five percent of all men could identify a symptom a man might experience, and 18 percent could identify a symptom a woman might experience (Table 12.20.2). Knowledge of symptoms rises with increasing education and increasing household economic status (higher wealth quintiles) among both women and men.

All 2003 NDHS respondents who had ever had sex were asked whether they had an STI in the past 12 months. They were also asked whether they had experienced any abnormal genital discharge or a genital sore or ulcer in the past 12 months. These data are likely to underestimate the true prevalence of STIs for a number of reasons. For example, if symptoms are not obvious or prolonged, they may not be recognized as an STI. Furthermore, even if a respondent knows that she or he has an STI, the respondent may be reluctant to report it, because of embarrassment or presumed stigma associated with such infections.

| Percentage of women with knowledge of symptoms associated with sexually transmitted infections (STIs) in a man and in a woman, by background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Knowledge of symptoms of STIs in a man |  |  |  | Knowledge of symptoms of STIs in a woman |  |  |  |  |
| Background characteristic | No knowledge of STIs | No symptoms mentioned | One symptom mentioned | Two or more symptoms mentioned | Missing | No symptoms mentioned | One symptom mentioned | Two or more symptoms mentioned | Missing | Number of women |
| Age |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 70.8 | 13.1 | 7.3 | 8.7 | 0.0 | 14.9 | 5.8 | 8.5 | 0.0 | 1,716 |
| 20-24 | 53.4 | 18.0 | 11.1 | 17.5 | 0.1 | 19.6 | 8.9 | 18.1 | 0.1 | 1,494 |
| 25-29 | 46.1 | 16.3 | 12.4 | 25.1 | 0.1 | 15.9 | 11.7 | 26.2 | 0.1 | 1,382 |
| 30-39 | 51.6 | 14.0 | 12.5 | 21.9 | 0.0 | 13.8 | 12.0 | 22.6 | 0.0 | 1,757 |
| 40-49 | 51.5 | 13.0 | 11.6 | 23.9 | 0.0 | 14.4 | 9.0 | 25.2 | 0.0 | 1,271 |
| Marital status |  |  |  |  |  |  |  |  |  |  |
| Never married | 52.1 | 19.5 | 12.5 | 15.9 | 0.0 | 22.2 | 9.5 | 16.1 | 0.0 | 1,926 |
| Ever had sex | 32.2 | 27.9 | 17.3 | 22.6 | 0.0 | 31.5 | 12.5 | 23.7 | 0.0 | 838 |
| Never had sex | 67.4 | 13.0 | 8.8 | 10.8 | 0.0 | 15.0 | 7.3 | 10.3 | 0.0 | 1,087 |
| Married or living together | 57.2 | 13.1 | 10.1 | 19.7 | 0.0 | 13.3 | 9.2 | 20.3 | 0.0 | 5,336 |
| Divorced/separated/ widowed | 44.1 | 16.3 | 14.6 | 25.0 | 0.0 | 14.9 | 12.2 | 28.8 | 0.0 | 358 |
| Residence |  |  |  |  |  |  |  |  |  |  |
| Urban | 45.8 | 17.4 | 13.6 | 23.1 | 0.0 | 18.8 | 12.1 | 23.3 | 0.0 | 2,629 |
| Rural | 60.3 | 13.5 | 9.5 | 16.8 | 0.0 | 14.0 | 8.0 | 17.7 | 0.0 | 4,991 |
| Region |  |  |  |  |  |  |  |  |  |  |
| North Central | 55.4 | 16.6 | 9.3 | 18.6 | 0.0 | 17.8 | 8.3 | 18.4 | 0.0 | 1,121 |
| North East | 71.1 | 6.9 | 3.9 | 18.1 | 0.0 | 5.9 | 3.7 | 19.2 | 0.0 | 1,368 |
| North West | 71.4 | 6.5 | 6.6 | 15.4 | 0.1 | 6.1 | 5.7 | 16.8 | 0.1 | 2,095 |
| South East | 38.0 | 28.7 | 13.4 | 19.8 | 0.0 | 25.8 | 12.0 | 24.2 | 0.0 | 737 |
| South South | 35.0 | 22.8 | 19.2 | 23.0 | 0.0 | 27.7 | 12.9 | 24.5 | 0.0 | 1,342 |
| South West | 39.0 | 20.5 | 18.5 | 22.1 | 0.0 | 23.4 | 20.1 | 17.5 | 0.0 | 958 |
| Education |  |  |  |  |  |  |  |  |  |  |
| No education | 74.3 | 7.1 | 5.5 | 13.0 | 0.1 | 6.7 | 5.1 | 13.8 | 0.1 | 3,171 |
| Primary | 53.4 | 16.6 | 11.1 | 18.9 | 0.0 | 16.6 | 10.3 | 19.7 | 0.0 | 1,628 |
| Secondary | 39.9 | 22.2 | 16.1 | 21.8 | 0.0 | 25.2 | 13.0 | 21.9 | 0.0 | 2,370 |
| Higher | 8.4 | 23.7 | 21.2 | 46.7 | 0.0 | 25.1 | 18.0 | 48.4 | 0.0 | 451 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |
| Lowest | 69.4 | 9.7 | 8.2 | 12.7 | 0.0 | 8.9 | 7.6 | 14.1 | 0.0 | 1,414 |
| Second | 66.2 | 12.1 | 6.3 | 15.3 | 0.1 | 12.2 | 6.1 | 15.4 | 0.1 | 1,439 |
| Middle | 62.6 | 12.4 | 8.5 | 16.4 | 0.0 | 13.8 | 6.9 | 16.7 | 0.0 | 1,513 |
| Fourth | 51.6 | 14.7 | 12.7 | 21.1 | 0.0 | 15.3 | 11.0 | 22.1 | 0.0 | 1,526 |
| Highest | 31.5 | 23.6 | 17.3 | 27.6 | 0.0 | 26.0 | 14.4 | 28.1 | 0.0 | 1,728 |
| Total | 55.3 | 14.8 | 10.9 | 19.0 | 0.0 | 15.7 | 9.4 | 19.6 | 0.0 | 7,620 |

Table 12.20.2 Knowledge of symptoms of STIs: men
Percentage of men with knowledge of symptoms associated with sexually transmitted infections (STIs) in a man and in a woman, by background characteristics, Nigeria 2003

| Background characteristic | No knowledge of STIs | Knowledge of symptoms of STIs in a man |  |  | Knowledge of symptoms of STIs in a woman |  |  | Number of men |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | No symptoms mentioned | One symptom mentioned | Two or more symptoms mentioned | No symptoms mentioned | One symptom mentioned | Two or more symptoms mentioned |  |
| Age |  |  |  |  |  |  |  |  |
| 15-19 | 54.2 | 16.2 | 16.4 | 13.2 | 29.8 | 9.2 | 6.8 | 453 |
| 20-24 | 32.5 | 19.5 | 17.2 | 30.8 | 42.9 | 7.5 | 17.1 | 426 |
| 25-29 | 19.4 | 17.9 | 23.7 | 39.0 | 52.5 | 10.5 | 17.6 | 328 |
| 30-39 | 17.1 | 14.3 | 18.9 | 49.6 | 43.3 | 13.9 | 25.8 | 519 |
| 40-49 | 17.9 | 18.2 | 18.9 | 44.9 | 47.2 | 11.3 | 23.5 | 367 |
| Marital status |  |  |  |  |  |  |  |  |
| Never married | 35.8 | 18.0 | 17.9 | 28.2 | 41.0 | 9.1 | 14.1 | 1,048 |
| Ever had sex | 15.8 | 18.9 | 22.1 | 43.3 | 51.3 | 12.5 | 20.4 | 489 |
| Never had sex | 53.3 | 17.3 | 14.3 | 15.0 | 31.9 | 6.1 | 8.6 | 559 |
| Married or living together | 22.2 | 16.3 | 19.6 | 42.0 | 43.6 | 11.9 | 22.4 | 1,006 |
| Divorced/separated/ widowed | (10.0) | (10.0) | (20.7) | (59.4) | (50.9) | (17.0) | (22.1) | 40 |
| Residence |  |  |  |  |  |  |  |  |
| Urban | 26.5 | 18.0 | 21.0 | 34.4 | 46.7 | 11.1 | 15.6 | 792 |
| Rural | 30.1 | 16.4 | 17.4 | 36.0 | 39.8 | 10.3 | 19.8 | 1,301 |
| Region |  |  |  |  |  |  |  |  |
| North Central | 21.9 | 12.3 | 20.0 | 45.7 | 41.5 | 12.1 | 24.5 | 313 |
| North East | 41.6 | 6.2 | 16.1 | 36.0 | 24.9 | 10.3 | 23.2 | 377 |
| North West | 38.2 | 16.9 | 19.1 | 25.8 | 37.7 | 9.3 | 14.8 | 529 |
| South East | 14.2 | 21.5 | 17.2 | 47.1 | 45.7 | 3.9 | 36.2 | 192 |
| South South | 24.0 | 25.6 | 13.7 | 36.7 | 56.2 | 9.9 | 9.9 | 385 |
| South West | 18.3 | 21.9 | 28.0 | 31.8 | 54.1 | 17.0 | 10.5 | 296 |
| Education |  |  |  |  |  |  |  |  |
| No education | 45.6 | 15.0 | 15.5 | 23.9 | 34.4 | 8.9 | 11.0 | 385 |
| Primary | 32.9 | 14.7 | 18.7 | 33.7 | 37.4 | 11.6 | 18.1 | 519 |
| Secondary | 24.8 | 18.2 | 19.9 | 37.1 | 45.9 | 9.8 | 19.4 | 932 |
| Higher | 9.4 | 20.6 | 19.9 | 50.2 | 51.7 | 13.9 | 25.0 | 257 |
| Wealth quintile |  |  |  |  |  |  |  |  |
| Lowest | 40.3 | 16.5 | 16.8 | 26.3 | 38.0 | 9.3 | 12.4 | 362 |
| Second | 37.5 | 14.6 | 16.8 | 31.1 | 33.7 | 13.4 | 15.3 | 360 |
| Middle | 30.6 | 13.2 | 22.1 | 34.1 | 41.8 | 9.2 | 18.4 | 392 |
| Fourth | 27.5 | 15.1 | 16.3 | 41.1 | 40.9 | 9.5 | 22.1 | 452 |
| Highest | 14.6 | 23.6 | 21.1 | 40.8 | 53.2 | 11.5 | 20.8 | 527 |
| Total | 28.8 | 17.0 | 18.8 | 35.4 | 42.4 | 10.6 | 18.2 | 2,093 |

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

Overall, 1 percent of women and 3 percent of men reported having had an STI in the 12 months preceding the survey (Table 12.21). The percentage who reported having either an STI or one of the two STI symptoms is slightly higher: 5 percent of both women and men. Never-married women and men reported higher levels than the national average. Eight percent of never-married women and 7 percent of never-married men report having had an STI or symptom.


Treatment and prevention behaviours of those who have experienced STIs are important factors in controlling the spread of STIs. Respondents who reported having an STI or abnormal genital discharge, genital sores, or ulcers in the past 12 months were asked whether they sought treatment. The results are presented in Table 12.22. Two out of three women did seek treatment, as did four out offive men; however, not everyone approached a health professional. Only 40 percent of women and 30 percent of men with an STI or symptom sought assistance from a clinic, hospital, or health professional.

| Table 12.22 Women and men seeking treatment for STIs |  |  |
| :---: | :---: | :---: |
| Percentage of women and men reporting an STI or symptoms of an STI in the past 12 months who sought care, by source of advice or treatment, Nigeria 2003 |  |  |
| Source of advice or treatment | Women | Men |
| Clinic/hospital/health professional ${ }^{1}$ | 40.4 | 30.6 |
| Traditional healer | 15.3 | 43.2 |
| Advice or medicine from shop/pharmacy | 31.3 | 54.7 |
| Advice from friends/relatives | 22.3 | 42.0 |
| Advice or treatment from any source | 67.6 | 82.7 |
| No advice or treatment | 32.4 | 17.3 |
| Number with STI and/or symptoms of STI | 297 | 69 |
| Note: Symptoms of an STI are an abnormal genital discharge, a genital sore, or a genital ulcer. <br> ${ }^{1}$ Corresponds to UNAIDS STI Service Indicator 4 "Men and women seeking treatment for STIs" |  |  |

### 12.10 ORPHANHOOD

Repercussions of HIV infection are not limited to the persons directly infected with the virus. Children of infected parents will eventually become orphans in need of new caretakers. When a household takes in a child who has been orphaned, there are more people over whom the resources of the household have to be spread. Table 12.23 presents data on the prevalence of orphanhood in Nigeria. Overall, fewer than 1 percent of children have lost both parents; however, 6 percent of children under age 15 have lost at least one parent. Eleven percent of children in the South East have lost one or both par-ents-the highest prevalence in the country. Nationwide, 11 percent of children under age 15 are living with neither their mother nor their father; prevalence climbs to 18 percent among children age 10-14.

Table 12.23 Orphanhood and children's living arrangements
Percent distribution of de jure children under age 15 by survival status of parents and children's living arrangements, according to background characteristics, Nigeria 2003

| Background characteristic | Both parents dead | Mother dead | Father dead | Both parents alive | Missing information on father/ mother | Total | Mother, father or both dead ${ }^{1}$ | Not living with either parent | Living with mother | Living with father | Living with both parents | Total | Number of children |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0-1 | 0.0 | 0.1 | 0.5 | 99.1 | 0.4 | 100.0 | 0.6 | 1.1 | 12.2 | 1.0 | 85.6 | 100.0 | 2,479 |
| 2-4 | 0.2 | 0.7 | 1.5 | 96.9 | 0.7 | 100.0 | 2.5 | 6.8 | 10.5 | 3.0 | 79.7 | 100.0 | 3,421 |
| 5-9 | 0.6 | 2.3 | 3.7 | 92.5 | 1.0 | 100.0 | 6.6 | 12.0 | 9.0 | 6.8 | 72.2 | 100.0 | 5,262 |
| 10-14 | 1.2 | 3.9 | 6.7 | 85.8 | 2.4 | 100.0 | 11.8 | 18.3 | 11.2 | 9.7 | 60.8 | 100.0 | 4,415 |
| 0-14 | 0.6 | 2.0 | 3.6 | 92.6 | 1.2 | 100.0 | 6.2 | 10.9 | 10.5 | 5.9 | 72.7 | 100.0 | 15,577 |
| Sex |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Male | 0.7 | 2.3 | 3.6 | 92.3 | 1.2 | 100.0 | 6.6 | 10.4 | 10.4 | 6.8 | 72.4 | 100.0 | 7,928 |
| Female | 0.5 | 1.8 | 3.6 | 92.9 | 1.2 | 100.0 | 5.8 | 11.4 | 10.5 | 4.9 | 73.1 | 100.0 | 7,649 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 0.6 | 2.2 | 4.3 | 92.3 | 0.7 | 100.0 | 7.1 | 13.3 | 12.5 | 6.0 | 68.2 | 100.0 | 4,981 |
| Rural | 0.6 | 2.0 | 3.3 | 92.7 | 1.5 | 100.0 | 5.8 | 9.8 | 9.5 | 5.8 | 74.9 | 100.0 | 10,596 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 0.5 | 1.8 | 4.8 | 91.9 | 1.1 | 100.0 | 7.1 | 11.1 | 12.8 | 5.6 | 70.4 | 100.0 | 2,432 |
| North East | 0.6 | 1.7 | 2.5 | 94.4 | 0.7 | 100.0 | 4.8 | 9.8 | 5.9 | 7.4 | 77.0 | 100.0 | 3,330 |
| North West | 0.6 | 1.5 | 2.1 | 94.7 | 1.1 | 100.0 | 4.2 | 7.5 | 5.8 | 4.7 | 82.0 | 100.0 | 4,803 |
| South East | 1.2 | 2.4 | 7.1 | 88.2 | 1.1 | 100.0 | 10.7 | 15.0 | 14.5 | 2.6 | 67.9 | 100.0 | 1,100 |
| South South | 0.7 | 3.8 | 5.1 | 88.1 | 2.3 | 100.0 | 9.6 | 16.1 | 18.1 | 7.9 | 57.9 | 100.0 | 2,375 |
| South West | 0.3 | 1.5 | 3.9 | 93.3 | 1.0 | 100.0 | 5.7 | 12.8 | 16.4 | 5.9 | 64.9 | 100.0 | 1,537 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 0.6 | 2.1 | 2.8 | 93.1 | 1.4 | 100.0 | 5.5 | 8.8 | 8.0 | 4.8 | 78.4 | 100.0 | 3,338 |
| Second | 0.7 | 1.6 | 2.6 | 93.9 | 1.2 | 100.0 | 5.0 | 11.5 | 8.6 | 5.7 | 74.2 | 100.0 | 3,301 |
| Middle | 0.5 | 2.0 | 5.2 | 91.0 | 1.3 | 100.0 | 7.7 | 10.7 | 13.1 | 6.9 | 69.4 | 100.0 | 3,146 |
| Fourth | 0.8 | 1.6 | 4.7 | 91.8 | 1.1 | 100.0 | 7.1 | 11.8 | 13.1 | 5.4 | 69.7 | 100.0 | 3,066 |
| Highest | 0.3 | 2.9 | 2.6 | 93.2 | 1.0 | 100.0 | 5.8 | 12.3 | 9.8 | 6.7 | 71.3 | 100.0 | 2,727 |
| Total | 0.6 | 2.0 | 3.6 | 92.6 | 1.2 | 100.0 | 6.2 | 10.9 | 10.5 | 5.9 | 72.7 | 100.0 | 15,577 |

${ }^{1}$ Corresponds to UNAIDS Indicator 14.4 "Prevalence of orphanhood—mother, father, or both dead"

Table 12.24 presents data on school attendance among children age 10-14. Nearly three-quarters of children age 10-14 whose parents are both alive and who are living with at least one of their parents are currently attending school (73 percent). This varies regionally, from just over half of the children in the North East and North West attending school, to over 90 percent in the three south regions. Children with one parent who has died, be it a mother or father, are no worse off with regard to school attendance. There are too few children who have lost both parents to provide a reliable estimate of children age 10-14 attending school. The estimate presented in the table is based on very few cases and should be used with caution.

| Table 12.24 Schooling of children 10-14 by orphanhood and living arrangements |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentage of dejure children age 10-14 who are currently attending school, by orphanhood, living arrangements, and background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |  |  |
| Both parents alive |  |  |  |  | Mother dead |  | Father dead |  | Both parents dead |  | Mother, father, or both dead |  |
|  | Living with at least one parent |  | Not living with either parent |  |  |  |  |  |  |  |  |  |
| Background characteristic | Percent attending school | Number | Percent attending school | Number | Percent attending school | Number | Percent attending school | Number | Percent attending school | Number | Percent attending school | Number |
| Age |  |  |  |  |  |  |  |  |  |  |  |  |
| Male | 78.6 | 1,647 | 80.9 | 254 | 80.3 | 98 | 81.1 | 135 | (52.8) | 31 | 76.5 | 265 |
| Female | 68.0 | 1,584 | 74.3 | 305 | 80.8 | 72 | 81.9 | 162 | * | 23 | 76.9 | 257 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 84.1 | 1,096 | 80.4 | 236 | 88.6 | 66 | 88.5 | 109 | * | 15 | 85.1 | 190 |
| Rural | 67.9 | 2,135 | 75.0 | 322 | 75.4 | 104 | 77.5 | 189 | (44.2) | 39 | 72.0 | 332 |
| Region |  |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 88.5 | 531 | 81.0 | 80 | * | 16 | 88.1 | 63 | * | 8 | 87.1 | 88 |
| North East | 51.3 | 630 | 44.7 | 102 | (43.3) | 37 | 47.4 | 35 | * | 9 | 38.4 | 81 |
| North West | 54.3 | 942 | 59.7 | 93 | (70.1) | 37 | 65.7 | 41 | * | 15 | 59.0 | 93 |
| South East | 92.5 | 234 | 87.8 | 80 | * | 13 | 97.0 | 49 | * | 5 | 96.0 | 67 |
| South South | 94.9 | 544 | 95.5 | 127 | (99.0) | 55 | 84.6 | 72 | * | 13 | 88.8 | 140 |
| South West | 95.5 | 351 | 97.1 | 78 | * | 12 | 93.3 | 39 | * | 4 | 92.4 | 54 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |  |  |  |
| Lowest | 50.8 | 672 | 66.8 | 76 | (55.7) | 32 | 65.8 | 50 | * | 11 | 56.9 | 93 |
| Second | 63.4 | 677 | 57.6 | 109 | * | 26 | 70.3 | 43 | * | 13 | 65.0 | 82 |
| Middle | 71.1 | 654 | 68.2 | 91 | (68.4) | 29 | 82.5 | 80 | * | 11 | 75.0 | 120 |
| Fourth | 90.4 | 645 | 87.5 | 121 | (90.4) | 33 | 88.2 | 86 | * | 15 | 87.9 | 134 |
| Highest | 94.8 | 585 | 93.0 | 162 | (98.9) | 50 | 97.9 | 39 | * | 3 | 93.3 | 92 |
| Total | 73.4 | 3,231 | 77.3 | 558 | 80.5 | 170 | 81.5 | 298 | (49.5) | 54 | 76.7 | 522 |

Note: 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. There are too few cases of "double orphans" to calculate the UNAIDS Indicator for ratio of orphans to non-orphans who are in school.

## FEMALE CIRCUMCISION

Female genital cutting (FGC), also known as female circumcision in Nigeria, is a common practice in many societies in the northern half of sub-Saharan Africa. Nearly universal in a few countries, it is practiced by various groups in at least 25 African countries, in Yemen, and in immigrant African populations in Europe and North America. In a few societies, the procedure is routinely carried out when a girl is a few weeks or a few months old (e.g. Eritrea, Yemen), while in most others, it occurs later in childhood or adolescence. In the case of the latter, FGC is typically part of a ritual initiation into womanhood that includes a period of seclusion and education about the rights and duties of a wife.

The 2003 Nigeria Demographic and Health Survey (2003 NDHS) collected data on the practice of female circumcision in Nigeria from all women age 15-49. The 1999 NDHS collected data on female circumcision only from currently married women. In this chapter, topics discussed include knowledge, prevalence, and type; age at circumcision; person who performed the circumcision; and attitudes towards the practice.

### 13.1 Knowledge and Prevalence of Female Circumcision

Table 13.1 presents data on women's knowledge of female circumcision. About half (53 percent) of Nigerian women age 15-49 have heard of the practice. There are marked variations in knowledge of female circumcision by residence, region, education, and ethnicity. About two-thirds of urban respondents have heard of female circumcision, compared with less than half of women in rural areas ( 69 versus 45 percent). In general, women in the south are more than twice as likely as women in the north to have heard of the practice. These variations by region and residence are a reflection of ethnic differentials. The Igbo and Yoruba, who are primarily resident in the South East and South West, respectively, have greater knowledge of female circumcision than the ethnic groups primarily resident in the north.

Table 13.1 also shows the prevalence of female circumcision by background characteristics, which follows the same patterns as knowledge of circumcision. The proportion of women who were circumcised at the time of the survey was greatest in the southern regions, among the Yoruba and Igbo, and among urban residents. The high prevalence of female circumcision among the Yoruba ( 61 percent) and Igbo (45 percent) helps to explain regional and urban-rural differentials, since the Yoruba and Igbo traditionally reside in the South West and South East, which are more urban than the north. More than twice as many of the oldest women as the youngest women are circumcised ( 28 versus 13 percent), suggesting that there has been a decline in the practice. Caldwell et al. (2000) have reported a decline in the prevalence of female circumcision among the Yoruba.

### 13.2 Flesh Removal and Infibulation

Questions directed at determining the type of female circumcision were asked of women who reported they had been circumcised. Table 13.1 indicates that the type of circumcision could not be determined for half of the women. However, among those women who could identify the type of procedure, circumcision that involved cutting and removal of flesh is most commonly reported (44 percent). Four percent of women reported that their vagina was sewn closed (infibulation) during their circumcision, which is the most radical procedure. It is worth noting that among the Yoruba, who have the largest proportion of women circumcised, less than 1 percent of women are infibulated. Infibulation is most prevalent in the South South region (8 percent).

Table 13.1 Knowledge and prevalence of female circumcision
Percentage of women who have heard of female circumcision, percentage of women circumcised, and the percent distribution of circumcised women by type of circumcision, according to background characteristics, Nigeria 2003

| Background characteristic | Percentage of women who heard of female circumcision | Percentage of women circumcised | Number of women | Type of circumcision |  |  |  | Total | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Cut, no flesh removed |  | Sewn closed | Not determined |  |  |
| Age |  |  |  |  |  |  |  |  |  |
| 15-19 | 43.1 | 12.9 | 1,716 | 2.2 | 37.8 | 5.1 | 55.0 | 100.0 | 221 |
| 20-24 | 52.8 | 17.0 | 1,494 | 1.8 | 43.1 | 2.9 | 52.2 | 100.0 | 253 |
| 25-29 | 57.5 | 20.8 | 1,382 | 1.8 | 40.2 | 2.2 | 55.8 | 100.0 | 288 |
| 30-34 | 55.0 | 19.4 | 941 | 1.1 | 43.6 | 7.6 | 47.7 | 100.0 | 183 |
| 35-39 | 60.8 | 22.2 | 816 | 2.4 | 44.3 | 4.9 | 48.4 | 100.0 | 181 |
| 40-44 | 53.6 | 22.2 | 688 | 1.2 | 49.0 | 1.9 | 47.9 | 100.0 | 153 |
| 45-49 | 59.6 | 28.4 | 583 | 3.9 | 51.0 | 3.6 | 41.6 | 100.0 | 165 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 68.7 | 28.3 | 2,629 | 1.5 | 37.6 | 4.0 | 56.9 | 100.0 | 744 |
| Rural | 45.0 | 14.0 | 4,991 | 2.5 | 49.6 | 3.9 | 44.0 | 100.0 | 701 |
| Region |  |  |  |  |  |  |  |  |  |
| North Central | 36.0 | 9.6 | 1,121 | 1.2 | 64.6 | 2.5 | 31.7 | 100.0 | 107 |
| North East | 40.1 | 1.3 | 1,368 | * | * | * | * | * | 18 |
| North West | 25.1 | 0.4 | 2,095 | * | * | * | * | * | 9 |
| South East | 87.7 | 40.8 | 737 | 0.3 | 12.2 | 2.7 | 84.8 | 100.0 | 300 |
| South South | 82.5 | 34.7 | 1,342 | 3.0 | 66.0 | 7.5 | 23.5 | 100.0 | 466 |
| South West | 85.7 | 56.9 | 958 | 2.2 | 36.3 | 1.3 | 60.3 | 100.0 | 545 |
| Ethnic group |  |  |  |  |  |  |  |  |  |
| Fulani | 19.4 | 0.6 | 463 | * | * | * | * | * | 3 |
| Hausa | 28.5 | 0.4 | 2,055 | * | * | * | * | * | 8 |
| Igbo | 86.5 | 45.1 | 1,037 | 1.3 | 28.3 | 3.1 | 67.3 | 100.0 | 467 |
| Kanuri | 58.5 | 0.5 | 232 | * | * | * | * | * | 1 |
| Tiv | 27.9 | 0.9 | 170 | * | * | * | * | * | 1 |
| Yoruba | 88.2 | 60.7 | 865 | 2.1 | 38.3 | 0.9 | 58.7 | 100.0 | 525 |
| Other | 54.8 | 15.7 | 2,797 | 2.5 | 66.1 | 7.8 | 23.6 | 100.0 | 439 |
| Total | 53.2 | 19.0 | 7,620 | 2.0 | 43.5 | 3.9 | 50.6 | 100.0 | 1,445 |

Note: Total includes 1 case with data missing on circumcision. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

### 13.3 Age at Circumcision

The percent distribution of women by age at circumcision is presented in Table 13.2. Female circumcision in Nigeria occurs mostly in infancy (i.e., before the first birthday). Three-quarters of the women who underwent circumcision were circumcised by age one. Twenty-one percent, however, were circumcised at age five or older. There are marked variations in the proportions of women circumcised in infancy by residence and ethnicity. For instance, almost nine in ten Igbo and Yoruba were circumcised during infancy compared with less than half of those in other ethnic groups (45 percent).

Infibulation, the most severe form of circumcision, is more likely to be carried out on women circumcised at a later age than on the very young. The table shows that 37 percent of those cut before the age of one had been infibulated, while 49 percent of those circumcised after the age of four were infibulated. It should be noted that the total number of respondents infibulated was 57.

Table 13.2 Age at circumcision
Percent distribution of circumcised women by age at circumcision, according to background characteristics, Nigeria 2003

| Background characteristic | Age at circumcision in years |  |  |  | Total | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $<1$ | 1-4 | $5+$ | Don't know/ missing |  |  |
| Age |  |  |  |  |  |  |
| 15-19 | 78.4 | 1.7 | 14.2 | 5.7 | 100.0 | 221 |
| 20-24 | 77.2 | 1.1 | 18.7 | 3.1 | 100.0 | 253 |
| 25-29 | 79.5 | 0.2 | 17.7 | 2.5 | 100.0 | 288 |
| 30-34 | 64.3 | 0.3 | 27.4 | 8.1 | 100.0 | 183 |
| 35-39 | 71.6 | 3.3 | 24.4 | 0.7 | 100.0 | 181 |
| 40-44 | 72.4 | 1.5 | 24.3 | 1.8 | 100.0 | 153 |
| 45-49 | 73.5 | 0.6 | 21.1 | 4.8 | 100.0 | 165 |
| Residence |  |  |  |  |  |  |
| Urban | 79.2 | 0.9 | 16.8 | 3.1 | 100.0 | 744 |
| Rural | 69.6 | 1.5 | 24.4 | 4.5 | 100.0 | 701 |
| Region |  |  |  |  |  |  |
| North Central | 51.6 | 1.7 | 42.1 | 4.6 | 100.0 | 107 |
| North East | * | * | * | * | * | 18 |
| North West | * | * | * | * | * | 9 |
| South East | 94.1 | 0.1 | 4.9 | 0.9 | 100.0 | 300 |
| South South | 55.2 | 2.1 | 38.0 | 4.7 | 100.0 | 466 |
| South West | 86.4 | 0.7 | 9.1 | 3.8 | 100.0 | 545 |
| Ethnic group |  |  |  |  |  |  |
| Igbo | 88.9 | 0.3 | 9.4 | 1.4 | 100.0 | 467 |
| Yoruba | 87.4 | 1.2 | 7.1 | 4.4 | 100.0 | 525 |
| Other | 45.0 | 2.0 | 47.4 | 5.5 | 100.0 | 453 |
| Type of circumcision |  |  |  |  |  |  |
| Cut, no flesh removed | (69.7) | (0.0) | (30.3) | (0.0) | (100.0) | 29 |
| Cut, flesh removed | 60.6 | 1.9 | 35.2 | 2.3 | 100.0 | 628 |
| Sewn closed | 37.4 | 5.0 | 49.2 | 8.4 | 100.0 | 57 |
| Not determined | 89.6 | 0.3 | 5.2 | 4.8 | 100.0 | 732 |
| Total | 74.6 | 1.2 | 20.5 | 3.8 | 100.0 | 1,445 |

Note: 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.

### 13.4 Circumcision of Daughters

Women interviewed in the 2003 NDHS who had living daughters were asked if any of their daughters had been circumcised, and if not, whether they intended to have a daughter circumcised. Table 13.3 shows that, of women who have at least one daughter, 10 percent had circumcised a daughter, and an additional 3 percent intend to have a daughter circumcised. The proportion of women who have at least one circumcised daughter increases with age. Prevalence varies by residence and ethnicity, with women residing in urban areas, those in the south, and Yorubas and Igbos being the most likely to have circumcised daughters or intend to have their daughters circumcised.

Table 13.3 shows the percent distribution of most recently circumcised daughters by type of circumcision. The results show that circumcision involving the cutting and removal of flesh is the most common in Nigeria, accounting for two-thirds of all circumcisions. Five percent of circumcised daughters had no flesh removed, and 4 percent were infibulated.

| Among women with at least one living daughter, percentage with at least one circumcised daughter, percentage who intend to have their daughter circumcised, and percent distribution by type of circumcision among most recently circumcised daughters, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Percentage of women | Percentage of women | Number |  | mong circu type of | sed dau umcisio |  |  |  |
| Background characteristic | least one daughter circumcised | to have <br> daughter circumcised | with at least one daughter | Cut, no flesh removed | Cut, flesh removed | Sewn closed | Not determined | Total | Number of women |
| Age |  |  |  |  |  |  |  |  |  |
| 15-19 | 0.5 | 5.0 | 183 | * | * | * | * | * | 1 |
| 20-24 | 4.4 | 3.9 | 538 | (1.5) | (63.7) | (2.5) | (32.3) | (100.0) | 23 |
| 25-29 | 6.9 | 2.3 | 898 | 12.6 | 54.1 | 5.4 | 27.9 | 100.0 | 62 |
| 30-34 | 6.4 | 4.4 | 715 | 4.1 | 71.5 | 2.0 | 22.5 | 100.0 | 45 |
| 35-39 | 11.3 | 3.5 | 707 | 3.7 | 69.1 | 4.0 | 23.2 | 100.0 | 80 |
| 40-44 | 12.9 | 2.7 | 582 | 2.4 | 77.0 | 3.7 | 16.9 | 100.0 | 75 |
| 45-49 | 23.8 | 1.4 | 506 | 4.3 | 64.6 | 3.1 | 28.0 | 100.0 | 120 |
| Residence |  |  |  |  |  |  |  |  |  |
| Urban | 15.0 | 3.1 | 1,294 | 2.9 | 68.0 | 3.4 | 25.7 | 100.0 | 194 |
| Rural | 7.5 | 3.2 | 2,834 | 6.7 | 65.9 | 3.7 | 23.7 | 100.0 | 213 |
| Region |  |  |  |  |  |  |  |  |  |
| North Central | 6.6 | 3.3 | 606 | 1.1 | 59.8 | 0.0 | 39.1 | 100.0 | 40 |
| North East | 0.2 | 0.4 | 856 | * | * | * | * | * | 2 |
| North West | 0.9 | 0.9 | 1,320 | * | * | * | * | * | 12 |
| South East | 25.7 | 4.9 | 324 | 7.3 | 42.1 | 9.5 | 41.1 | 100.0 | 83 |
| South South | 17.2 | 10.6 | 621 | 1.7 | 81.0 | 6.1 | 11.2 | 100.0 | 107 |
| South West | 40.8 | 3.0 | 401 | 5.2 | 73.0 | 0.0 | 21.9 | 100.0 | 164 |
| Education |  |  |  |  |  |  |  |  |  |
| No education | 5.6 | 1.6 | 2,158 | 7.4 | 58.1 | 3.9 | 30.6 | 100.0 | 121 |
| Primary | 14.8 | 4.2 | 1,000 | 0.6 | 73.7 | 3.2 | 22.6 | 100.0 | 148 |
| Secondary | 14.9 | 5.7 | 786 | 8.6 | 65.1 | 4.3 | 22.0 | 100.0 | 117 |
| Higher | 11.8 | 4.4 | 185 | (0.0) | (79.8) | (0.0) | (20.2) | (100.0) | 22 |
| Ethnic group |  |  |  |  |  |  |  |  |  |
| Igbo | 25.8 | 4.5 | 447 | 5.3 | 52.5 | 9.5 | 32.7 | 100.0 | 115 |
| Yoruba | 46.3 | 2.6 | 371 | 4.9 | 70.6 | 0.0 | 24.5 | 100.0 | 172 |
| Other | 3.6 | 3.0 | 3,311 | 4.5 | 75.5 | 2.9 | 17.1 | 100.0 | 120 |
| Wealth quintile |  |  |  |  |  |  |  |  |  |
| Lowest | 6.8 | 3.1 | 903 | 6.7 | 71.5 | 3.1 | 18.7 | 100.0 | 61 |
| Second | 6.2 | 2.6 | 874 | 1.9 | 72.0 | 3.4 | 22.7 | 100.0 | 54 |
| Middle | 8.2 | 1.9 | 822 | 5.1 | 64.9 | 7.7 | 22.2 | 100.0 | 67 |
| Fourth | 11.1 | 4.0 | 770 | 6.1 | 68.9 | 3.0 | 22.0 | 100.0 | 85 |
| Highest | 18.4 | 4.2 | 759 | 4.4 | 62.7 | 2.1 | 30.8 | 100.0 | 140 |
| Total | 9.9 | 3.1 | 4,129 | 4.9 | 66.9 | 3.6 | 24.6 | 100.0 | 407 |

Note: Figures in parentheses are based on 26-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 13.4 indicates that almost all of the most recently circumcised daughters ( 85 percent) were circumcised before their first birthday, and 4 percent were circumcised between ages 1-4 years. Traditional circumcisers carried out 61 percent of the circumcisions. Circumcision is also commonly performed by nurses and midwives ( 24 percent) and traditional birth attendants (10 percent).

| Table 13.4 Aspects of daughter's circumcision |  |
| :---: | :---: |
| Percent distribution of most recently circumcised daughter by the age of the daughter at the time she was circumcised, and the person performing the circumcision, Nigeria 2003 |  |
| Aspects | Percent |
| Age of daughter when she was circumcised (in years) |  |
| 0 | 85.0 |
| 1-4 | 4.1 |
| 5-6 | 1.8 |
| 7-8 | 2.0 |
| 9-10 | 0.5 |
| 11-12 | 0.9 |
| 13+ | 3.9 |
| Don't know/missing | 1.8 |
| Person who performed the circumcision |  |
| Traditional circumciser | 60.6 |
| Traditional birth attendant | 10.0 |
| Other traditional | 1.0 |
| Doctor | 2.0 |
| Nurse/midwife | 24.3 |
| Other health professional | 0.4 |
| Don't know/missing | 1.8 |
| Total | 100.0 |
| Number | 407 |

### 13.5 Attitudes toward Female Circumcision

Women and men who had heard of female circumcision were asked if they thought the practice should be continued or discontinued. Table 13.5.1 indicates that among the Nigerian women who had heard of female circumcision, two-thirds believe that the practice should be discontinued, while 21 percent believe the practice should be continued. Approximately one in ten of this group of women expressed conditional approval or was unsure of her opinion. Continuation of female circumcision finds greater support among southerners than northerners and among those who are circumcised than those uncircumcised. Even so, less than half of circumcised women want the practice to be continued. Women were also asked about their perception of men's attitudes toward female circumcision. Half of women believe that men want the practice discontinued. Nonetheless, one-fifth believe that men want female circumcision to continue.

Table 13.5.1 Attitudes toward female circumcison: women
Percent distribution of all women who have heard of female circumcision by opinion on whether female circumcision should be continued and by opinion on whether men think female circumcision should be continued, according to background characteristics, Nigeria 2003

| Background characteristic | Attitude toward female circumcision |  |  |  | Total | Believes men think that female circumcision should be: |  |  |  | Total | Number of women |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Should be continued | Should be discontinued | Depends/ don't know | Missing |  | Continued | Discontinued | Depends/ don't know | Missing |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 23.4 | 60.0 | 15.2 | 1.4 | 100.0 | 20.8 | 42.7 | 35.5 | 1.0 | 100.0 | 739 |
| 20-24 | 21.3 | 66.2 | 10.6 | 1.9 | 100.0 | 19.9 | 49.1 | 29.0 | 2.0 | 100.0 | 789 |
| 25-29 | 17.0 | 70.1 | 12.2 | 0.7 | 100.0 | 14.9 | 51.5 | 32.8 | 0.7 | 100.0 | 794 |
| 30-34 | 15.8 | 73.7 | 9.9 | 0.5 | 100.0 | 15.8 | 53.1 | 30.6 | 0.5 | 100.0 | 518 |
| 35-39 | 24.9 | 66.7 | 8.4 | 0.0 | 100.0 | 21.1 | 51.2 | 27.7 | 0.0 | 100.0 | 496 |
| 40-44 | 20.0 | 64.9 | 14.8 | 0.4 | 100.0 | 18.6 | 51.5 | 29.6 | 0.3 | 100.0 | 369 |
| 45-49 | 24.9 | 62.9 | 11.2 | 1.0 | 100.0 | 19.5 | 49.4 | 30.1 | 1.0 | 100.0 | 347 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 22.5 | 64.7 | 11.9 | 0.9 | 100.0 | 18.7 | 49.4 | 31.0 | 0.9 | 100.0 | 1,805 |
| Rural | 19.4 | 67.9 | 11.8 | 1.0 | 100.0 | 18.5 | 49.4 | 31.2 | 0.9 | 100.0 | 2,248 |
| Region |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 13.2 | 64.2 | 19.1 | 3.6 | 100.0 | 12.1 | 42.0 | 42.3 | 3.6 | 100.0 | 403 |
| North East | 7.3 | 78.6 | 13.5 | 0.6 | 100.0 | 5.9 | 55.5 | 37.9 | 0.7 | 100.0 | 548 |
| North West | 13.5 | 70.5 | 13.1 | 2.9 | 100.0 | 11.5 | 55.7 | 30.7 | 2.1 | 100.0 | 527 |
| South East | 23.9 | 67.4 | 8.6 | 0.0 | 100.0 | 20.4 | 56.8 | 22.8 | 0.0 | 100.0 | 646 |
| South South | 18.9 | 73.7 | 7.2 | 0.2 | 100.0 | 20.0 | 52.6 | 26.9 | 0.5 | 100.0 | 1,107 |
| South West | 38.3 | 46.3 | 15.1 | 0.3 | 100.0 | 31.3 | 34.9 | 33.6 | 0.3 | 100.0 | 821 |
| Education |  |  |  |  |  |  |  |  |  |  |  |
| No education | 19.1 | 64.7 | 14.7 | 1.6 | 100.0 | 15.5 | 47.8 | 35.2 | 1.5 | 100.0 | 1,023 |
| Primary | 23.1 | 64.5 | 11.6 | 0.9 | 100.0 | 18.9 | 47.8 | 32.2 | 1.0 | 100.0 | 949 |
| Secondary | 23.2 | 65.4 | 10.9 | 0.6 | 100.0 | 22.6 | 48.9 | 28.1 | 0.5 | 100.0 | 1,666 |
| Higher | 10.4 | 79.7 | 9.1 | 0.8 | 100.0 | 9.2 | 59.3 | 30.6 | 0.9 | 100.0 | 415 |
| Circumcision status |  |  |  |  |  |  |  |  |  |  |  |
| Not circumcised | 9.3 | 76.3 | 12.9 | 1.4 | 100.0 | 8.3 | 57.1 | 33.3 | 1.3 | 100.0 | 2,607 |
| Circumcised | 41.5 | 48.6 | 9.8 | 0.1 | 100.0 | 37.0 | 35.7 | 27.1 | 0.2 | 100.0 | 1,445 |
| Total | 20.8 | 66.4 | 11.8 | 0.9 | 100.0 | 18.6 | 49.4 | 31.1 | 0.9 | 100.0 | 4,052 |

Men who had heard of female circumcision were asked the same attitude questions. Table 13.5.2 shows that among men who had heard of the practice, almost two-thirds are against continuation of female circumcision, while about one-fifth favour continuation. Similar to women, men residing in urban areas and those in the south are the most likely to support the continuation of the practice. Once again, differentials by residence are largely due to ethnicity. Almost half of men believe women want the practice discontinued, while only 14 percent believe that women want female circumcision to continue.

| Percent distribution of all men who have heard of female circumcision by opinion on whether female circumcision should be continued and by opinion on whether women think female circumcision should be continued, according to background characteristics, Nigeria 2003 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Attitude toward female circumcision |  |  |  | Total | Believes women think that female circumcision should be: |  |  |  | Total | Number of men |
| Background characteristic | Should be continued | Should be discontinued | Depends/ don't know | Missing |  | Continued | Discontinued | Depends/ don't know | Missing |  |  |
| Age |  |  |  |  |  |  |  |  |  |  |  |
| 15-19 | 20.2 | 54.0 | 25.0 | 0.8 | 100.0 | 17.1 | 40.2 | 42.0 | 0.8 | 100.0 | 127 |
| 20-24 | 19.0 | 62.1 | 18.4 | 0.5 | 100.0 | 15.8 | 50.1 | 33.0 | 1.0 | 100.0 | 223 |
| 25-29 | 22.6 | 59.9 | 17.6 | 0.0 | 100.0 | 16.1 | 46.5 | 37.4 | 0.0 | 100.0 | 211 |
| 30-34 | 17.0 | 67.4 | 15.6 | 0.0 | 100.0 | 8.9 | 58.9 | 32.1 | 0.0 | 100.0 | 229 |
| 35-39 | 22.1 | 61.3 | 16.6 | 0.0 | 100.0 | 15.4 | 54.9 | 29.7 | 0.0 | 100.0 | 163 |
| 40-44 | 10.2 | 75.8 | 14.0 | 0.0 | 100.0 | 8.0 | 55.9 | 36.1 | 0.0 | 100.0 | 166 |
| 45-49 | 24.8 | 62.6 | 12.6 | 0.0 | 100.0 | 15.2 | 49.2 | 35.6 | 0.0 | 100.0 | 117 |
| 50-54 | 19.8 | 57.7 | 22.5 | 0.0 | 100.0 | 16.7 | 53.5 | 29.9 | 0.0 | 100.0 | 103 |
| 55-59 | 21.4 | 66.3 | 12.3 | 0.0 | 100.0 | 15.3 | 45.8 | 38.9 | 0.0 | 100.0 | 89 |
| Residence |  |  |  |  |  |  |  |  |  |  |  |
| Urban | 23.1 | 59.8 | 17.0 | 0.2 | 100.0 | 13.0 | 49.9 | 37.0 | 0.2 | 100.0 | 586 |
| Rural | 16.7 | 65.9 | 17.3 | 0.1 | 100.0 | 14.5 | 52.2 | 33.0 | 0.3 | 100.0 | 840 |
| Region |  |  |  |  |  |  |  |  |  |  |  |
| North Central | 17.4 | 75.6 | 6.9 | 0.0 | 100.0 | 12.6 | 68.1 | 19.3 | 0.0 | 100.0 | 154 |
| North East | 8.7 | 73.7 | 17.3 | 0.3 | 100.0 | 9.4 | 50.8 | 39.1 | 0.7 | 100.0 | 307 |
| North West | 14.5 | 64.3 | 21.2 | 0.0 | 100.0 | 11.7 | 53.6 | 34.7 | 0.0 | 100.0 | 276 |
| South East | 28.4 | 45.5 | 26.2 | 0.0 | 100.0 | 12.2 | 42.4 | 45.4 | 0.0 | 100.0 | 156 |
| South South | 24.1 | 64.1 | 11.4 | 0.4 | 100.0 | 20.4 | 51.6 | 27.6 | 0.4 | 100.0 | 279 |
| South West | 27.8 | 52.7 | 19.5 | 0.0 | 100.0 | 16.4 | 44.0 | 39.6 | 0.0 | 100.0 | 254 |
| Education |  |  |  |  |  |  |  |  |  |  |  |
| No education | 15.2 | 63.7 | 21.0 | 0.0 | 100.0 | 15.2 | 46.5 | 38.3 | 0.0 | 100.0 | 280 |
| Primary | 24.6 | 57.6 | 17.8 | 0.0 | 100.0 | 17.4 | 44.8 | 37.8 | 0.0 | 100.0 | 362 |
| Secondary | 20.1 | 61.2 | 18.4 | 0.4 | 100.0 | 12.8 | 51.4 | 35.2 | 0.6 | 100.0 | 549 |
| Higher | 14.4 | 77.0 | 8.6 | 0.0 | 100.0 | 9.7 | 66.3 | 24.0 | 0.0 | 100.0 | 235 |
| Total | 19.3 | 63.4 | 17.1 | 0.1 | 100.0 | 13.9 | 51.2 | 34.6 | 0.2 | 100.0 | 1,426 |

### 13.6 Reasons for Supporting Female Circumcision

In the 2003 NDHS, women and men who said they thought female circumcision should continue were asked about the benefits the girls themselves get if they undergo this procedure. Chastity before marriage is the reason most commonly cited by both women and men in Nigeria. More than one-third of the women ( 36 percent) and 45 percent of men cited the need to prevent premarital sex as their reason for supporting female circumcision (Table 13.6). Maintaining virginity before marriage has been given as a benefit of female circumcision in other African countries as well, but except for Niger, it has always been the third or fourth most frequently given reason (Yoder et al., 2004).

An additional 35 percent of women and 30 percent of men said that a circumcised female would have better marriage prospects. Whereas almost one-quarter of men cite greater sexual pleasure for men as a perceived benefit, this is the least commonly cited reason among women ( 5 percent). One-quarter of women and one-fifth of men support female circumcision due to a belief that it aids safe delivery. This misconception will require adequate public education to correct.

| Table 13.6 Perceived benefits of undergoing female circumcision |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Among women and men who say they think female circumcision should be continued, percentage who cite specific reasons, according to urban-rural residence, Nigeria 2003 |  |  |  |  |  |  |
| Reason | Women |  |  | Men |  |  |
|  | Residence |  | Total | Residence |  | Total |
|  | Urban | Rural |  | Urban | Rural |  |
| Reason for supporting female circumcision |  |  |  |  |  |  |
| Cleanliness/hygiene | 5.1 | 8.4 | 6.8 | 5.5 | 14.4 | 10.0 |
| Social acceptance | 34.0 | 21.9 | 27.7 | 9.1 | 22.7 | 16.0 |
| Better marriage prospects | 26.8 | 42.0 | 34.6 | 28.3 | 31.9 | 30.1 |
| Preserve virginity/prevent premarital sex | 49.0 | 23.4 | 35.8 | 48.3 | 41.8 | 45.0 |
| More sexual pleasure for the man | 7.1 | 3.5 | 5.3 | 24.7 | 21.7 | 23.2 |
| Religious approval | 10.4 | 12.2 | 11.3 | 11.2 | 6.2 | 8.7 |
| Helps delivery | 24.6 | 25.8 | 25.2 | 20.2 | 20.9 | 20.5 |
| Other | 9.6 | 21.3 | 15.7 | 15.7 | 5.9 | 10.7 |
| Number | 407 | 436 | 843 | 135 | 141 | 276 |

### 13.7 Reasons for Not Supporting Female Circumcision

Women and men who said they thought female circumcision should be discontinued were asked about the benefits the girls themselves get if they do not become circumcised. Table 13.7 shows that sexual gratification was cited as a benefit by the majority of the women and men who do not support the continuation of female circumcision. One-third of the women cited more sexual pleasure for the woman and an additional one-fourth cited more sexual pleasure for the men. Among men, however, 48 percent cited more sexual pleasure for the man, and an additional 34 percent cited increased sexual pleasure for the woman. Religion is the reason least frequently cited by both women and men for not supporting female circumcision, suggesting that female circumcision is not perceived as a religious practice. It has been observed that female circumcision is a cultural rather than a religious practice (Toubia, 1995; Caldwell et al., 2000).

| Among women and men who say they think female circumcision should be discontinued, percentage who cite specific reasons, according to urban-rural residence, Nigeria 2003 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Reason | Women |  |  | Men |  |  |
|  | Residence |  | Total | Residence |  | Total |
|  | Urban | Rural |  | Urban | Rural |  |
| Reason for not supporting female circumcision |  |  |  |  |  |  |
| Fewer medical problems | 33.0 | 34.2 | 33.7 | 25.8 | 35.6 | 31.8 |
| Avoiding pain | 18.8 | 21.7 | 20.5 | 27.2 | 22.3 | 24.2 |
| More sexual pleasure for her | 38.9 | 32.5 | 35.3 | 41.9 | 28.8 | 33.9 |
| More sexual pleasure for the man | 25.1 | 24.0 | 24.5 | 53.0 | 45.0 | 48.1 |
| Follows religion | 2.3 | 3.1 | 2.8 | 3.6 | 5.1 | 4.5 |
| Number | 1,168 | 1,525 | 2,693 | 350 | 554 | 904 |

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## A. 1 Introduction

The principal objective of the 2003 NDHS is to provide current and reliable data on fertility and family planning behaviour, child mortality, children's nutritional status, the utilization of maternal and child health services, and knowledge and attitudes towards HIV/AIDS. A related objective is to provide as many of these key indicators as possible for urban and rural areas separately, as well as for each of Nigeria's six geopolitical zones (see Table A.1).

The population covered by the 2003 NDHS is defined as the universe of all women age 15-49 and all men age 15-59 in Nigeria. A probability sample of households was selected and all women age 15-49 identified in the households were eligible to be interviewed. In addition, in a subsample of one-third of the households selected for the survey, all men age 15-59 were eligible to be interviewed.

## A. 2 Sample Frame

The sample frame for this survey was the list of enumeration areas (EAs) developed for the 1991 Population Census. Administratively, at the time the survey was planned, Nigeria was divided into 36 states and the Federal Capital Territory (FCT) of Abuja. Each state was subdivided into local government area (LGA) units and each LGA was divided into localities. In addition to these administrative units, for implementation of the 1991 Population Census, each locality was subdivided into enumeration areas (EAs). The list of approximately 212,080 EAs, with household and population information (from the 1991census) for each EA, was evaluated as a potential sampling frame for the 2003 NDHS. The EAs are grouped by states, by LGAs within a state, and by localities within an LGA, stratified separately by urban and rural areas. Any locality with less than 20,000 population constitutes a rural area. Also available from the 1991 census were maps showing the location of the EAs. These maps needed to be updated in the field before the final household selection. After a careful evaluation, the EA list was used as the sample frame.

## A. 3 SAMPLE Allocation

The primary sampling unit (PSU), or cluster, for the 2003 NDHS is defined as one or more EAs from the 1991 census frame. A minimum requirement of 50 households per cluster was imposed on the design; in the case of less than 50 households, a contiguous EA was added. The number of clusters in each state was not allocated in proportion to the state's population because of the need to obtain estimates for each of the six zones. Since Nigeria is a country where the majority of the population resides in rural areas, the number of clusters allocated to the urban areas in five out of the six zones was increased in order to obtain reasonable urban estimates.

The target of the 2003 NDHS sample was to obtain completed interviews with about 8,250 women. Based on the level of nonresponse found in the 1999 Nigeria DHS survey, a target of 7,935 households was set. When the sample was implemented, three clusters could not be visited because of communal clashes, so 7,864 households were selected, in which all women age 15-49 were eligible to be interviewed. To obtain estimates of fertility and child mortality with a reasonable level of precision, a minimum of 1,200 completed interviews with women was desired in each zone. In each state, the number of households was not distributed proportionally between urban and rural areas. Also, in six designated states, a minimum of 350 completed interviews were targeted to provide selected indicators.

| Table A. 1 Allocation of the sample |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of expected women's interviews and number of clusters covered, by state, Nigeria 2003 |  |  |  |  |  |  |
|  | Expected number of women's interviews |  |  | Number of clusters selected |  |  |
| state | Urban | Rural | Total | Urban | Rural | Total |
| North Central | 530 | 755 | 1,285 | 26 | 30 | 56 |
| Plateau | 54 | 147 | 201 | 3 | 6 | 9 |
| Benue | 89 | 261 | 350 | 4 | 10 | 14 |
| Nasarawa | 30 | 86 | 116 | 1 | 3 | 4 |
| Kogi | 126 | 87 | 213 | 6 | 3 | 9 |
| Kwara | 134 | 15 | 149 | 7 | 1 | 8 |
| Niger | 84 | 140 | 224 | 4 | 6 | 10 |
| FCT | 13 | 18 | 32 | 1 | 1 | 2 |
| North East | 500 | 811 | 1,311 | 25 | 32 | 57 |
| Taraba | 32 | 121 | 153 | 2 | 5 | 7 |
| Adamawa | 80 | 134 | 214 | 4 | 5 | 9 |
| Gombe | 44 | 106 | 151 | 2 | 4 | 6 |
| Borno | 185 | 67 | 253 | 9 | 3 | 12 |
| Bauchi | 90 | 310 | 400 | 5 | 12 | 17 |
| Yobe | 68 | 72 | 140 | 3 | 3 | 6 |
| North West | 500 | 1,233 | 1,733 | 27 | 49 | 76 |
| Jigawa | 14 | 186 | 200 | 1 | 7 | 8 |
| Kano | 252 | 150 | 402 | 13 | 6 | 19 |
| Kebbi | 22 | 124 | 146 | 1 | 5 | 6 |
| Kaduna | 93 | 307 | 400 | 5 | 12 | 17 |
| Katsina | 53 | 214 | 267 | 3 | 9 | 12 |
| Zamfara | 33 | 115 | 149 | 2 | 5 | 7 |
| Sokoto | 33 | 137 | 170 | 2 | 5 | 7 |
| South East | 500 | 747 | 1,247 | 25 | 30 | 55 |
| Ebonyi | 104 | 63 | 167 | 5 | 3 | 8 |
| Anambra | 140 | 210 | 350 | 7 | 8 | 15 |
| Enugu | 151 | 89 | 240 | 8 | 4 | 12 |
| Abia | 86 | 123 | 209 | 4 | 5 | 9 |
| Imo | 19 | 262 | 281 | 1 | 10 | 11 |
| South South | 500 | 774 | 1,274 | 25 | 31 | 56 |
| Bayelsa | 6 | 90 | 97 | 0 | 4 | 4 |
| Cross River | 59 | 113 | 172 | 3 | 5 | 8 |
| Akwa Ibom | 23 | 201 | 223 | 1 | 8 | 9 |
| Rivers | 127 | 223 | 350 | 6 | 9 | 15 |
| Delta | 118 | 119 | 237 | 7 | 4 | 11 |
| Edo | 167 | 28 | 195 | 8 | 1 | 9 |
| South West | 750 | 650 | 1,400 | 40 | 25 | 65 |
| Lagos | 363 | 76 | 439 | 20 | 1 | 21 |
| Oyo | 138 | 144 | 281 | 7 | 6 | 13 |
| Osun | 57 | 124 | 180 | 3 | 5 | 8 |
| Ogun | 75 | 117 | 192 | 4 | 5 | 9 |
| Ekiti | 54 | 72 | 125 | 3 | 3 | 6 |
| Ondo | 64 | 118 | 182 | 3 | 5 | 8 |
| Total | 3,280 | 4,970 | 8,250 | 165 | 200 | 365 |

## A. 4 Sample Selection

The 2003 NDHS sample was selected using a stratified, two-stage cluster design. A total of 365 clusters were selected, 165 in urban and 200 in rural areas. Table A. 1 shows the distribution of clusters selected for the 2003 NDHS. Once the number of households was allocated to each state by urban and rural areas, the numbers of clusters was calculated based on an average sample take of 20 completed
women’s interviews (in 19 selected households) in urban areas, and 25 completed interviews (in 24 selected households) in rural areas. In each urban or rural area in a given state, clusters were selected systematically with equal probability. The selection was done using the following formula:

$$
P_{1 i}=(a / A)
$$

where
$a$ : is the number of clusters to be selected in the given combination of residence area and state,
$A$ : is the total number of clusters in the given combination of residence area and state.
In each selected cluster, a complete household listing operation was carried out and households were selected to achieve a fixed sample take per cluster. Since the 2003 NDHS sample is unbalanced (disproportional) by urban-rural residence and state, it requires sampling weights to provide estimates at every domain of study.

In a given state, if $c$ is the fixed number of households selected out of the total households $\left(L_{i}\right)$ found in the 2003 listing process-for the $i^{\text {th }}$ cluster, then the household probability in the selected $i^{\text {th }}$ cluster can be expressed as

$$
P_{2 i}=\left(c / L_{i}\right)
$$

The final household overall probability in the $i^{\text {th }}$ cluster could be calculated as

$$
f_{i}=P_{1 i} * P_{2 i}
$$

and the sampling design weight for the $i^{\text {th }}$ cluster is given as

$$
1 / f_{i}=1 /\left(P_{1 i} * P_{2 i}\right)
$$

## A. 5 Sample for Male Survey

In every third household selected, all men age 15-59 listed in the household were eligible to be interviewed. Based on data from the 1999 NDHS, this was expected to produce a total of about 2,800 successfully completed male interviews in the 2003 NDHS.

## A. 6 Response Rates

Tables A. 2 and A. 3 present information on the results of the household and individual interviews. Household interviews were completed for 99 percent of the occupied households. A total of 7,985 eligible women were found in these households, and 95 percent of them were successfully interviewed. The overall response rate for women was 94 percent. A total of 2,572 eligible men from every third household were identified for the individual interviews; 91 percent were successfully interviewed. The overall response rate for men was 90 percent. The principal reason for nonresponse among eligible women and men was the failure to find them at home despite repeated visits to the household. The refusal rate was low.

There was no difference by urban-rural residence in overall response rates for eligible women and men. By region, the overall response rates for eligible women varied little, with the exception of South South, which had the lowest response rate for women (88 percent). The lowest overall response rate for men was in the South South and South East (83 percent each).

Table A. 2 Sample implementation: women
Percent distribution of households 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, Nigeria 2003

| Result | Residence |  | Region |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Urban | Rural | North Central | North East | North West | South East | South South | South West |  |
| Selected households |  |  |  |  |  |  |  |  |  |
| Completed (C) | 92.7 | 91.3 | 95.4 | 95.9 | 93.3 | 86.6 | 87.1 | 91.9 | 91.9 |
| Household present but no competent respondent at home (HP) | 0.5 | 0.6 | 0.4 | 0.2 | 0.7 | 0.3 | 0.9 | 0.8 | 0.6 |
| Refused (R) | 0.9 | 0.3 | 0.2 | 0.2 | 0.4 | 1.0 | 0.9 | 0.4 | 0.5 |
| Dwelling not found (DNF) | 0.1 | 0.2 | 0.1 | 0.0 | 0.1 | 0.0 | 0.7 | 0.3 | 0.2 |
| Household absent (HA) | 3.3 | 3.9 | 1.7 | 2.0 | 3.6 | 4.6 | 6.3 | 4.0 | 3.7 |
| Dwelling vacant/address not a dwelling (DV) | 2.3 | 3.1 | 2.0 | 1.4 | 1.7 | 6.7 | 3.2 | 2.3 | 2.8 |
| Dwelling destroyed (DD) | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.1 | 0.2 |
| Other (O) | 0.1 | 0.3 | 0.0 | 0.0 | 0.1 | 0.6 | 0.4 | 0.2 | 0.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of sampled households | 3,163 | 4,701 | 1,214 | 1,242 | 1,689 | 1,195 | 1,159 | 1,365 | 7,864 |
| Household response rate (HRR) ${ }^{1}$ | 98.4 | 98.8 | 99.2 | 99.5 | 98.8 | 98.6 | 97.1 | 98.4 | 98.6 |
| Eligible women |  |  |  |  |  |  |  |  |  |
| Completed (EWC) | 96.1 | 95.0 | 95.8 | 94.7 | 97.2 | 95.3 | 90.4 | 97.8 | 95.4 |
| Not at home (EWNH) | 1.8 | 2.5 | 2.3 | 2.3 | 1.3 | 2.2 | 5.4 | 0.9 | 2.3 |
| Postponed (EWP) | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 |
| Refused (EWR) | 0.9 | 0.8 | 0.6 | 1.3 | 0.2 | 1.2 | 1.4 | 0.7 | 0.8 |
| Partly completed (EWPC) | 0.3 | 0.1 | 0.1 | 0.3 | 0.1 | 0.1 | 0.3 | 0.3 | 0.2 |
| Incapacitated (EWI) | 0.6 | 0.7 | 0.7 | 0.8 | 0.6 | 0.7 | 0.6 | 0.3 | 0.6 |
| Other (EWO) | 0.3 | 0.9 | 0.5 | 0.5 | 0.6 | 0.4 | 1.8 | 0.1 | 0.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of women | 3,181 | 4,804 | 1,311 | 1,492 | 1,843 | 1,134 | 1,038 | 1,167 | 7,985 |
| Eligible women response rate (EWRR) ${ }^{2}$ | 96.1 | 95.0 | 95.8 | 94.7 | 97.2 | 95.3 | 90.4 | 97.8 | 95.4 |
| Overall response rate (ORR) ${ }^{3}$ | 94.6 | 93.8 | 95.1 | 94.2 | 96.0 | 94.0 | 87.8 | 96.2 | 94.1 |

${ }^{1}$ Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$
\frac{100 * \mathrm{C}}{\mathrm{C}+\mathrm{HP}+\mathrm{R}+\mathrm{DNF}}
$$

${ }^{2}$ Using the number of eligible women falling into specific response categories, the eligible woman response rate (EWRR) is calculated as:

$$
100 \text { * EWC }
$$

$$
\mathrm{EWC}+\mathrm{EWNH}+\mathrm{EWP}+\mathrm{EWR}+\mathrm{EWPC}+\mathrm{EWI}+\mathrm{EWO}
$$

${ }^{3}$ The overall response rate (ORR) is calculated as: ORR $=$ HRR * EWRR/100

Table A. 3 Sample implementation: men
Percent distribution of households 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 Nigeria 2003

| Result | Residence |  | Region |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Urban | Rural | North Central | North East | North West | South East | South South | South <br> West |  |
| Selected households |  |  |  |  |  |  |  |  |  |
| Completed (C) | 92.7 | 91.3 | 96.5 | 97.0 | 92.8 | 85.9 | 85.8 | 92.3 | 91.9 |
| Household present but no competent respondent at home (HP) | 0.5 | 0.6 | 0.5 | 0.2 | 0.9 | 0.5 | 0.8 | 0.2 | 0.5 |
| Refused (R) | 1.1 | 0.3 | 0.0 | 0.2 | 0.0 | 1.5 | 1.1 | 0.9 | 0.6 |
| Dwelling not found (DNF) | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.2 | 0.1 |
| Household absent (HA) | 3.4 | 4.0 | 1.3 | 1.7 | 3.8 | 4.1 | 6.9 | 4.7 | 3.7 |
| Dwelling vacant/address not a dwelling (DV) | 1.9 | 3.1 | 1.3 | 0.7 | 2.3 | 6.9 | 3.7 | 1.1 | 2.6 |
| Dwelling destroyed (DD) | 0.1 | 0.4 | 0.5 | 0.0 | 0.2 | 0.3 | 0.8 | 0.0 | 0.3 |
| Other (O) | 0.2 | 0.3 | 0.0 | 0.0 | 0.0 | 0.8 | 0.5 | 0.5 | 0.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of sampled households | 1,003 | 1,566 | 396 | 406 | 554 | 391 | 379 | 443 | 2,569 |
| Household response rate (HRR) ${ }^{1}$ | 98.2 | 99.0 | 99.5 | 99.5 | 99.0 | 97.7 | 97.3 | 98.6 | 98.7 |
| Eligible men |  |  |  |  |  |  |  |  |  |
| Completed (EMC) | 91.9 | 90.7 | 97.2 | 88.9 | 93.3 | 84.9 | 85.8 | 94.3 | 91.2 |
| Not at home (EMNH) | 3.7 | 5.3 | 1.6 | 2.9 | 3.9 | 7.1 | 10.7 | 3.5 | 4.6 |
| Postponed (EMP) | 0.0 | 0.1 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Refused (EMR) | 1.2 | 0.5 | 0.0 | 1.5 | 0.9 | 2.2 | 0.3 | 0.0 | 0.8 |
| Partly completed (EMPC) | 0.4 | 0.3 | 0.5 | 0.0 | 0.3 | 1.3 | 0.0 | 0.0 | 0.3 |
| Incapacitated (EMI) | 0.9 | 0.5 | 0.7 | 1.3 | 0.2 | 1.3 | 0.5 | 0.2 | 0.7 |
| Other (EMO) | 1.9 | 2.7 | 0.0 | 5.5 | 1.2 | 3.2 | 2.7 | 2.0 | 2.4 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of men | 1,073 | 1,499 | 428 | 476 | 586 | 312 | 365 | 405 | 2,572 |
| Eligible men response rate (EMRR) ${ }^{2}$ | 91.9 | 90.7 | 97.2 | 88.9 | 93.3 | 84.9 | 85.8 | 94.3 | 91.2 |
| Overall response rate (ORR) ${ }^{3}$ | 90.2 | 89.8 | 96.7 | 88.4 | 92.4 | 83.0 | 83.4 | 93.0 | 90.0 |

${ }^{1}$ Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$
\frac{100 * C}{C+H P+R+D N F}
$$

${ }^{2}$ Using the number of eligible men falling into specific response categories, the eligible man response rate (EMRR) is calculated as:

$$
\frac{100 \text { *EMC }}{\mathrm{EMC}+\mathrm{EMNH}+\mathrm{EMP}+\mathrm{EMR}+\mathrm{EMPC}+\mathrm{EMI}+\mathrm{EMO}}
$$

${ }^{3}$ The overall response rate (ORR) is calculated as: ORR $=$ HRR * EMRR/100

## ESTIMATES OF SAMPLING ERRORS

Appenox $\boldsymbol{B}$

The estimates from a sample survey are affected by two types of errors: (1) nonsampling errors, and (2) sampling errors. Nonsampling 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 2003 Nigeria Demographic and Health Survey (NDHS) to minimize this type of error, nonsampling 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 2003 NDHS 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 formulas for calculating sampling errors. However, the 2003 NDHS sample is the result of a multi-stage stratified design, and, consequently, it was necessary to use more complex formulae. The computer software used to calculate sampling errors for the 2003 NDHS is the ISSA Sampling Error Module. This module used the Taylor linearization method of variance estimation for survey estimates that are means or proportions. The Jackknife repeated replication method is used for variance estimation of more complex statistics such as fertility and mortality rates.

The Taylor linearization 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:

$$
S E^{2}(r)=\operatorname{var}(r)=\frac{1-f}{x^{2}} \sum_{h=1}^{H}\left[\frac{m_{h}}{m_{h-1}}\left(\sum_{i=1}^{m_{h}} z_{h i}^{2}-\frac{z_{h}^{2}}{m_{h}}\right)\right]
$$

in which

$$
z_{h i}=y_{h i}-r x_{h i}, \text { and } z_{h}=y_{h}-r x_{h}
$$

where $h \quad$ represents the stratum which varies from 1 to $H$,
$m_{h} \quad$ is the total number of clusters selected in the $h^{\text {th }}$ stratum,
$y_{h i} \quad$ is the sum of the weighted values of variable $y$ in the $i^{\text {th }}$ cluster in the $h^{\text {th }}$ stratum,
$x_{h i} \quad$ is the sum of the weighted number of cases in the $i^{\text {th }}$ cluster in the $h^{\text {th }}$ stratum, and
$f \quad$ 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 formulae. Each replication considers all but one clusters in the calculation of the estimates. Pseudoindependent replications are thus created. In the 2003 NDHS, there were 362 non-empty clusters. Hence, 361 replications were created. The variance of a rate $r$ is calculated as follows:

$$
S E^{2}(r)=\operatorname{var}(r)=\frac{1}{k(k-1)} \sum_{i=1}^{k}\left(r_{i}-r\right)^{2}
$$

in which

$$
r_{i}=k r-(k-1) r_{(i)}
$$

where $r$ is the estimate computed from the full sample of 362 clusters,
$r_{(i)}$ is the estimate computed from the reduced sample of 361 clusters ( $i^{\text {th }}$ cluster excluded), and
$k \quad$ is the total number of clusters.
In addition to the standard error, ISSA computes the design effect (DEFT) for each estimate, which 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. ISSA also computes the relative error and confidence limits for the estimates.

Sampling errors for the 2003 NDHS are calculated for selected variables considered to be of primary interest for woman's survey and for man's surveys, respectively. The results are presented in this appendix for the country as a whole, for urban and rural areas, and for each of the 6 regions. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table B.1. Tables B. 2 to B. 10 present the value of the statistic (R), its standard error (SE), the number of unweighted $(\mathrm{N})$ and weighted (WN) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits ( $\mathrm{R} \pm 2 \mathrm{SE}$ ), for each variable. The DEFT is considered undefined when the standard error considering 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, as 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 aged 40-49) can be interpreted as follows: the overall average from the national sample is 6.808 and its standard error is 0.134. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate, i.e., $6.808 \pm 2 \times 0.134$. There is a high probability ( 95 percent) that the true average number of children ever born to all women aged 40 to 49 is between 6.540 and 7.077.

Sampling errors are analyzed for the national woman sample and for two separate groups of estimates: (1) means and proportions, and (2) complex demographic rates. The relative standard errors (SE/R) for the means and proportions range between 1.1 percent and 32.7 percent with an average of 6.36 percent; the highest relative standard errors are for estimates of very low values (e.g., currently using
female sterilization). If estimates of very low values (less than 10 percent) were removed, then the average drops to 4.2 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, 2.5 percent. However, for the mortality rates, the average relative standard error is much higher, 6.04 percent.

There are differentials in the relative standard error for the estimates of sub-populations. For example, for the variable want no more children, the relative standard errors as a percent of the estimated mean for the whole country, and for the urban areas are 4.9 percent and 6.1 percent, respectively.

For the total sample, the value of the design effect (DEFT), averaged over all variables, is 1.78 which means that, due to multi-stage clustering of the sample, the average standard error is increased by a factor of 1.78 over that in an equivalent simple random sample.

Table B. 1 List of selected variables for sampling errors, Nigeria 2003

| Variable | Estimate | Base population |
| :---: | :---: | :---: |
| WOMEN |  |  |
| Urban residence | Proportion | All women |
| Literate | Proportion | All women |
| No education | Proportion | All women |
| Secondary education or higher | Proportion | All women |
| Net attendance ratio for primary school | Ratio | Children 6-11 years |
| Never married | Proportion | All women |
| Currently married/in union | Proportion | All women |
| Married before age 20 | Proportion | All women age 20-49 |
| Currently pregnant | Proportion | All women |
| Children ever born | Mean | All women |
| Children surviving | Mean | All women |
| Children ever born to women age 40-49 | Mean | Women age 40-49 |
| Total fertility rate (3 years) | Proportion | All women |
| Knows any contraceptive method | Proportion | Currently married women |
| Ever using any contraceptive method | Proportion | Currently married women |
| Currently using any contraceptive method | Proportion | Currently married women |
| Currently using a modern method | Proportion | Currently married women |
| Currently using pill | Proportion | Currently married women |
| Currently using IUD | Proportion | Currently married women |
| Currently using condom | Proportion | Currently married women |
| Currently using female sterilization | Proportion | Currently married women |
| Currently using periodic abstinence | Proportion | Currently married women |
| Obtained method from public sector source | Proportion | Current users of modern methods |
| Wanting no more children | Proportion | Currently married women |
| Wanting to delay birth at least 2 years | Proportion | Currently married women |
| Ideal family size | Mean | All women |
| Neonatal mortality (0-4 years) | Rate | Children exposed to the risk of mortality |
| Postneonatal mortality (0-4 years) | Rate | Children exposed to the risk of mortality |
| Infant mortality rate (0-4 years) | Rate | Children exposed to the risk of mortality |
| Infant mortality rate (5-9 years) | Rate | Children exposed to the risk of mortality |
| Infant mortality rate (10-14 years) | Rate | Children exposed to the risk of mortality |
| Child mortality (0-4 years) | Rate | Children exposed to the risk of mortality |
| Under-five mortality (0-4 years) | Rate | Children exposed to the risk of mortality |
| Mothers received tetanus injection for last birth | Proportion | Women with at least one live birth in five years before the survey |
| Mothers received medical assistance at delivery | Proportion | Births in past 5 years ${ }^{1}$ |
| Had diarrhoea in two weeks before survey | Proportion | Children age 0-59 months |
| Treated with oral rehydration salts (ORS) | Proportion | Children with diarrhoea in two weeks before the survey |
| Taken to a health provider | Proportion | Children with diarrhoea in two weeks before the survey |
| Vaccination card seen | Proportion | Children age 12-23 months |
| Receiving vaccinations: <br> BCG <br> DPT (3 doses) <br> Polio (3 doses) <br> Measles <br> Fully immunized | Proportion | Children age 12-23 months |
| Height-for-age (below -2SD) | Proportion | Children age 0-59 months |
| Weight-for-height (below -2SD) | Proportion | Children age 0-59 months |
| Weight-for-age (below -2SD) | Proportion | Children age 0-59 months |
| BMI < 18.5 | Proportion | All women |
| Circumcised | Proportion | All women |
| Has heard of HIV/AIDS | Proportion | All women |
| Knows about condoms | Proportion | All women |
| Knows about limiting partners | Proportion | All women |
| MEN |  |  |
| Urban residence | Proportion | All men |
| Literate | Proportion | All men |
| No education | Proportion | All men |
| Secondary education or higher | Proportion | All men |
| Never married | Proportion | All men |
| Currently married/in union | Proportion | All men |
| Knows any contraceptive method | Proportion | All men |
| Ideal family size | Mean | All men |
| Has heard of HIV/AIDS | Proportion | All men age 15-49 |
| Knows about condoms | Proportion | All men age 15-49 |
| Knows about limiting partners | Proportion | All men age 15-49 |
| ${ }^{1}$ Births occurring 1-59 months before interview |  |  |


| Variable | Value <br> (R) | Stand- <br> ard <br> error <br> (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence limits |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Un- | Weight- |  |  |  |  |
|  |  |  | (N) | (WN) |  |  | R-2SE | $\mathrm{R}+2 \mathrm{SE}$ |
| WOMEN |  |  |  |  |  |  |  |  |
| Urban residence | 0.345 | 0.018 | 7620 | 7620 | 3.325 | 0.052 | 0.309 | 0.381 |
| Literate | 0.482 | 0.017 | 7620 | 7620 | 3.017 | 0.036 | 0.447 | 0.516 |
| No education | 0.416 | 0.017 | 7620 | 7620 | 2.970 | 0.040 | 0.383 | 0.450 |
| Secondary education or higher | 0.370 | 0.016 | 7620 | 7620 | 2.861 | 0.043 | 0.339 | 0.402 |
| Net attendance ratio for primary school | 0.601 | 0.016 | 5896 | 6111 | 2.044 | 0.027 | 0.568 | 0.634 |
| Never married | 0.253 | 0.010 | 7620 | 7620 | 2.002 | 0.039 | 0.233 | 0.273 |
| Currently married/in union | 0.700 | 0.011 | 7620 | 7620 | 2.014 | 0.015 | 0.679 | 0.721 |
| Married before age 20 | 0.663 | 0.012 | 5871 | 5904 | 2.019 | 0.019 | 0.638 | 0.688 |
| Currently pregnant | 0.114 | 0.005 | 7620 | 7620 | 1.385 | 0.044 | 0.104 | 0.124 |
| Children ever born | 3.094 | 0.056 | 7620 | 7620 | 1.517 | 0.018 | 2.983 | 3.206 |
| Children surviving | 2.381 | 0.038 | 7620 | 7620 | 1.346 | 0.016 | 2.306 | 2.457 |
| Children ever born to women age 40-49 | 6.808 | 0.134 | 1313 | 1271 | 1.508 | 0.020 | 6.540 | 7.077 |
| Total fertility rate (3 years) | 5.655 | 0.142 | na | 21194 | 1.696 | 0.025 | 5.372 | 5.939 |
| Knows any contraceptive method | 0.784 | 0.011 | 5157 | 5336 | 1.976 | 0.014 | 0.762 | 0.807 |
| Ever using contraceptive method | 0.307 | 0.013 | 5157 | 5336 | 2.076 | 0.043 | 0.281 | 0.334 |
| Currently using any contraceptive method | 0.126 | 0.007 | 5157 | 5336 | 1.451 | 0.053 | 0.112 | 0.139 |
| Currently using a modern method | 0.082 | 0.005 | 5157 | 5336 | 1.184 | 0.055 | 0.073 | 0.092 |
| Currently using pill | 0.018 | 0.002 | 5157 | 5336 | 1.247 | 0.128 | 0.013 | 0.023 |
| Currently using IUD | 0.007 | 0.001 | 5157 | 5336 | 1.023 | 0.165 | 0.005 | 0.010 |
| Currently using condom | 0.019 | 0.003 | 5157 | 5336 | 1.495 | 0.148 | 0.014 | 0.025 |
| Currently using female sterilization | 0.002 | 0.001 | 5157 | 5336 | 1.056 | 0.327 | 0.001 | 0.003 |
| Currently using periodic abstinence | 0.021 | 0.003 | 5157 | 5336 | 1.544 | 0.147 | 0.015 | 0.027 |
| Obtained method from public sector source | 0.228 | 0.022 | 616 | 597 | 1.287 | 0.095 | 0.185 | 0.272 |
| Wanting no more children | 0.183 | 0.009 | 5157 | 5336 | 1.658 | 0.049 | 0.165 | 0.201 |
| Wanting to delay birth at least 2 years | 0.338 | 0.010 | 5157 | 5336 | 1.569 | 0.031 | 0.318 | 0.359 |
| Ideal family size | 6.668 | 0.088 | 6783 | 6795 | 2.324 | 0.013 | 6.491 | 6.844 |
| Neonatal mortality (0-4 years) | 48.370 | 3.527 | 6101 | 6310 | 1.191 | 0.073 | 41.317 | 55.423 |
| Postneonatal mortality (0-4 years) | 51.587 | 4.234 | 6135 | 6343 | 1.430 | 0.082 | 43.119 | 60.054 |
| Infant mortality (0-4 years) | 99.956 | 6.202 | 6135 | 6343 | 1.481 | 0.062 | 87.552 | 112.360 |
| Infant mortality (5-9 years) | 119.858 | 5.482 | 5442 | 5574 | 1.123 | 0.046 | 108.894 | 130.822 |
| Infant Mortality (10-14 years) | 113.346 | 6.144 | 4436 | 4515 | 1.141 | 0.054 | 101.058 | 125.634 |
| Child mortality (0-4 years) | 111.693 | 6.819 | 6309 | 6530 | 1.404 | 0.061 | 98.056 | 125.331 |
| Under-five mortality (0-4 years) | 200.485 | 8.942 | 6343 | 6563 | 1.554 | 0.045 | 182.601 | 218.370 |
| Mothers received tetanus injection for last birth | 0.508 | 0.018 | 3775 | 3911 | 2.284 | 0.036 | 0.471 | 0.544 |
| Mothers received medical assistance at delivery | 0.362 | 0.019 | 6029 | 6219 | 2.464 | 0.053 | 0.324 | 0.401 |
| Had diarrhoea in two weeks before survey | 0.188 | 0.011 | 5186 | 5345 | 1.869 | 0.056 | 0.167 | 0.209 |
| Treated with oral rehydration salts (ORS) | 0.182 | 0.016 | 929 | 1006 | 1.173 | 0.086 | 0.151 | 0.213 |
| Taken to a health provider | 0.215 | 0.027 | 929 | 1006 | 1.916 | 0.128 | 0.160 | 0.270 |
| Vaccination card seen | 0.213 | 0.019 | 1015 | 999 | 1.407 | 0.087 | 0.176 | 0.250 |
| Received BCG | 0.483 | 0.025 | 1015 | 999 | 1.564 | 0.052 | 0.433 | 0.533 |
| Received DPT (3 doses) | 0.214 | 0.022 | 1015 | 999 | 1.696 | 0.104 | 0.169 | 0.258 |
| Received polio (3 doses) | 0.294 | 0.023 | 1015 | 999 | 1.576 | 0.078 | 0.249 | 0.340 |
| Received measles | 0.359 | 0.025 | 1015 | 999 | 1.636 | 0.070 | 0.309 | 0.409 |
| Fully immunized | 0.129 | 0.017 | 1015 | 999 | 1.629 | 0.135 | 0.094 | 0.164 |
| Height-for-age (below -2SD) | 0.383 | 0.011 | 4610 | 4789 | 1.501 | 0.030 | 0.360 | 0.406 |
| Weight-for-height (below -2SD) | 0.092 | 0.006 | 4610 | 4789 | 1.326 | 0.062 | 0.081 | 0.104 |
| Weight-for-age (below -2SD) | 0.287 | 0.013 | 4610 | 4789 | 1.774 | 0.044 | 0.262 | 0.312 |
| $\mathrm{BMI}<18.5$ | 0.152 | 0.008 | 6426 | 6362 | 1.736 | 0.051 | 0.136 | 0.167 |
| Circumcised | 0.190 | 0.014 | 7620 | 7620 | 3.012 | 0.071 | 0.163 | 0.217 |
| Has heard of HIV/AIDS | 0.863 | 0.010 | 7620 | 7620 | 2.488 | 0.011 | 0.844 | 0.883 |
| Knows about condoms | 0.446 | 0.011 | 7620 | 7620 | 1.938 | 0.025 | 0.424 | 0.468 |
| Knows about limiting partners | 0.599 | 0.013 | 7620 | 7620 | 2.241 | 0.021 | 0.574 | 0.624 |
| MEN |  |  |  |  |  |  |  |  |
| Urban residence | 0.372 | 0.021 | 2346 | 2346 | 2.078 | 0.056 | 0.330 | 0.413 |
| Literate | 0.725 | 0.014 | 2346 | 2346 | 1.486 | 0.019 | 0.697 | 0.752 |
| No education | 0.216 | 0.014 | 2346 | 2346 | 1.598 | 0.063 | 0.189 | 0.243 |
| Secondary education or higher | 0.527 | 0.019 | 2346 | 2346 | 1.801 | 0.035 | 0.490 | 0.564 |
| Never married | 0.447 | 0.017 | 2346 | 2346 | 1.628 | 0.037 | 0.413 | 0.480 |
| Currently married/in union | 0.531 | 0.017 | 2346 | 2346 | 1.606 | 0.031 | 0.498 | 0.564 |
| Knows any contraceptive method | 0.902 | 0.011 | 2346 | 2346 | 1.843 | 0.013 | 0.879 | 0.924 |
| Ideal family size | 8.590 | 0.291 | 1992 | 1982 | 1.624 | 0.034 | 8.008 | 9.171 |
| Has heard of HIV/AIDS | 0.970 | 0.005 | 2086 | 2093 | 1.457 | 0.006 | 0.960 | 0.981 |
| Knows about condoms | 0.634 | 0.019 | 2086 | 2093 | 1.824 | 0.030 | 0.595 | 0.672 |
| Knows about limiting partners | 0.802 | 0.013 | 2086 | 2093 | 1.520 | 0.017 | 0.775 | 0.828 |


| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence limits |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Weight- |  |  |  |  |
|  |  |  | (N) | (WN) |  |  | R-2SE | $\mathrm{R}+2 \mathrm{SE}$ |
| WOMEN |  |  |  |  |  |  |  |  |
| Urban residence | 1.000 | 0.000 | 3057 | 2629 | na | 0.000 | 1.000 | 1.000 |
| Literate | 0.675 | 0.023 | 3057 | 2629 | 2.679 | 0.034 | 0.630 | 0.721 |
| No education | 0.249 | 0.021 | 3057 | 2629 | 2.718 | 0.085 | 0.206 | 0.291 |
| Secondary education or higher | 0.556 | 0.025 | 3057 | 2629 | 2.795 | 0.045 | 0.505 | 0.606 |
| Net attendance ratio for primary school | 0.695 | 0.019 | 2241 | 1956 | 1.549 | 0.028 | 0.657 | 0.734 |
| Never married | 0.321 | 0.015 | 3057 | 2629 | 1.759 | 0.046 | 0.291 | 0.351 |
| Currently married/in union | 0.621 | 0.017 | 3057 | 2629 | 1.974 | 0.028 | 0.587 | 0.656 |
| Married before age 20 | 0.524 | 0.019 | 2368 | 2049 | 1.861 | 0.036 | 0.485 | 0.562 |
| Currently pregnant | 0.094 | 0.006 | 3057 | 2629 | 1.212 | 0.068 | 0.081 | 0.107 |
| Children ever born | 2.658 | 0.077 | 3057 | 2629 | 1.419 | 0.029 | 2.504 | 2.812 |
| Children surviving | 2.185 | 0.056 | 3057 | 2629 | 1.283 | 0.026 | 2.073 | 2.297 |
| Children ever born to women age 40-49 | 6.248 | 0.176 | 507 | 418 | 1.327 | 0.028 | 5.896 | 6.599 |
| Total fertility rate (3 years) | 4.861 | 0.202 | na | 7369 | 1.651 | 0.042 | 4.456 | 5.266 |
| Knows any contraceptive method | 0.910 | 0.010 | 1870 | 1633 | 1.561 | 0.011 | 0.890 | 0.931 |
| Ever using contraceptive method | 0.449 | 0.023 | 1870 | 1633 | 2.017 | 0.052 | 0.402 | 0.495 |
| Currently using any contraceptive method | 0.202 | 0.014 | 1870 | 1633 | 1.501 | 0.069 | 0.174 | 0.230 |
| Currently using a modern method | 0.139 | 0.010 | 1870 | 1633 | 1.265 | 0.073 | 0.119 | 0.160 |
| Currently using pill | 0.033 | 0.005 | 1870 | 1633 | 1.228 | 0.153 | 0.023 | 0.043 |
| Currently using IUD | 0.019 | 0.004 | 1870 | 1633 | 1.161 | 0.192 | 0.012 | 0.026 |
| Currently using condom | 0.040 | 0.008 | 1870 | 1633 | 1.678 | 0.190 | 0.025 | 0.055 |
| Currently using female sterilization | 0.003 | 0.001 | 1870 | 1633 | 0.970 | 0.392 | 0.001 | 0.006 |
| Currently using periodic abstinence | 0.029 | 0.005 | 1870 | 1633 | 1.169 | 0.155 | 0.020 | 0.039 |
| Obtained method from public sector source | 0.207 | 0.027 | 354 | 322 | 1.262 | 0.131 | 0.153 | 0.262 |
| Wanting no more children | 0.218 | 0.013 | 1870 | 1633 | 1.389 | 0.061 | 0.192 | 0.245 |
| Wanting to delay birth at least 2 years | 0.323 | 0.017 | 1870 | 1633 | 1.604 | 0.054 | 0.288 | 0.357 |
| Ideal family size | 6.023 | 0.148 | 2746 | 2409 | 2.699 | 0.025 | 5.727 | 6.320 |
| Neonatal mortality (10 years) | 36.679 | 4.256 | 4017 | 3393 | 1.305 | 0.116 | 28.167 | 45.191 |
| Postneonatal mortality (10 years) | 44.109 | 4.752 | 4023 | 3397 | 1.352 | 0.108 | 34.605 | 53.612 |
| Infant mortality (10 years) | 80.788 | 7.678 | 4023 | 3397 | 1.576 | 0.095 | 65.432 | 96.144 |
| Child mortality (10 years) | 78.464 | 7.803 | 4073 | 3437 | 1.383 | 0.099 | 62.859 | 94.069 |
| Under five mortality (10 years) | 152.913 | 11.956 | 4079 | 3441 | 1.770 | 0.078 | 129.000 | 176.826 |
| Mothers received tetanus injection for last birth | 0.734 | 0.026 | 1350 | 1144 | 2.176 | 0.036 | 0.681 | 0.787 |
| Mothers received medical assistance at delivery | 0.588 | 0.035 | 2118 | 1795 | 2.529 | 0.060 | 0.518 | 0.658 |
| Had diarrhoea in two weeks before survey | 0.145 | 0.020 | 1902 | 1620 | 2.226 | 0.137 | 0.105 | 0.185 |
| Treated with oral rehydration salts (ORS) | 0.229 | 0.027 | 281 | 235 | 0.968 | 0.119 | 0.174 | 0.283 |
| Taken to a health provider | 0.303 | 0.089 | 281 | 235 | 2.798 | 0.293 | 0.125 | 0.481 |
| Vaccination card seen | 0.356 | 0.032 | 395 | 312 | 1.266 | 0.090 | 0.292 | 0.421 |
| Received BCG | 0.701 | 0.043 | 395 | 312 | 1.760 | 0.062 | 0.614 | 0.788 |
| Received DPT (3 doses) | 0.402 | 0.036 | 395 | 312 | 1.377 | 0.089 | 0.331 | 0.474 |
| Received polio (3 doses) | 0.420 | 0.047 | 395 | 312 | 1.801 | 0.112 | 0.326 | 0.514 |
| Received measles | 0.521 | 0.047 | 395 | 312 | 1.749 | 0.089 | 0.428 | 0.614 |
| Fully immunized | 0.251 | 0.035 | 395 | 312 | 1.527 | 0.140 | 0.181 | 0.322 |
| Height-for-age (below -2SD) | 0.288 | 0.020 | 1748 | 1553 | 1.665 | 0.068 | 0.249 | 0.327 |
| Weight-for-height (below-2SD) | 0.083 | 0.009 | 1748 | 1553 | 1.379 | 0.111 | 0.064 | 0.101 |
| Weight-for-age (below -2SD) | 0.222 | 0.022 | 1748 | 1553 | 2.020 | 0.100 | 0.178 | 0.267 |
| BMI $<18.5$ | 0.131 | 0.010 | 2642 | 2258 | 1.552 | 0.078 | 0.111 | 0.152 |
| Circumcised | 0.283 | 0.017 | 3057 | 2629 | 2.085 | 0.060 | 0.249 | 0.317 |
| Has heard of HIV/AIDS | 0.947 | 0.005 | 3057 | 2629 | 1.269 | 0.005 | 0.937 | 0.957 |
| Knows about condoms | 0.575 | 0.014 | 3057 | 2629 | 1.546 | 0.024 | 0.548 | 0.603 |
| Knows about limiting partners | 0.730 | 0.014 | 3057 | 2629 | 1.740 | 0.019 | 0.702 | 0.758 |
| MEN |  |  |  |  |  |  |  |  |
| Urban residence | 1.000 | 0.000 | 986 | 872 | na | 0.000 | 1.000 | 1.000 |
| Literate | 0.868 | 0.012 | 986 | 872 | 1.145 | 0.014 | 0.843 | 0.893 |
| No education | 0.112 | 0.013 | 986 | 872 | 1.319 | 0.118 | 0.085 | 0.139 |
| Secondary education or higher | 0.658 | 0.027 | 986 | 872 | 1.766 | 0.041 | 0.604 | 0.711 |
| Never married | 0.510 | 0.024 | 986 | 872 | 1.526 | 0.048 | 0.461 | 0.558 |
| Currently married/in union | 0.460 | 0.024 | 986 | 872 | 1.515 | 0.052 | 0.412 | 0.508 |
| Knows any contraceptive method | 0.949 | 0.010 | 986 | 872 | 1.443 | 0.011 | 0.929 | 0.969 |
| Ideal family size | 6.567 | 0.301 | 817 | 729 | 1.557 | 0.046 | 5.964 | 7.170 |
| Has heard of HIV/AIDS | 0.990 | 0.004 | 887 | 792 | 1.118 | 0.004 | 0.982 | 0.997 |
| Knows about condoms | 0.706 | 0.022 | 887 | 792 | 1.420 | 0.031 | 0.663 | 0.750 |
| Knows about limiting partners | 0.831 | 0.017 | 887 | 792 | 1.352 | 0.020 | 0.797 | 0.865 |


| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence limits |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Weight- |  |  |  |  |
|  |  |  | (N) | (WN) |  |  | R-2SE | $\mathrm{R}+2 \mathrm{SE}$ |
| WOMEN |  |  |  |  |  |  |  |  |
| Urban residence | 0.000 | 0.000 | 4563 | 4991 | na | na | 0.000 | 0.000 |
| Literate | 0.380 | 0.022 | 4563 | 4991 | 3.096 | 0.059 | 0.335 | 0.424 |
| No education | 0.504 | 0.022 | 4563 | 4991 | 2.986 | 0.044 | 0.460 | 0.548 |
| Secondary education or higher | 0.273 | 0.018 | 4563 | 4991 | 2.690 | 0.065 | 0.237 | 0.308 |
| Net attendance ratio for primary school | 0.557 | 0.023 | 3655 | 4155 | 2.184 | 0.040 | 0.512 | 0.602 |
| Never married | 0.217 | 0.013 | 4563 | 4991 | 2.092 | 0.059 | 0.191 | 0.242 |
| Currently married/in union | 0.742 | 0.013 | 4563 | 4991 | 1.966 | 0.017 | 0.716 | 0.767 |
| Married before age 20 | 0.737 | 0.015 | 3503 | 3855 | 2.026 | 0.020 | 0.706 | 0.767 |
| Currently pregnant | 0.124 | 0.007 | 4563 | 4991 | 1.426 | 0.056 | 0.110 | 0.138 |
| Children ever born | 3.324 | 0.073 | 4563 | 4991 | 1.501 | 0.022 | 3.177 | 3.470 |
| Children surviving | 2.485 | 0.050 | 4563 | 4991 | 1.367 | 0.020 | 2.386 | 2.584 |
| Children ever born to women age 40-49 | 7.083 | 0.176 | 806 | 853 | 1.513 | 0.025 | 6.731 | 7.435 |
| Total fertility rate (3 years) | 6.075 | 0.182 | na | 13887 | 1.670 | 0.030 | 5.710 | 6.439 |
| Knows any contraceptive method | 0.729 | 0.015 | 3287 | 3703 | 1.894 | 0.020 | 0.700 | 0.758 |
| Ever using contraceptive method | 0.245 | 0.015 | 3287 | 3703 | 2.058 | 0.063 | 0.214 | 0.276 |
| Currently using any contraceptive method | 0.092 | 0.007 | 3287 | 3703 | 1.457 | 0.080 | 0.077 | 0.107 |
| Currently using a modern method | 0.057 | 0.005 | 3287 | 3703 | 1.166 | 0.082 | 0.048 | 0.067 |
| Currently using pill | 0.011 | 0.002 | 3287 | 3703 | 1.342 | 0.218 | 0.006 | 0.016 |
| Currently using IUD | 0.002 | 0.001 | 3287 | 3703 | 0.952 | 0.351 | 0.001 | 0.004 |
| Currently using condom | 0.010 | 0.002 | 3287 | 3703 | 1.159 | 0.197 | 0.006 | 0.015 |
| Currently using female sterilization | 0.001 | 0.001 | 3287 | 3703 | 1.149 | 0.522 | 0.000 | 0.003 |
| Currently using periodic abstinence | 0.017 | 0.004 | 3287 | 3703 | 1.765 | 0.234 | 0.009 | 0.025 |
| Obtained method from public sector source | 0.253 | 0.036 | 262 | 275 | 1.323 | 0.141 | 0.181 | 0.324 |
| Wanting no more children | 0.167 | 0.011 | 3287 | 3703 | 1.727 | 0.067 | 0.145 | 0.190 |
| Wanting to delay birth at least 2 years | 0.345 | 0.013 | 3287 | 3703 | 1.548 | 0.037 | 0.320 | 0.371 |
| Ideal family size | 7.021 | 0.108 | 4037 | 4387 | 2.139 | 0.015 | 6.805 | 7.237 |
| Neonatal mortality (10 years) | 59.979 | 3.944 | 7499 | 8463 | 1.205 | 0.066 | 52.091 | 67.866 |
| Postneonatal mortality (10 years) | 60.758 | 4.105 | 7520 | 8487 | 1.350 | 0.068 | 52.549 | 68.967 |
| Infant mortality (10 years) | 120.736 | 5.790 | 7520 | 8487 | 1.324 | 0.048 | 109.157 | 132.316 |
| Child mortality (10 years) | 138.678 | 8.578 | 7672 | 8674 | 1.704 | 0.062 | 121.521 | 155.835 |
| Under five mortality (10 years) | 242.671 | 9.006 | 7693 | 8699 | 1.496 | 0.037 | 224.659 | 260.683 |
| Mothers received tetanus injection for last birth | 0.414 | 0.022 | 2425 | 2766 | 2.200 | 0.052 | 0.371 | 0.457 |
| Mothers received medical assistance at delivery | 0.271 | 0.020 | 3911 | 4424 | 2.288 | 0.075 | 0.230 | 0.311 |
| Had diarrhoea in two weeks before survey | 0.207 | 0.012 | 3284 | 3726 | 1.686 | 0.059 | 0.182 | 0.231 |
| Treated with oral rehydration salts (ORS) | 0.168 | 0.018 | 648 | 771 | 1.179 | 0.107 | 0.132 | 0.204 |
| Taken to a health provider | 0.188 | 0.020 | 648 | 771 | 1.240 | 0.106 | 0.148 | 0.227 |
| Vaccination card seen | 0.148 | 0.020 | 620 | 687 | 1.386 | 0.137 | 0.107 | 0.188 |
| Received BCG | 0.384 | 0.030 | 620 | 687 | 1.517 | 0.078 | 0.324 | 0.444 |
| Received DPT (3 doses) | 0.128 | 0.027 | 620 | 687 | 1.950 | 0.209 | 0.075 | 0.181 |
| Received polio (3 doses) | 0.237 | 0.024 | 620 | 687 | 1.376 | 0.100 | 0.190 | 0.285 |
| Received measles | 0.285 | 0.028 | 620 | 687 | 1.555 | 0.100 | 0.228 | 0.342 |
| Fully immunized | 0.074 | 0.018 | 620 | 687 | 1.742 | 0.247 | 0.037 | 0.110 |
| Height-for-age (below -2SD) | 0.429 | 0.014 | 2862 | 3236 | 1.445 | 0.033 | 0.401 | 0.457 |
| Weight-for-height (below -2SD) | 0.097 | 0.007 | 2862 | 3236 | 1.275 | 0.073 | 0.083 | 0.111 |
| Weight-for-age (below -2SD) | 0.318 | 0.015 | 2862 | 3236 | 1.621 | 0.047 | 0.288 | 0.347 |
| BMI $<18.5$ | 0.163 | 0.011 | 3784 | 4105 | 1.804 | 0.067 | 0.141 | 0.184 |
| Circumcised | 0.140 | 0.019 | 4563 | 4991 | 3.613 | 0.132 | 0.103 | 0.178 |
| Has heard of HIV/AIDS | 0.819 | 0.015 | 4563 | 4991 | 2.593 | 0.018 | 0.789 | 0.848 |
| Knows about condoms | 0.378 | 0.015 | 4563 | 4991 | 2.109 | 0.040 | 0.348 | 0.409 |
| Knows about limiting partners | 0.530 | 0.018 | 4563 | 4991 | 2.404 | 0.034 | 0.494 | 0.565 |
| MEN |  |  |  |  |  |  |  |  |
| Urban residence | 0.000 | 0.000 | 1360 | 1474 | na | na | 0.000 | 0.000 |
| Literate | 0.640 | 0.020 | 1360 | 1474 | 1.515 | 0.031 | 0.600 | 0.679 |
| No education | 0.278 | 0.020 | 1360 | 1474 | 1.622 | 0.071 | 0.238 | 0.317 |
| Secondary education or higher | 0.450 | 0.025 | 1360 | 1474 | 1.870 | 0.056 | 0.399 | 0.500 |
| Never married | 0.410 | 0.023 | 1360 | 1474 | 1.709 | 0.056 | 0.364 | 0.455 |
| Currently married/in union | 0.573 | 0.023 | 1360 | 1474 | 1.690 | 0.040 | 0.527 | 0.618 |
| Knows any contraceptive method | 0.874 | 0.017 | 1360 | 1474 | 1.881 | 0.019 | 0.840 | 0.908 |
| Ideal family size | 9.767 | 0.414 | 1175 | 1253 | 1.591 | 0.042 | 8.940 | 10.594 |
| Has heard of HIV/AIDS | 0.959 | 0.008 | 1199 | 1301 | 1.455 | 0.009 | 0.942 | 0.975 |
| Knows about condoms | 0.590 | 0.029 | 1199 | 1301 | 2.007 | 0.048 | 0.533 | 0.647 |
| Knows about limiting partners | 0.784 | 0.019 | 1199 | 1301 | 1.591 | 0.024 | 0.746 | 0.822 |


| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Rela- <br> tive <br> error (SE/R) | Confidence limits |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Weight- |  |  |  |  |
|  |  |  | (N) | (WN) |  |  | R-2SE | $\mathrm{R}+2 \mathrm{SE}$ |
| WOMEN |  |  |  |  |  |  |  |  |
| Urban residence | 0.251 | 0.030 | 1256 | 1121 | 2.484 | 0.121 | 0.190 | 0.312 |
| Literate | 0.434 | 0.040 | 1256 | 1121 | 2.879 | 0.093 | 0.353 | 0.515 |
| No education | 0.359 | 0.034 | 1256 | 1121 | 2.537 | 0.096 | 0.291 | 0.428 |
| Secondary education or higher | 0.341 | 0.031 | 1256 | 1121 | 2.349 | 0.092 | 0.278 | 0.404 |
| Net attendance ratio for primary school | 0.702 | 0.033 | 1067 | 978 | 1.951 | 0.046 | 0.637 | 0.767 |
| Never married | 0.280 | 0.027 | 1256 | 1121 | 2.154 | 0.098 | 0.225 | 0.334 |
| Currently married/in union | 0.673 | 0.025 | 1256 | 1121 | 1.874 | 0.037 | 0.623 | 0.723 |
| Married before age 20 | 0.635 | 0.023 | 996 | 879 | 1.503 | 0.036 | 0.590 | 0.681 |
| Currently pregnant | 0.094 | 0.012 | 1256 | 1121 | 1.466 | 0.128 | 0.070 | 0.119 |
| Children ever born | 2.976 | 0.111 | 1256 | 1121 | 1.264 | 0.037 | 2.754 | 3.198 |
| Children surviving | 2.404 | 0.077 | 1256 | 1121 | 1.111 | 0.032 | 2.250 | 2.559 |
| Children ever born to women age 40-49 | 7.354 | 0.338 | 202 | 169 | 1.690 | 0.046 | 6.677 | 8.030 |
| Total fertility rate (3 years) | 5.704 | 0.335 | na | 3146 | 1.445 | 0.059 | 5.035 | 6.374 |
| Knows any contraceptive method | 0.774 | 0.032 | 848 | 754 | 2.198 | 0.041 | 0.711 | 0.837 |
| Ever using contraceptive method | 0.324 | 0.032 | 848 | 754 | 1.958 | 0.097 | 0.261 | 0.387 |
| Currently using any contraceptive method | 0.133 | 0.015 | 848 | 754 | 1.276 | 0.112 | 0.103 | 0.163 |
| Currently using a modern method | 0.103 | 0.012 | 848 | 754 | 1.133 | 0.115 | 0.080 | 0.127 |
| Currently using pill | 0.022 | 0.005 | 848 | 754 | 1.062 | 0.245 | 0.011 | 0.032 |
| Currently using IUD | 0.001 | 0.001 | 848 | 754 | 0.747 | 0.713 | 0.000 | 0.003 |
| Currently using condom | 0.015 | 0.005 | 848 | 754 | 1.121 | 0.316 | 0.005 | 0.024 |
| Currently using female sterilization | 0.008 | 0.003 | 848 | 754 | 0.955 | 0.371 | 0.002 | 0.014 |
| Currently using periodic abstinence | 0.019 | 0.007 | 848 | 754 | 1.429 | 0.349 | 0.006 | 0.033 |
| Obtained method from public sector source | 0.330 | 0.068 | 121 | 97 | 1.588 | 0.206 | 0.194 | 0.467 |
| Wanting no more children | 0.241 | 0.020 | 848 | 754 | 1.392 | 0.085 | 0.200 | 0.282 |
| Wanting to delay birth at least 2 years | 0.358 | 0.019 | 848 | 754 | 1.168 | 0.054 | 0.320 | 0.397 |
| Ideal family size | 6.194 | 0.197 | 1184 | 1060 | 2.273 | 0.032 | 5.800 | 6.589 |
| Neonatal mortality (10 years) | 53.260 | 8.562 | 1898 | 1680 | 1.398 | 0.161 | 36.136 | 70.384 |
| Postneonatal mortality (10 years) | 49.379 | 7.317 | 1899 | 1680 | 1.332 | 0.148 | 34.745 | 64.013 |
| Infant mortality (10 years) | 102.638 | 10.125 | 1899 | 1680 | 1.235 | 0.099 | 82.389 | 122.887 |
| Child mortality (10 years) | 69.698 | 10.853 | 1916 | 1699 | 1.500 | 0.156 | 47.992 | 91.403 |
| Under five mortality (10 years) | 165.18 | 13.746 | 1917 | 1699 | 1.335 | 0.083 | 137.691 | 192.674 |
| Mothers received tetanus injection for last birth | 0.626 | 0.037 | 645 | 575 | 1.967 | 0.060 | 0.551 | 0.701 |
| Mothers received medical assistance at delivery | 0.501 | 0.033 | 1015 | 897 | 1.648 | 0.066 | 0.435 | 0.567 |
| Had diarrhoea in two weeks before survey | 0.149 | 0.022 | 895 | 781 | 1.712 | 0.145 | 0.106 | 0.192 |
| Treated with oral rehydration salts (ORS) | 0.223 | 0.059 | 138 | 116 | 1.432 | 0.262 | 0.106 | 0.340 |
| Taken to a health provider | 0.397 | 0.039 | 138 | 116 | 0.846 | 0.098 | 0.319 | 0.476 |
| Vaccination card seen | 0.229 | 0.046 | 181 | 149 | 1.384 | 0.199 | 0.138 | 0.321 |
| Received BCG | 0.634 | 0.057 | 181 | 149 | 1.485 | 0.090 | 0.520 | 0.748 |
| Received DPT (3 doses) | 0.238 | 0.048 | 181 | 149 | 1.366 | 0.200 | 0.143 | 0.334 |
| Received polio (3 doses) | 0.368 | 0.049 | 181 | 149 | 1.288 | 0.134 | 0.269 | 0.467 |
| Received measles | 0.446 | 0.067 | 181 | 149 | 1.675 | 0.150 | 0.312 | 0.580 |
| Fully immunized | 0.124 | 0.033 | 181 | 149 | 1.274 | 0.264 | 0.059 | 0.189 |
| Height-for-age (below -2SD) | 0.314 | 0.027 | 850 | 758 | 1.625 | 0.087 | 0.260 | 0.369 |
| Weight-for-height (below -2SD) | 0.055 | 0.009 | 850 | 758 | 1.130 | 0.163 | 0.037 | 0.073 |
| Weight-for-age (below -2SD) | 0.196 | 0.021 | 850 | 758 | 1.481 | 0.108 | 0.154 | 0.238 |
| BMI $<18.5$ | 0.066 | 0.009 | 1069 | 944 | 1.229 | 0.142 | 0.047 | 0.085 |
| Circumcised | 0.096 | 0.035 | 1256 | 1121 | 4.165 | 0.361 | 0.027 | 0.165 |
| Has heard of HIV/AIDS | 0.845 | 0.037 | 1256 | 1121 | 3.611 | 0.044 | 0.771 | 0.919 |
| Knows about condoms | 0.347 | 0.027 | 1256 | 1121 | 1.985 | 0.077 | 0.293 | 0.400 |
| Knows about limiting partners | 0.556 | 0.041 | 1256 | 1121 | 2.946 | 0.074 | 0.474 | 0.639 |
| MEN |  |  |  |  |  |  |  |  |
| Urban residence | 0.278 | 0.041 | 416 | 348 | 1.853 | 0.147 | 0.197 | 0.360 |
| Literate | 0.752 | 0.032 | 416 | 348 | 1.496 | 0.042 | 0.689 | 0.816 |
| No education | 0.134 | 0.027 | 416 | 348 | 1.600 | 0.199 | 0.081 | 0.188 |
| Secondary education or higher | 0.631 | 0.037 | 416 | 348 | 1.553 | 0.058 | 0.558 | 0.705 |
| Never married | 0.495 | 0.042 | 416 | 348 | 1.693 | 0.084 | 0.412 | 0.579 |
| Currently married/in union | 0.499 | 0.041 | 416 | 348 | 1.682 | 0.083 | 0.417 | 0.582 |
| Knows any contraceptive method | 0.930 | 0.018 | 416 | 348 | 1.418 | 0.019 | 0.895 | 0.966 |
| Ideal family size | 8.042 | 0.498 | 407 | 339 | 1.342 | 0.062 | 7.045 | 9.039 |
| Has heard of HIV/AIDS | 0.971 | 0.010 | 374 | 313 | 1.125 | 0.010 | 0.951 | 0.990 |
| Knows about condoms | 0.681 | 0.029 | 374 | 313 | 1.205 | 0.043 | 0.623 | 0.739 |
| Knows about limiting partners | 0.838 | 0.024 | 374 | 313 | 1.273 | 0.029 | 0.789 | 0.886 |


| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence limits |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Weight- |  |  |  |  |
|  |  |  | (N) | (WN) |  |  | R-2SE | $\mathrm{R}+2 \mathrm{SE}$ |
| WOMEN |  |  |  |  |  |  |  |  |
| Urban residence | 0.275 | 0.025 | 1413 | 1368 | 2.094 | 0.090 | 0.225 | 0.325 |
| Literate | 0.256 | 0.030 | 1413 | 1368 | 2.590 | 0.118 | 0.196 | 0.316 |
| No education | 0.678 | 0.032 | 1413 | 1368 | 2.552 | 0.047 | 0.615 | 0.742 |
| Secondary education or higher | 0.157 | 0.021 | 1413 | 1368 | 2.201 | 0.136 | 0.114 | 0.199 |
| Net attendance ratio for primary school | 0.444 | 0.040 | 1301 | 1278 | 2.018 | 0.089 | 0.365 | 0.523 |
| Never married | 0.124 | 0.017 | 1413 | 1368 | 1.949 | 0.138 | 0.090 | 0.158 |
| Currently married/in union | 0.821 | 0.020 | 1413 | 1368 | 1.941 | 0.024 | 0.781 | 0.860 |
| Married before age 20 | 0.855 | 0.016 | 1108 | 1074 | 1.477 | 0.018 | 0.823 | 0.886 |
| Currently pregnant | 0.142 | 0.013 | 1413 | 1368 | 1.379 | 0.090 | 0.117 | 0.168 |
| Children ever born | 3.927 | 0.125 | 1413 | 1368 | 1.368 | 0.032 | 3.677 | 4.178 |
| Children surviving | 2.859 | 0.108 | 1413 | 1368 | 1.616 | 0.038 | 2.644 | 3.075 |
| Children ever born to women age 40-49 | 7.412 | 0.364 | 247 | 241 | 1.587 | 0.049 | 6.683 | 8.140 |
| Total fertility rate (3 years) | 7.027 | 0.299 | na | 3808 | 1.985 | 0.043 | 6.428 | 7.626 |
| Knows any contraceptive method | 0.635 | 0.022 | 1133 | 1122 | 1.535 | 0.035 | 0.591 | 0.679 |
| Ever using contraceptive method | 0.123 | 0.013 | 1133 | 1122 | 1.307 | 0.104 | 0.098 | 0.149 |
| Currently using any contraceptive method | 0.042 | 0.006 | 1133 | 1122 | 1.038 | 0.147 | 0.030 | 0.055 |
| Currently using a modern method | 0.030 | 0.004 | 1133 | 1122 | 0.851 | 0.143 | 0.022 | 0.039 |
| Currently using pill | 0.007 | 0.003 | 1133 | 1122 | 1.246 | 0.434 | 0.001 | 0.014 |
| Currently using IUD | 0.002 | 0.001 | 1133 | 1122 | 1.100 | 0.757 | 0.000 | 0.005 |
| Currently using condom | 0.002 | 0.001 | 1133 | 1122 | 1.014 | 0.654 | 0.000 | 0.005 |
| Currently using female sterilization | 0.000 | 0.000 | 1133 | 1122 | 0.551 | 1.018 | 0.000 | 0.001 |
| Currently using periodic abstinence | 0.006 | 0.003 | 1133 | 1122 | 1.316 | 0.486 | 0.000 | 0.013 |
| Obtained method from public sector source | 0.535 | 0.107 | 32 | 29 | 1.189 | 0.199 | 0.322 | 0.748 |
| Wanting no more children | 0.163 | 0.020 | 1133 | 1122 | 1.794 | 0.121 | 0.123 | 0.202 |
| Wanting to delay birth at least 2 years | 0.344 | 0.024 | 1133 | 1122 | 1.692 | 0.069 | 0.296 | 0.391 |
| Ideal family size | 7.817 | 0.178 | 1107 | 1060 | 1.651 | 0.023 | 7.462 | 8.173 |
| Neonatal mortality (10 years) | 60.637 | 7.661 | 2842 | 2802 | 1.417 | 0.126 | 45.316 | 75.959 |
| Postneonatal mortality (10 years) | 64.856 | 5.691 | 2850 | 2809 | 1.108 | 0.088 | 53.474 | 76.238 |
| Infant mortality (10 years) | 125.493 | 8.204 | 2850 | 2809 | 1.201 | 0.065 | 109.086 | 141.900 |
| Child mortality (10 years) | 153.707 | 10.692 | 2915 | 2884 | 1.274 | 0.070 | 132.322 | 175.092 |
| Under five mortality (10 years) | 259.911 | 11.454 | 2923 | 2891 | 1.177 | 0.044 | 237.002 | 282.820 |
| Mothers received tetanus injection for last birth | 0.431 | 0.036 | 867 | 862 | 2.178 | 0.084 | 0.358 | 0.503 |
| Mothers received medical assistance at delivery | 0.220 | 0.027 | 1487 | 1472 | 2.100 | 0.123 | 0.166 | 0.275 |
| Had diarrhoea in two weeks before survey | 0.351 | 0.018 | 1239 | 1225 | 1.331 | 0.052 | 0.314 | 0.387 |
| Treated with oral rehydration salts (ORS) | 0.138 | 0.020 | 403 | 430 | 1.162 | 0.148 | 0.097 | 0.179 |
| Taken to a health provider | 0.076 | 0.017 | 403 | 430 | 1.298 | 0.228 | 0.041 | 0.111 |
| Vaccination card seen | 0.171 | 0.037 | 236 | 219 | 1.435 | 0.219 | 0.096 | 0.246 |
| Received BCG | 0.311 | 0.048 | 236 | 219 | 1.525 | 0.154 | 0.215 | 0.407 |
| Received DPT (3 doses) | 0.091 | 0.026 | 236 | 219 | 1.361 | 0.287 | 0.039 | 0.143 |
| Received polio (3 doses) | 0.248 | 0.044 | 236 | 219 | 1.521 | 0.178 | 0.160 | 0.336 |
| Received measles | 0.225 | 0.035 | 236 | 219 | 1.242 | 0.155 | 0.156 | 0.295 |
| Fully immunized | 0.060 | 0.018 | 236 | 219 | 1.171 | 0.310 | 0.023 | 0.096 |
| Height-for-age (below-2SD) | 0.430 | 0.022 | 1099 | 1089 | 1.375 | 0.052 | 0.386 | 0.475 |
| Weight-for-height (below -2SD) | 0.079 | 0.011 | 1099 | 1089 | 1.298 | 0.133 | 0.058 | 0.100 |
| Weight-for-age (below-2SD) | 0.331 | 0.023 | 1099 | 1089 | 1.449 | 0.069 | 0.285 | 0.376 |
| $\mathrm{BMI}<18.5$ | 0.230 | 0.021 | 1120 | 1095 | 1.687 | 0.092 | 0.188 | 0.273 |
| Circumcised | 0.013 | 0.003 | 1413 | 1368 | 1.069 | 0.250 | 0.006 | 0.019 |
| Has heard of HIV/AIDS | 0.757 | 0.018 | 1413 | 1368 | 1.547 | 0.023 | 0.722 | 0.793 |
| Knows about condoms | 0.347 | 0.032 | 1413 | 1368 | 2.496 | 0.091 | 0.284 | 0.410 |
| Knows about limiting partners | 0.506 | 0.021 | 1413 | 1368 | 1.557 | 0.041 | 0.465 | 0.548 |
| MEN |  |  |  |  |  |  |  |  |
| Urban residence | 0.286 | 0.031 | 423 | 421 | 1.426 | 0.110 | 0.223 | 0.349 |
| Literate | 0.599 | 0.031 | 423 | 421 | 1.284 | 0.051 | 0.538 | 0.661 |
| No education | 0.419 | 0.041 | 423 | 421 | 1.727 | 0.099 | 0.336 | 0.502 |
| Secondary education or higher | 0.357 | 0.044 | 423 | 421 | 1.902 | 0.124 | 0.268 | 0.446 |
| Never married | 0.300 | 0.048 | 423 | 421 | 2.147 | 0.160 | 0.204 | 0.395 |
| Currently married/in union | 0.672 | 0.048 | 423 | 421 | 2.116 | 0.072 | 0.575 | 0.769 |
| Knows any contraceptive method | 0.780 | 0.042 | 423 | 421 | 2.103 | 0.054 | 0.695 | 0.865 |
| Ideal family size | 12.484 | 1.173 | 297 | 284 | 1.831 | 0.094 | 10.138 | 14.830 |
| Has heard of HIV/AIDS | 0.973 | 0.008 | 376 | 377 | 0.954 | 0.008 | 0.957 | 0.989 |
| Knows about condoms | 0.475 | 0.055 | 376 | 377 | 2.131 | 0.116 | 0.365 | 0.585 |
| Knows about limiting partners | 0.802 | 0.026 | 376 | 377 | 1.254 | 0.032 | 0.750 | 0.853 |


| Table B.7 Sampling errors for North West sample, | Nigeria | 2003 |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |


| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence limits |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Weight- |  |  |  |  |
|  |  |  | (N) | (WN) |  |  | R-2SE | $\mathrm{R}+2 \mathrm{SE}$ |
| WOMEN |  |  |  |  |  |  |  |  |
| Urban residence | 0.404 | 0.103 | 1081 | 737 | 6.890 | 0.255 | 0.198 | 0.610 |
| Literate | 0.856 | 0.021 | 1081 | 737 | 2.009 | 0.025 | 0.813 | 0.899 |
| No education | 0.077 | 0.015 | 1081 | 737 | 1.850 | 0.194 | 0.047 | 0.107 |
| Secondary education or higher | 0.675 | 0.039 | 1081 | 737 | 2.758 | 0.058 | 0.596 | 0.754 |
| Net attendance ratio for primary school | 0.802 | 0.037 | 670 | 437 | 2.251 | 0.046 | 0.729 | 0.875 |
| Never married | 0.462 | 0.023 | 1081 | 737 | 1.485 | 0.049 | 0.417 | 0.507 |
| Currently married/in union | 0.499 | 0.025 | 1081 | 737 | 1.666 | 0.051 | 0.449 | 0.550 |
| Married before age 20 | 0.345 | 0.027 | 803 | 557 | 1.606 | 0.078 | 0.291 | 0.398 |
| Currently pregnant | 0.068 | 0.005 | 1081 | 737 | 0.706 | 0.080 | 0.057 | 0.079 |
| Children ever born | 2.241 | 0.075 | 1081 | 737 | 0.820 | 0.034 | 2.090 | 2.392 |
| Children surviving | 1.934 | 0.074 | 1081 | 737 | 0.962 | 0.038 | 1.786 | 2.082 |
| Children ever born to women age 40-49 | 6.572 | 0.503 | 219 | 128 | 2.562 | 0.077 | 5.566 | 7.579 |
| Total fertility rate (3 years) | 4.106 | 0.368 | na | 2108 | 1.771 | 0.090 | 3.371 | 4.841 |
| Knows any contraceptive method | 0.871 | 0.031 | 509 | 368 | 2.073 | 0.035 | 0.810 | 0.933 |
| Ever using contraceptive method | 0.559 | 0.057 | 509 | 368 | 2.574 | 0.101 | 0.445 | 0.672 |
| Currently using any contraceptive method | 0.225 | 0.028 | 509 | 368 | 1.493 | 0.123 | 0.169 | 0.280 |
| Currently using a modern method | 0.130 | 0.019 | 509 | 368 | 1.305 | 0.150 | 0.091 | 0.169 |
| Currently using pill | 0.015 | 0.007 | 509 | 368 | 1.361 | 0.496 | 0.000 | 0.029 |
| Currently using IUD | 0.007 | 0.004 | 509 | 368 | 1.067 | 0.550 | 0.000 | 0.015 |
| Currently using condom | 0.089 | 0.020 | 509 | 368 | 1.551 | 0.221 | 0.050 | 0.128 |
| Currently using female sterilization | 0.001 | 0.001 | 509 | 368 | 0.635 | 0.763 | 0.000 | 0.003 |
| Currently using periodic abstinence | 0.033 | 0.011 | 509 | 368 | 1.379 | 0.333 | 0.011 | 0.054 |
| Obtained method from public sector source | 0.174 | 0.049 | 90 | 78 | 1.220 | 0.282 | 0.076 | 0.272 |
| Wanting no more children | 0.316 | 0.032 | 509 | 368 | 1.545 | 0.101 | 0.252 | 0.379 |
| Wanting to delay birth at least 2 years | 0.223 | 0.034 | 509 | 368 | 1.825 | 0.151 | 0.156 | 0.291 |
| Ideal family size | 5.314 | 0.154 | 999 | 693 | 2.812 | 0.029 | 5.005 | 5.623 |
| Neonatal mortality (10 years) | 33.975 | 13.372 | 1086 | 706 | 2.042 | 0.394 | 7.231 | 60.719 |
| Postneonatal mortality (10 years) | 31.652 | 10.193 | 1088 | 707 | 1.704 | 0.322 | 11.266 | 52.037 |
| Infant mortality (10 years) | 65.626 | 21.848 | 1088 | 707 | 2.375 | 0.333 | 21.931 | 109.321 |
| Child mortality (10 years) | 39.771 | 10.797 | 1096 | 710 | 1.652 | 0.271 | 18.176 | 61.365 |
| Under five mortality (10 years) | 102.787 | 28.906 | 1098 | 711 | 2.660 | 0.281 | 44.975 | 160.599 |
| Mothers received tetanus injection for last birth | 0.897 | 0.035 | 329 | 222 | 2.061 | 0.039 | 0.828 | 0.967 |
| Mothers received medical assistance at delivery | 0.876 | 0.043 | 524 | 371 | 2.310 | 0.049 | 0.791 | 0.962 |
| Had diarrhoea in two weeks before survey | 0.086 | 0.026 | 466 | 347 | 2.073 | 0.301 | 0.034 | 0.139 |
| Treated with oral rehydration salts (ORS) | 0.174 | 0.064 | 45 | 30 | 1.124 | 0.370 | 0.045 | 0.302 |
| Taken to a health provider | 0.249 | 0.108 | 45 | 30 | 1.670 | 0.433 | 0.034 | 0.464 |
| Vaccination card seen | 0.431 | 0.081 | 91 | 74 | 1.697 | 0.188 | 0.269 | 0.592 |
| Received BCG | 0.834 | 0.050 | 91 | 74 | 1.402 | 0.060 | 0.733 | 0.934 |
| Received DPT (3 doses) | 0.585 | 0.067 | 91 | 74 | 1.407 | 0.114 | 0.452 | 0.719 |
| Received polio (3 doses) | 0.574 | 0.105 | 91 | 74 | 2.208 | 0.183 | 0.364 | 0.784 |
| Received measles | 0.641 | 0.097 | 91 | 74 | 2.109 | 0.152 | 0.447 | 0.836 |
| Fully immunized | 0.446 | 0.068 | 91 | 74 | 1.429 | 0.153 | 0.309 | 0.582 |
| Height-for-age (below -2SD) | 0.197 | 0.015 | 439 | 338 | 0.811 | 0.074 | 0.168 | 0.226 |
| Weight-for-height (below -2SD) | 0.049 | 0.013 | 439 | 338 | 1.299 | 0.254 | 0.024 | 0.074 |
| Weight-for-age (below -2SD) | 0.085 | 0.029 | 439 | 338 | 2.170 | 0.343 | 0.027 | 0.143 |
| BMI $<18.5$ | 0.082 | 0.021 | 985 | 648 | 2.418 | 0.263 | 0.039 | 0.124 |
| Circumcised | 0.408 | 0.030 | 1081 | 737 | 2.021 | 0.074 | 0.347 | 0.468 |
| Has heard of HIV/AIDS | 0.955 | 0.013 | 1081 | 737 | 2.121 | 0.014 | 0.928 | 0.982 |
| Knows about condoms | 0.436 | 0.024 | 1081 | 737 | 1.619 | 0.056 | 0.387 | 0.485 |
| Knows about limiting partners | 0.773 | 0.027 | 1081 | 737 | 2.085 | 0.034 | 0.720 | 0.826 |
| MEN |  |  |  |  |  |  |  |  |
| Urban residence | 0.462 | 0.113 | 265 | 207 | 3.682 | 0.244 | 0.236 | 0.688 |
| Literate | 0.929 | 0.024 | 265 | 207 | 1.503 | 0.026 | 0.881 | 0.976 |
| No education | 0.025 | 0.011 | 265 | 207 | 1.105 | 0.422 | 0.004 | 0.047 |
| Secondary education or higher | 0.714 | 0.058 | 265 | 207 | 2.103 | 0.082 | 0.597 | 0.831 |
| Never married | 0.517 | 0.050 | 265 | 207 | 1.618 | 0.096 | 0.418 | 0.617 |
| Currently married/in union | 0.478 | 0.050 | 265 | 207 | 1.637 | 0.105 | 0.378 | 0.579 |
| Knows any contraceptive method | 0.955 | 0.020 | 265 | 207 | 1.561 | 0.021 | 0.915 | 0.995 |
| Ideal family size | 5.309 | 0.288 | 259 | 205 | 1.751 | 0.054 | 4.733 | 5.885 |
| Has heard of HIV/AIDS | 0.993 | 0.005 | 233 | 192 | 0.967 | 0.005 | 0.982 | 1.000 |
| Knows about condoms | 0.794 | 0.050 | 233 | 192 | 1.898 | 0.063 | 0.694 | 0.895 |
| Knows about limiting partners | 0.851 | 0.017 | 233 | 192 | 0.723 | 0.020 | 0.818 | 0.885 |


| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence limits |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Weight- |  |  |  |  |
|  |  |  | (N) | (WN) |  |  | R-2SE | $\mathrm{R}+2 \mathrm{SE}$ |
| WOMEN |  |  |  |  |  |  |  |  |
| Urban residence | 0.291 | 0.055 | 938 | 1342 | 3.733 | 0.190 | 0.180 | 0.402 |
| Literate | 0.750 | 0.031 | 938 | 1342 | 2.216 | 0.042 | 0.687 | 0.813 |
| No education | 0.081 | 0.022 | 938 | 1342 | 2.418 | 0.267 | 0.038 | 0.124 |
| Secondary education or higher | 0.617 | 0.039 | 938 | 1342 | 2.433 | 0.063 | 0.539 | 0.694 |
| Net attendance ratio for primary school | 0.822 | 0.023 | 704 | 969 | 1.538 | 0.029 | 0.775 | 0.868 |
| Never married | 0.431 | 0.024 | 938 | 1342 | 1.453 | 0.055 | 0.384 | 0.478 |
| Currently married/in union | 0.495 | 0.024 | 938 | 1342 | 1.447 | 0.048 | 0.447 | 0.542 |
| Married before age 20 | 0.481 | 0.029 | 693 | 980 | 1.520 | 0.060 | 0.424 | 0.539 |
| Currently pregnant | 0.090 | 0.013 | 938 | 1342 | 1.438 | 0.149 | 0.063 | 0.117 |
| Children ever born | 2.513 | 0.164 | 938 | 1342 | 1.634 | 0.065 | 2.184 | 2.841 |
| Children surviving | 2.064 | 0.113 | 938 | 1342 | 1.395 | 0.055 | 1.838 | 2.290 |
| Children ever born to women age 40-49 | 6.894 | 0.315 | 153 | 214 | 1.466 | 0.046 | 6.264 | 7.524 |
| Total fertility rate (3 years) | 4.630 | 0.274 | na | 3698 | 1.084 | 0.059 | 4.083 | 5.178 |
| Knows any contraceptive method | 0.942 | 0.020 | 467 | 664 | 1.822 | 0.021 | 0.902 | 0.981 |
| Ever using contraceptive method | 0.613 | 0.031 | 467 | 664 | 1.380 | 0.051 | 0.551 | 0.675 |
| Currently using any contraceptive method | 0.254 | 0.028 | 467 | 664 | 1.381 | 0.110 | 0.199 | 0.310 |
| Currently using a modern method | 0.138 | 0.021 | 467 | 664 | 1.294 | 0.150 | 0.097 | 0.179 |
| Currently using pill | 0.040 | 0.012 | 467 | 664 | 1.330 | 0.300 | 0.016 | 0.065 |
| Currently using IUD | 0.007 | 0.006 | 467 | 664 | 1.391 | 0.747 | 0.000 | 0.018 |
| Currently using condom | 0.024 | 0.008 | 467 | 664 | 1.142 | 0.336 | 0.008 | 0.040 |
| Currently using female sterilization | 0.004 | 0.004 | 467 | 664 | 1.169 | 0.824 | 0.000 | 0.011 |
| Currently using periodic abstinence | 0.073 | 0.017 | 467 | 664 | 1.397 | 0.231 | 0.039 | 0.106 |
| Obtained method from public sector source | 0.126 | 0.027 | 141 | 186 | 0.967 | 0.215 | 0.072 | 0.180 |
| Wanting no more children | 0.316 | 0.022 | 467 | 664 | 1.027 | 0.070 | 0.272 | 0.360 |
| Wanting to delay birth at least 2 years | 0.304 | 0.030 | 467 | 664 | 1.429 | 0.100 | 0.243 | 0.365 |
| Ideal family size | 5.538 | 0.152 | 901 | 1290 | 2.068 | 0.027 | 5.234 | 5.841 |
| Neonatal mortality (10 years) | 52.656 | 10.561 | 1072 | 1542 | 1.156 | 0.201 | 31.534 | 73.778 |
| Postneonatal mortality (10 years) | 67.568 | 9.922 | 1075 | 1548 | 1.256 | 0.147 | 47.725 | 87.412 |
| Infant mortality (10 years) | 120.224 | 18.027 | 1075 | 1548 | 1.580 | 0.150 | 84.170 | 156.279 |
| Child mortality (10 years) | 63.423 | 5.753 | 1084 | 1556 | 0.761 | 0.091 | 51.917 | 74.928 |
| Under five mortality (10 years) | 176.022 | 17.272 | 1087 | 1562 | 1.373 | 0.098 | 141.479 | 210.566 |
| Mothers received tetanus injection for last birth | 0.710 | 0.043 | 380 | 544 | 1.859 | 0.061 | 0.623 | 0.797 |
| Mothers received medical assistance at delivery | 0.559 | 0.058 | 560 | 789 | 2.185 | 0.104 | 0.442 | 0.676 |
| Had diarrhoea in two weeks before survey | 0.080 | 0.016 | 484 | 684 | 1.215 | 0.201 | 0.048 | 0.113 |
| Treated with oral rehydration salts (ORS) | 0.277 | 0.072 | 37 | 55 | 0.909 | 0.261 | 0.132 | 0.421 |
| Taken to a health provider | 0.268 | 0.071 | 37 | 55 | 0.973 | 0.267 | 0.125 | 0.410 |
| Vaccination card seen | 0.379 | 0.077 | 92 | 120 | 1.418 | 0.202 | 0.226 | 0.532 |
| Received BCG | 0.761 | 0.059 | 92 | 120 | 1.268 | 0.078 | 0.643 | 0.880 |
| Received DPT (3 doses) | 0.325 | 0.084 | 92 | 120 | 1.624 | 0.257 | 0.158 | 0.492 |
| Received polio (3 doses) | 0.400 | 0.069 | 92 | 120 | 1.281 | 0.173 | 0.262 | 0.538 |
| Received measles | 0.669 | 0.071 | 92 | 120 | 1.353 | 0.107 | 0.526 | 0.811 |
| Fully immunized | 0.208 | 0.054 | 92 | 120 | 1.224 | 0.262 | 0.099 | 0.317 |
| Height-for-age (below -2SD) | 0.209 | 0.023 | 464 | 643 | 1.259 | 0.112 | 0.163 | 0.256 |
| Weight-for-height (below-2SD) | 0.111 | 0.020 | 464 | 643 | 1.315 | 0.182 | 0.071 | 0.152 |
| Weight-for-age (below -2SD) | 0.180 | 0.027 | 464 | 643 | 1.426 | 0.149 | 0.127 | 0.234 |
| BMI $<18.5$ | 0.111 | 0.013 | 811 | 1173 | 1.201 | 0.119 | 0.084 | 0.137 |
| Circumcised | 0.347 | 0.049 | 938 | 1342 | 3.169 | 0.142 | 0.248 | 0.446 |
| Has heard of HIV/AIDS | 0.903 | 0.023 | 938 | 1342 | 2.408 | 0.026 | 0.857 | 0.950 |
| Knows about condoms | 0.488 | 0.029 | 938 | 1342 | 1.784 | 0.060 | 0.430 | 0.546 |
| Knows about limiting partners | 0.580 | 0.031 | 938 | 1342 | 1.933 | 0.054 | 0.518 | 0.643 |
| MEN |  |  |  |  |  |  |  |  |
| Urban residence | 0.264 | 0.057 | 313 | 445 | 2.282 | 0.216 | 0.150 | 0.377 |
| Literate | 0.805 | 0.033 | 313 | 445 | 1.478 | 0.041 | 0.738 | 0.871 |
| No education | 0.030 | 0.011 | 313 | 445 | 1.130 | 0.363 | 0.008 | 0.052 |
| Secondary education or higher | 0.656 | 0.047 | 313 | 445 | 1.735 | 0.071 | 0.563 | 0.749 |
| Never married | 0.600 | 0.033 | 313 | 445 | 1.189 | 0.055 | 0.534 | 0.666 |
| Currently married/in union | 0.386 | 0.032 | 313 | 445 | 1.168 | 0.083 | 0.322 | 0.450 |
| Knows any contraceptive method | 0.861 | 0.032 | 313 | 445 | 1.635 | 0.037 | 0.797 | 0.925 |
| Ideal family size | 6.692 | 0.411 | 305 | 432 | 1.366 | 0.061 | 5.871 | 7.514 |
| Has heard of HIV/AIDS | 0.921 | 0.023 | 276 | 385 | 1.394 | 0.025 | 0.875 | 0.966 |
| Knows about condoms | 0.504 | 0.054 | 276 | 385 | 1.781 | 0.107 | 0.397 | 0.611 |
| Knows about limiting partners | 0.682 | 0.047 | 276 | 385 | 1.657 | 0.068 | 0.589 | 0.775 |


| Variable | Value <br> (R) | Standard error (SE) | Number of cases |  | Design effect (DEFT) | Relative error (SE/R) | Confidence limits |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Weight- |  |  |  |  |
|  |  |  | (N) | (WN) |  |  | R-2SE | $\mathrm{R}+2 \mathrm{SE}$ |
| WOMEN |  |  |  |  |  |  |  |  |
| Urban residence | 0.732 | 0.035 | 1141 | 958 | 2.668 | 0.048 | 0.662 | 0.802 |
| Literate | 0.791 | 0.017 | 1141 | 958 | 1.419 | 0.022 | 0.757 | 0.825 |
| No education | 0.108 | 0.013 | 1141 | 958 | 1.381 | 0.117 | 0.083 | 0.134 |
| Secondary education or higher | 0.652 | 0.025 | 1141 | 958 | 1.766 | 0.038 | 0.602 | 0.702 |
| Net attendance ratio for primary school | 0.828 | 0.017 | 695 | 615 | 1.120 | 0.021 | 0.793 | 0.862 |
| Never married | 0.396 | 0.015 | 1141 | 958 | 1.050 | 0.038 | 0.366 | 0.427 |
| Currently married/in union | 0.571 | 0.018 | 1141 | 958 | 1.236 | 0.032 | 0.535 | 0.608 |
| Married before age 20 | 0.342 | 0.022 | 865 | 740 | 1.351 | 0.064 | 0.298 | 0.385 |
| Currently pregnant | 0.060 | 0.009 | 1141 | 958 | 1.252 | 0.146 | 0.043 | 0.078 |
| Children ever born | 2.019 | 0.076 | 1141 | 958 | 1.073 | 0.038 | 1.868 | 2.171 |
| Children surviving | 1.768 | 0.062 | 1141 | 958 | 1.023 | 0.035 | 1.643 | 1.892 |
| Children ever born to women age 40-49 | 5.459 | 0.190 | 177 | 147 | 1.118 | 0.035 | 5.079 | 5.840 |
| Total fertility rate (3 years) | 4.122 | 0.234 | na | 2631 | 1.318 | 0.057 | 3.654 | 4.591 |
| Knows any contraceptive method | 0.970 | 0.009 | 644 | 548 | 1.406 | 0.010 | 0.951 | 0.989 |
| Ever using contraceptive method | 0.657 | 0.018 | 644 | 548 | 0.981 | 0.028 | 0.620 | 0.694 |
| Currently using any contraceptive method | 0.327 | 0.023 | 644 | 548 | 1.238 | 0.070 | 0.282 | 0.373 |
| Currently using a modern method | 0.231 | 0.021 | 644 | 548 | 1.263 | 0.091 | 0.189 | 0.273 |
| Currently using pill | 0.052 | 0.012 | 644 | 548 | 1.371 | 0.231 | 0.028 | 0.076 |
| Currently using IUD | 0.049 | 0.009 | 644 | 548 | 1.047 | 0.182 | 0.031 | 0.067 |
| Currently using condom | 0.074 | 0.011 | 644 | 548 | 1.054 | 0.147 | 0.052 | 0.096 |
| Currently using female sterilization | 0.000 | 0.000 | 644 | 548 | na | na | 0.000 | 0.000 |
| Currently using periodic abstinence | 0.044 | 0.009 | 644 | 548 | 1.139 | 0.208 | 0.026 | 0.063 |
| Obtained method from public sector source | 0.199 | 0.038 | 192 | 170 | 1.302 | 0.189 | 0.124 | 0.275 |
| Wanting no more children | 0.299 | 0.020 | 644 | 548 | 1.097 | 0.066 | 0.259 | 0.338 |
| Wanting to delay birth at least 2 years | 0.343 | 0.023 | 644 | 548 | 1.215 | 0.066 | 0.297 | 0.388 |
| Ideal family size | 4.757 | 0.066 | 1070 | 901 | 1.337 | 0.014 | 4.626 | 4.889 |
| Neonatal mortality (10 years) | 39.077 | 7.515 | 1156 | 976 | 1.122 | 0.192 | 24.048 | 54.107 |
| Postneonatal mortality (10 years) | 30.112 | 5.561 | 1159 | 979 | 1.060 | 0.185 | 18.991 | 41.234 |
| Infant mortality (10 years) | 69.190 | 9.048 | 1159 | 979 | 1.092 | 0.131 | 51.094 | 87.285 |
| Child mortality (10 years) | 46.690 | 9.827 | 1165 | 983 | 1.339 | 0.210 | 27.037 | 66.344 |
| Under five mortality (10 years) | 112.650 | 14.172 | 1168 | 985 | 1.297 | 0.126 | 84.305 | 140.994 |
| Mothers received tetanus injection for last birth | 0.864 | 0.022 | 429 | 367 | 1.353 | 0.026 | 0.820 | 0.909 |
| Mothers received medical assistance at delivery | 0.816 | 0.019 | 622 | 529 | 0.982 | 0.023 | 0.778 | 0.853 |
| Had diarrhoea in two weeks before survey | 0.064 | 0.012 | 573 | 489 | 1.185 | 0.193 | 0.039 | 0.089 |
| Treated with oral rehydration salts (ORS) | 0.233 | 0.070 | 41 | 31 | 0.944 | 0.302 | 0.092 | 0.374 |
| Taken to a health provider | 0.389 | 0.094 | 41 | 31 | 1.127 | 0.242 | 0.201 | 0.577 |
| Vaccination card seen | 0.364 | 0.056 | 104 | 81 | 1.124 | 0.155 | 0.251 | 0.476 |
| Received BCG | 0.850 | 0.046 | 104 | 81 | 1.173 | 0.054 | 0.759 | 0.942 |
| Received DPT (3 doses) | 0.678 | 0.055 | 104 | 81 | 1.095 | 0.080 | 0.569 | 0.788 |
| Received polio (3 doses) | 0.448 | 0.064 | 104 | 81 | 1.226 | 0.142 | 0.321 | 0.575 |
| Received measles | 0.731 | 0.048 | 104 | 81 | 1.007 | 0.066 | 0.635 | 0.828 |
| Fully immunized | 0.325 | 0.060 | 104 | 81 | 1.226 | 0.184 | 0.205 | 0.444 |
| Height-for-age (below -2SD) | 0.246 | 0.016 | 570 | 510 | 0.793 | 0.064 | 0.214 | 0.277 |
| Weight-for-height (below-2SD) | 0.086 | 0.012 | 570 | 510 | 0.996 | 0.138 | 0.062 | 0.110 |
| Weight-for-age (below -2SD) | 0.191 | 0.021 | 570 | 510 | 1.177 | 0.109 | 0.149 | 0.233 |
| BMI $<18.5$ | 0.167 | 0.020 | 1037 | 872 | 1.760 | 0.122 | 0.126 | 0.207 |
| Circumcised | 0.569 | 0.025 | 1141 | 958 | 1.715 | 0.044 | 0.518 | 0.619 |
| Has heard of HIV/AIDS | 0.903 | 0.013 | 1141 | 958 | 1.507 | 0.015 | 0.876 | 0.929 |
| Knows about condoms | 0.563 | 0.025 | 1141 | 958 | 1.674 | 0.044 | 0.514 | 0.613 |
| Knows about limiting partners | 0.674 | 0.019 | 1141 | 958 | 1.394 | 0.029 | 0.636 | 0.713 |
| MEN |  |  |  |  |  |  |  |  |
| Urban residence | 0.717 | 0.043 | 382 | 322 | 1.867 | 0.060 | 0.631 | 0.803 |
| Literate | 0.930 | 0.014 | 382 | 322 | 1.057 | 0.015 | 0.903 | 0.958 |
| No education | 0.048 | 0.013 | 382 | 322 | 1.149 | 0.263 | 0.023 | 0.073 |
| Secondary education or higher | 0.721 | 0.024 | 382 | 322 | 1.060 | 0.034 | 0.672 | 0.770 |
| Never married | 0.501 | 0.039 | 382 | 322 | 1.526 | 0.078 | 0.423 | 0.579 |
| Currently married/in union | 0.451 | 0.036 | 382 | 322 | 1.407 | 0.080 | 0.379 | 0.522 |
| Knows any contraceptive method | 0.980 | 0.009 | 382 | 322 | 1.238 | 0.009 | 0.962 | 0.998 |
| Ideal family size | 4.766 | 0.163 | 362 | 305 | 1.568 | 0.034 | 4.439 | 5.092 |
| Has heard of HIV/AIDS | 0.977 | 0.009 | 350 | 296 | 1.091 | 0.009 | 0.959 | 0.994 |
| Knows about condoms | 0.735 | 0.028 | 350 | 296 | 1.175 | 0.038 | 0.679 | 0.790 |
| Knows about limiting partners | 0.834 | 0.023 | 350 | 296 | 1.149 | 0.027 | 0.789 | 0.880 |


| Table C. 1 Household age distribution |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Single-year age distribution of the de facto household population by sex (weighted), Nigeria 2003 |  |  |  |  |  |  |  |  |  |
|  | M ale |  | Female |  | M ale |  |  | Female |  |
| Age | Number | Percentage | Number | Percentage | Age | Numbe | Percentage | Numbe | Percentage |
| 0 | 703 | 4.0 | 678 | 3.8 | 37 | 101 | 0.6 | 121 | 0.7 |
| 1 | 553 | 3.2 | 516 | 2.9 | 38 | 107 | 0.6 | 186 | 1.0 |
| 2 | 568 | 3.3 | 592 | 3.3 | 39 | 68 | 0.4 | 88 | 0.5 |
| 3 | 626 | 3.6 | 583 | 3.3 | 40 | 400 | 2.3 | 391 | 2.2 |
| 4 | 523 | 3.0 | 498 | 2.8 | 41 | 61 | 0.4 | 62 | 0.4 |
| 5 | 486 | 2.8 | 487 | 2.7 | 42 | 134 | 0.8 | 143 | 0.8 |
| 6 | 554 | 3.2 | 553 | 3.1 | 43 | 80 | 0.5 | 84 | 0.5 |
| 7 | 594 | 3.4 | 536 | 3.0 | 44 | 49 | 0.3 | 56 | 0.3 |
| 8 | 593 | 3.4 | 520 | 2.9 | 45 | 294 | 1.7 | 240 | 1.4 |
| 9 | 433 | 2.5 | 431 | 2.4 | 46 | 71 | 0.4 | 72 | 0.4 |
| 10 | 546 | 3.1 | 544 | 3.1 | 47 | 89 | 0.5 | 63 | 0.4 |
| 11 | 334 | 1.9 | 369 | 2.1 | 48 | 109 | 0.6 | 133 | 0.8 |
| 12 | 480 | 2.8 | 523 | 3.0 | 49 | 50 | 0.3 | 76 | 0.4 |
| 13 | 453 | 2.6 | 428 | 2.4 | 50 | 310 | 1.8 | 208 | 1.2 |
| 14 | 331 | 1.9 | 312 | 1.8 | 51 | 23 | 0.1 | 103 | 0.6 |
| 15 | 433 | 2.5 | 414 | 2.3 | 52 | 99 | 0.6 | 170 | 1.0 |
| 16 | 287 | 1.6 | 305 | 1.7 | 53 | 62 | 0.4 | 92 | 0.5 |
| 17 | 335 | 1.9 | 342 | 1.9 | 54 | 56 | 0.3 | 80 | 0.5 |
| 18 | 421 | 2.4 | 476 | 2.7 | 55 | 144 | 0.8 | 192 | 1.1 |
| 19 | 260 | 1.5 | 295 | 1.7 | 56 | 59 | 0.3 | 68 | 0.4 |
| 20 | 526 | 3.0 | 634 | 3.6 | 57 | 45 | 0.3 | 45 | 0.3 |
| 21 | 198 | 1.1 | 210 | 1.2 | 58 | 83 | 0.5 | 68 | 0.4 |
| 22 | 320 | 1.8 | 334 | 1.9 | 59 | 41 | 0.2 | 30 | 0.2 |
| 23 | 242 | 1.4 | 247 | 1.4 | 60 | 229 | 1.3 | 218 | 1.2 |
| 24 | 188 | 1.1 | 183 | 1.0 | 61 | 24 | 0.1 | 021 | 0.1 |
| 25 | 453 | 2.6 | 588 | 3.3 | 62 | 78 | 0.4 | 41 | 0.2 |
| 26 | 176 | 1.0 | 240 | 1.4 | 63 | 40 | 0.2 | 34 | 0.2 |
| 27 | 211 | 1.2 | 211 | 1.2 | 64 | 40 | 0.2 | 26 | 0.1 |
| 28 | 237 | 1.4 | 294 | 1.7 | 65 | 163 | 0.9 | 113 | 0.6 |
| 29 | 118 | 0.7 | 149 | 0.8 | 66 | 18 | 0.1 | 13 | 0.1 |
| 30 | 497 | 2.8 | 513 | 2.9 | 67 | 36 | 0.2 | 17 | 0.1 |
| 31 | 102 | 0.6 | 110 | 0.6 | 68 | 48 | 0.3 | 39 | 0.2 |
| 32 | 174 | 1.0 | 171 | 1.0 | 69 | 13 | 0.1 | 16 | 0.1 |
| 33 | 128 | 0.7 | 139 | 0.8 | 70+ | 482 | 2.8 | 396 | 2.2 |
| 34 | 128 | 0.7 | 99 | 0.6 | Don't know/ |  |  |  |  |
| 35 | 408 | 2.3 | 359 | 2.0 | missing | g 20 | 0.1 | 10 | 0.1 |
| 36 | 111 | 0.6 | 114 | 0.6 |  |  |  |  |  |
|  |  |  |  |  | Total | 17,459 | 100.0 | 17,714 | 100.0 |

## Table C.2.1 Age distribution of eligible and interviewed women

De facto household population of women age 10-54, interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted), by five-year age groups, Nigeria 2003

| Age group | Household population of women age 10-54 | Interviewed women age 15-49 |  | Percentage of eligible women interviewed |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  | Number | Percent |  |
| 10-14 | 2,176 | na | na | na |
| 15-19 | 1,832 | 1,730 | 22.4 | 94.4 |
| 20-24 | 1,609 | 1,540 | 19.9 | 95.7 |
| 25-29 | 1,481 | 1,416 | 18.3 | 95.6 |
| 30-34 | 1,031 | 979 | 12.6 | 94.9 |
| 25-39 | 867 | 825 | 10.7 | 95.1 |
| 40-44 | 736 | 701 | 9.1 | 95.2 |
| 45-49 | 584 | 549 | 7.1 | 94.0 |
| 50-54 | 653 | na | na | na |
| 15-49 | 8,141 | 7,740 | 100.0 | 95.1 |
| Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. W eights for both household population of women and interviewed women are household weights. Age is based on the household schedule. <br> na $=$ N ot applicable |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |


| Table C.2.2 Age distribution of eligible and interviewed men |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| De facto household population of men aged 10-64, interviewed men aged 15-59 and percent of eligible men who were interviewed (weighted), Nigeria 2003 |  |  |  |  |
| Age | Household population of men | Intervi age | $\begin{aligned} & 1 \text { men } \\ & 59 \end{aligned}$ | Percentage of eligible men |
| group | age 10-64 | Number | Percent | interviewed |
| 10-14 | 741 | na | na | na |
| 15-19 | 517 | 457 | 19.4 | 88.5 |
| 20-24 | 474 | 431 | 18.3 | 91.0 |
| 25-29 | 346 | 326 | 13.8 | 94.2 |
| 30-34 | 305 | 291 | 12.3 | 95.5 |
| 25-39 | 239 | 221 | 9.4 | 92.7 |
| 40-44 | 233 | 210 | 8.9 | 89.9 |
| 45-49 | 188 | 173 | 7.3 | 92.1 |
| 50-54 | 164 | 135 | 5.7 | 82.4 |
| 55-59 | 125 | 117 | 4.9 | 93.0 |
| 60-64 | 134 | na | na | na |
| 15-59 | 2,591 | 2,362 | 100.0 | 91.2 |
| Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. W eights for both household population of men and interviewed men are household weights. Age is based on the household schedule. <br> na $=$ Not applicable |  |  |  |  |


| Table C. 3 Completeness of reporting |  |  |  |
| :---: | :---: | :---: | :---: |
| Percentage of observations missing information for selected demographic and health questions (weighted), Nigeria 2003 |  |  |  |
| Subject | Reference group | Percentage with missing information | Number of cases |
| Birth date | Births in the 15 years preceding the survey |  |  |
| Month only |  | 8.19 | 16,330 |
| M onth and year |  | 0.26 | 16,330 |
| Age at death | Deceased children born in the 15 years preceding the survey | 0.97 | 3,359 |
| Age/date at first union ${ }^{1}$ | Ever-married women age 15-49 | 0.77 | 5,694 |
| Respondent's education | All women age 15-49 | 0.14 | 7,620 |
| Diarrhoea in last 2 weeks | Living children age 0-59 months | 2.18 | 5,345 |
| Anthropometry | Living children age 0-59 months (from the |  |  |
| Height | household questionnaire) | 6.54 | 5,842 |
| W eight |  | 6.15 | 5,842 |
| Height or weight |  | 6.54 | 5,842 |
| ${ }^{1}$ 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 and survival status of children (weighted), Nigeria 2003

| Year | Number of births |  |  | Percentage with complete birth date ${ }^{1}$ |  |  | Sex ratio at birth ${ }^{2}$ |  |  | Calendar year ratio ${ }^{3}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Living | Dead | Total | Living | Dead | Total | Living | Dead | Total | Living | Dead | Total |
| 2003 | 604 | 37 | 641 | 99.6 | 100.0 | 99.6 | 119.2 | 89.2 | 117.2 | na | na | na |
| 2002 | 1,257 | 148 | 1,405 | 97.4 | 89.1 | 96.5 | 93.0 | 127.3 | 96.1 | na | na | na |
| 2001 | 1,011 | 144 | 1,155 | 97.5 | 86.1 | 96.1 | 104.1 | 143.2 | 108.3 | 85.7 | 77.8 | 84.6 |
| 2000 | 1,101 | 222 | 1,323 | 95.1 | 85.3 | 93.5 | 107.1 | 96.4 | 105.2 | 110.2 | 123.6 | 112.3 |
| 1999 | 987 | 215 | 1,202 | 94.2 | 89.2 | 93.3 | 103.2 | 125.3 | 106.8 | 98.5 | 93.6 | 97.6 |
| 1998 | 904 | 238 | 1,142 | 95.8 | 90.3 | 94.6 | 111.6 | 113.6 | 112.0 | 98.5 | 95.2 | 97.8 |
| 1997 | 848 | 285 | 1,133 | 93.9 | 77.4 | 89.8 | 88.2 | 88.5 | 88.3 | 92.4 | 117.5 | 97.6 |
| 1996 | 933 | 247 | 1,180 | 90.7 | 87.2 | 89.9 | 99.3 | 118.3 | 103.0 | 108.8 | 82.9 | 102.1 |
| 1995 | 866 | 310 | 1,177 | 90.1 | 81.5 | 87.8 | 108.0 | 106.1 | 107.5 | 99.3 | 128.7 | 105.7 |
| 1994 | 811 | 236 | 1,047 | 92.3 | 76.9 | 88.8 | 103.3 | 110.7 | 104.9 | 97.7 | 86.5 | 94.9 |
| 1999-2003 | 4,960 | 767 | 5,726 | 96.6 | 88.0 | 95.4 | 103.3 | 117.4 | 105.1 | na | na | na |
| 1994-1998 | 4,362 | 1,316 | 5,678 | 92.5 | 82.5 | 90.2 | 101.8 | 106.2 | 102.8 | na | na | na |
| 1989-1993 | 3,353 | 1,152 | 4,505 | 91.4 | 80.5 | 88.6 | 101.0 | 100.5 | 100.8 | na | na | na |
| 1984-1988 | 2,600 | 972 | 3,573 | 90.7 | 79.9 | 87.7 | 102.5 | 125.5 | 108.3 | na | na | na |
| < 1984 | 2,871 | 1,225 | 4,096 | 89.4 | 81.9 | 87.1 | 110.5 | 138.6 | 118.1 | na | na | na |
| All | 18,147 | 5,431 | 23,578 | 92.7 | 82.2 | 90.3 | 103.5 | 116.4 | 106.3 | na | na | na |

na $=$ Not applicable
${ }^{1}$ Both year and month of birth given
${ }^{2}\left(B_{m} / B_{f}\right) * 100$, where $B_{m}$ and $B_{f}$ are the numbers of male and female births, respectively
${ }^{3}\left[2 B_{x} /\left(\mathrm{B}_{x-1}+\mathrm{B}_{x+1}\right)\right)^{*} 100$, where $\mathrm{B}_{x}$ is the number 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 to occur at ages 0-6 days, for five-year periods preceding the survey (weighted), Nigeria 2003 |  |  |  |  |  |
| Number of years preceding the survey |  |  |  |  |  |
| Age at death (days) | 0-4 | 5-9 | 10-14 | 15-19 | $\begin{aligned} & \text { Total } \\ & 0-19 \end{aligned}$ |
| <1 | 49 | 71 | 45 | 36 | 200 |
| 1 | 78 | 82 | 51 | 34 | 245 |
| 2 | 21 | 26 | 17 | 13 | 77 |
| 3 | 26 | 26 | 19 | 14 | 85 |
| 4 | 15 | 11 | 9 | 10 | 45 |
| 5 | 10 | 13 | 23 | 18 | 63 |
| 6 | 16 | 12 | 9 | 4 | 41 |
| 7 | 6 | 13 | 16 | 10 | 45 |
| 8 | 6 | 8 | 4 | 1 | 19 |
| 9 | 5 | 8 | 6 | 7 | 26 |
| 10 | 2 | 3 | 4 | 8 | 17 |
| 11 | 2 | 7 | 1 | 0 | 10 |
| 12 | 8 | 6 | 4 | 1 | 18 |
| 13 | 0 | 0 | 2 | 0 | 2 |
| 14 | 19 | 9 | 12 | 12 | 51 |
| 15 | 5 | 10 | 0 |  | 19 |
| 16 | 0 | 7 | 1 | 1 | 10 |
| 17 | 0 | 0 | 1 | 2 | 3 |
| 18 | 7 | 1 | 1 | 0 | 9 |
| 20 | 2 | 4 | 6 | 1 | 12 |
| 21 | 12 | 10 | 6 | 5 | 33 |
| 22 | 0 | 0 | 1 | 0 | 1 |
| 23 | 0 | 0 | 0 | 1 | 1 |
| 24 | 1 | 1 | 1 | 0 | 3 |
| 25 | 0 | 0 | 2 | 0 | 2 |
| 26 | 0 | 1 | 1 | 0 | 2 |
| 27 | 0 | 2 | 0 | 0 | 2 |
| 28 | 0 | 2 | 0 | 0 | 3 |
| 29 | 1 | 4 | 0 | 0 | 4 |
| 30 | 0 | 6 | 2 | 2 | 10 |
| 31+ | 4 | 10 | 5 | 2 | 22 |
| Total 0-30 | 289 | 342 | 245 | 182 | 1,057 |
| Percent early neonatal ${ }^{1}$ | 74.1 | 70.4 | 70.9 | 70.4 | 71.5 |
| ${ }^{1} 0-6$ days/0-30 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 to occur at age under one month, for five-year periods preceding the survey, Nigeria 2003 |  |  |  |  |  |
| Number of years preceding the survey |  |  |  |  |  |
| Age at death (months) | 0-4 | 5-9 | 10-14 | 15-19 | $\begin{aligned} & \text { Total } \\ & 0-19 \end{aligned}$ |
| $<1^{\text {a }}$ | 289 | 342 | 245 | 182 | 1,057 |
| 1 | 29 | 38 | 31 | 12 | 109 |
| 2 | 24 | 41 | 16 | 19 | 101 |
| 3 | 31 | 36 | 26 | 36 | 129 |
| 4 | 12 | 30 | 22 | 15 | 80 |
| 5 | 34 | 35 | 16 | 11 | 96 |
| 6 | 15 | 15 | 36 | 13 | 79 |
| 7 | 28 | 36 | 29 | 25 | 117 |
| 8 | 28 | 31 | 16 | 24 | 99 |
| 9 | 28 | 27 | 22 | 14 | 90 |
| 10 | 25 | 21 | 22 | 16 | 83 |
| 11 | 14 | 37 | 12 | 18 | 81 |
| 12 | 26 | 37 | 28 | 35 | 126 |
| 13 | 18 | 13 | 21 | 21 | 73 |
| 14 | 14 | 22 | 14 | 8 | 58 |
| 15 | 7 | 16 | 12 | 13 | 48 |
| 16 | 15 | 8 | 8 | 2 | 33 |
| 17 |  | 15 | 24 | 7 | 54 |
| 18 | 22 | 19 | 24 | 23 | 87 |
| 19 | 3 | 20 | 11 | 1 | 35 |
| 20 | 4 | 9 | 7 | 6 | 26 |
| 21 | 5 | 3 | 1 | 1 | 11 |
| 22 | 1 | 13 | 1 | 5 | 18 |
| 23 | 5 | 13 | 7 | 5 | 30 |
| 24+ | 9 | 9 | 16 | 9 | 43 |
| Missing | 0 | 0 | 0 | 1 | 1 |
| 1 year | 49 | 75 | 47 | 56 | 227 |
| Total 0-11 | 555 | 689 | 493 | 385 | 2,121 |
| Percent neonatal ${ }^{1}$ | 52.1 | 49.6 | 49.6 | 47.4 | 49.8 |
| ${ }^{\text {a }}$ Includes deaths under one month reported in days <br> ${ }^{1}$ Under one month/under one year |  |  |  |  |  |

# 2003 NIGERIA DEMOGRAPHIC AND HEALTH SURVEY PERSONNEL 

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## appendix $E$

NATIONAL POPULATION COMMISSION


Now we would like some information about the people who usually live in your household or who are staying with you now.

| LINE | USUAL RESIDENTS AND VISITORS | RELATIONSHIP TO HEAD OF HOUSEHOLD | SEX | RESIDENCE |  | AGE | 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. | What is the relationship of (NAME) to the head of the household?* | Is (NAME) male or female? | Does <br> (NAME) usually live here? | Did <br> (NAME) <br> stay here <br> last <br> night? | How old is (NAME) as of last birthday? | CIRCLE <br> LINE <br> NUMBER <br> OF ALL <br> WOMEN <br> AGE <br> 15-49 | CIRCLE <br> LINE <br> NUMBER <br> OF ALL <br> MEN AGE <br> 15-59 | CIRCLE <br> LINE <br> NUMBER <br> OF ALL <br> CHILDREN <br> UNDER <br> AGE 6 |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (8A) | (9) |
| 01 |  |  | $\begin{array}{ll} M & F \\ 1 & 2 \end{array}$ | yES No <br> 1 <br> 2 | YES NO <br> 1 $2$ | IN YEARS | 01 | 01 | 01 |
| 02 |  |  | 12 | 12 | 12 |  | 02 | 02 | 02 |
| 03 |  |  | 12 | 12 | 12 |  | 03 | 03 | 03 |
| 04 |  |  | 12 | 12 | 12 |  | 04 | 04 | 04 |
| 05 |  |  | 12 | 12 | 12 |  | 05 | 05 | 05 |
| 06 |  |  | 12 | 12 | 12 |  | 06 | 06 | 06 |
| 07 |  |  | 12 | 12 | 12 |  | 07 | 07 | 07 |
| 08 |  |  | 12 | 12 | 12 |  | 08 | 08 | 08 |
| 09 |  |  | $12$ | 12 | $\begin{array}{ll} 1 & 2 \end{array}$ |  | 09 | 09 | 09 |
| 10 |  |  | $12$ | 12 | $1$ $2$ |  | 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
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 - BROTHER OR SISTER-IN-LAW
10 = OTHER RELATIVE
11 = ADOPTED/FOSTER/ STEPCHILD
$06=$ PARENT
12 = NOT RELATED
98 = DON'T KNOW

| $\begin{aligned} & \text { LINE } \\ & \text { NO. } \end{aligned}$ | PARENTAL SURVIVORSHIP AND RESIDENCE FOR PERSONS LESS THAN 15 YEARS OLD＊＊ |  |  |  | EDUCATION |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Is （NAME）＇s natural mother alive？ | IF ALIVE | Is（NAME）＇s natural father alive？ | IF ALIVE | IF AGE 5 YEARS OR OLDER |  |  | IF AGE 5－24 YEARS |  |  |  |  |
|  |  | Does （NAME）＇s natural mother live in this house－ hold？ <br> IF YES： <br> What is her name？ RECORD MOTHER＇S LINE NUMBER |  | Does （NAME）＇s natural father live in this house－ hold？ <br> IF YES： <br> What is his <br> name？ <br> RECORD <br> FATHER＇S LINE <br> NUMBER | Can （NAME） read \＆ write in any language with under－ standing？ | Has （NAME） ever attended school？ | What is the highest level of school（NAME） has attended？＊＊＊ What is the highest class／year （NAME） completed at that level？＊＊＊ | Is（NAME） currently attending school？ | During the current school year，did （NAME） attend school at any time？ | During the current school year，what level and class／year ［is／was］（NAME） attending？＊＊＊ | During the previous school year，did （NAME） attend school at any time？ | During that school year， what level and class／year did （NAME） attend？＊＊＊ |
|  | （10） | （11） | （12） | （13） | （13A） | （14） | （15） | （16） | （17） | （18） | （19） | （20） |
| 01 | $\begin{array}{ccc} \text { YES NO } & \text { DK } \\ 1 & 2 & 8 \\ & & \\ & & 1 \\ \text { skip to } & (12) \end{array}$ |  | $\begin{array}{\|ccc\|} \hline \text { YES } & \text { NO } & \text { DK } \\ 1 & 2 & 8 \\ & & 1 \\ \text { skip to } & (13 \mathrm{~A}) \\ \hline \end{array}$ |  | $\begin{array}{cc} \text { YES } & \text { NO } \\ & \\ 1 & 2 \end{array}$ | $$ |  | $$ | $\left\lvert\,\right.$ |  | $$ |  |
| 02 |  |  |  | $\square$ | 12 | $\underbrace{2}_{\substack{1 \\ \text { NEXT」 } \\ \text { LINE }}}$ | $\square$ | $\begin{array}{\|ll} \hline \mathrm{L}_{\mathrm{r}} \mathrm{GOTO} \\ 18 \end{array}{ }^{2}$ | $\left\lvert\, \begin{array}{lr} 1 & 2 \\ \text { GO TO.」 } \\ 19 \end{array}\right.$ |  <br>   | $\begin{array}{\|ll} 1 & 2 \\ \text { NEXT｣ } \\ \text { LINE } \end{array}$ |  |
| 03 |  | $\square$ |  |  | 12 | $\underset{\substack{\text { NEXT } \\ \text { LINE }}}{2}$ | $\square$ | ${\stackrel{1}{\mathrm{~L} . \mathrm{GOTO}_{18}}{ }^{2}}^{2}$ | $\left\lvert\, \begin{array}{ll} 1 & 2 \\ \text { GO TO.」 } \\ 19 \end{array}\right.$ | $\square$ | $\left\lvert\, \begin{array}{ll} 1 & 2 \\ \text { NEXT\& } \\ \text { LINE } \end{array}\right.$ | $\square$ |
| 04 |  |  |  |  | 12 | $\underset{\substack{1 \\ \text { NEXT } \\ \text { LINE }}}{2}$ |  | $\begin{array}{\|l\|l} \hline \mathrm{L}_{\substack{\text { GO TO } \\ 18}} 2 \\ \hline \end{array}$ | $\left\lvert\, \begin{array}{lr} 1 & 2 \\ \text { GO TO.」 } \\ & 19 \end{array}\right.$ |  | $\underbrace{2}_{\substack{1 \\ \text { NEXT」」 } \\ \text { LINE }}}$ |  |
| 05 |  |  |  | $\square$ | 12 | $\underset{\substack{1 \\ \text { NEXT } \\ \text { LINE }}}{2}$ |  | $\underbrace{1}_{18} \mathrm{~L}_{\substack{\text { GO TO }}} 2$ | $\left\lvert\, \begin{array}{lr} 1 & 2 \\ \text { GO TO.」 } \\ 19 \end{array}\right.$ |  | $\underbrace{2}_{\substack{1 \\ \text { NEXT」 } \\ \text { LINE }}}$ |  |
| 06 |  |   |  | $\square$ | 12 | ${ }_{\substack{\text { NEXT\&」 } \\ \text { LINE }}}^{2}$ |  | $\stackrel{1}{\mathrm{~L}, ~ \mathrm{GO} \mathrm{TO}}^{2}$ | $\begin{array}{\|lr} 1 & 2 \\ \text { GO TO.」 } \\ & 19 \end{array}$ | $\square$ | $\underbrace{2}_{\substack{\text { NEXT\&」 } \\ \text { LINE }}}$ |  |
| 07 |  |  |  | $\square$ | 12 | $\begin{array}{\|lr} 1 & 2 \\ \text { NEXT」」 } \\ \text { LINE } \end{array}$ |  | ${\stackrel{1}{\mathrm{~L}, \mathrm{GO} \mathrm{TO}_{18}}{ }^{2}}^{2}$ | $\begin{array}{\|lr} \hline 1 & 2 \\ \text { GO TO.」 } \\ & 19 \end{array}$ | $\square$ | $\left\lvert\, \begin{array}{ll} 1 & 2 \\ \text { NEXT｣ } \\ \text { LINE } \end{array}\right.$ |  |
| 08 |  | $\begin{array}{l\|l\|} \hline \end{array}$ |  |  | 12 | $\left\lvert\, \begin{array}{ll} 1 & 2 \\ \text { NEXT } \\ \text { LINE } \end{array}\right.$ |  | $\begin{array}{\|cc} \hline \mathrm{L}_{\substack{\text { GO TO } \\ 18}} 2 \\ \hline \end{array}$ | $\begin{array}{\|cr\|}1 & 2 \\ \text { GO TO，」 } \\ \\ & 19\end{array}$ |  | $\underbrace{2}_{\substack{1 \\ \text { NEXT」」 } \\ \text { LINE }}}$ |  |
| 09 |  |  |  |  | 12 | $\left\lvert\, \begin{array}{ll} 1 & 2 \\ \text { NEXT } \\ \text { LINE } \end{array}\right.$ |  | $\underbrace{}_{\substack{18}}{ }^{2}$ | $\left\lvert\, \begin{array}{lr} 1 & 2 \\ \text { GO TO.」 } \\ 19 \end{array}\right.$ |  | $\underbrace{2}_{\substack{1 \\ \text { NEXT」」 } \\ \text { LINE }}}$ | $\square$ |
| 10 |  | $1$ |  |  | 2 | $\underset{\substack{1 \\ \text { NEXT } \\ \text { LINE }}}{2}$ | $\square$ | ${\stackrel{1}{\mathrm{~L}} \underset{18}{\mathrm{GO} \text { TO }} 2}^{2}$ | $\left\lvert\, \begin{array}{lr} 1 & 2 \\ \text { GO TO, } \\ 19 \end{array}\right.$ |  <br>   | $\underbrace{2}_{\substack{\text { NEXT」」 } \\ \text { LINE }}}$ |  |

＊＊CODES FOR Q． 10 THROUGH Q． 13
THESE QUESTIONS REFER TO THE BIOLOGICAL
PARENTS OF THE CHILD．
IN Q． 11 AND Q． 13 ，RECORD＇00＇IF PARENT NOT LISTED IN HOUSEHOLD SCHEDULE．
＊＊＊CODES FOR Qs．15， 18 AND 20
EDUCATION LEVEL：
$0=$ PRE－PRIMARY／KINDERGARTEN
1 ＝PRIMARY
2 ＝SECONDARY
3 ＝HIGHER
8 ＝DON＇T KNOW
EDUCATION CLASS：
$00=$ LESS THAN 1 YEAR COMPLETED
$98=$ DON＇T KNOW

FOR＂HIGHER＂，TOTAL THE NUMBER OF YEARS AT THE POST－SECONDARY LEVEL．

| $\begin{aligned} & \text { LINE } \\ & \text { NO. } \end{aligned}$ | USUAL RESIDENTS AND VISITORS | RELATIONSHIP TO HEAD OF HOUSEHOLD | SEX | RESIDENCE |  | AGE | 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. | What is the relationship of (NAME) to the head of the household?* | Is (NAME) male or female? | Does (NAME) usually live here? | Did <br> (NAME) stay here last night? | How old is (NAME) as of last birthday? | CIRCLE <br> LINE <br> NUMBER <br> OF ALL <br> WOMEN <br> AGE <br> 15-49 | CIRCLE <br> LINE <br> NUMBER <br> OF ALL <br> MEN AGE <br> 15-59 | CIRCLE <br> LINE <br> NUMBER <br> OF ALL <br> CHILDRE <br> N UNDER <br> AGE 6 |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (8A) | (9) |
| 11 |  |  | $\begin{array}{ll} M & F \\ 1 & 2 \end{array}$ |  | YES NO <br> 1 $2$ | IN YEARS | 11 | 11 | 11 |
| 12 |  |  | 12 | 12 | 12 |  | 12 | 12 | 12 |
| 13 |  |  | $12$ | 12 | $12$ |  | 13 | 13 | 13 |
| 14 |  |  | $12$ | 12 | $12$ |  | 14 | 14 | 14 |
| 15 |  |  | $12$ | 12 | 12 |  | 15 | 15 | 15 |
| 16 |  |  | 12 | 12 | 12 |  | 16 | 16 | 16 |
| 17 |  |  | 12 | 12 | 12 |  | 17 | 17 | 17 |
| 18 |  |  | 12 | 12 | 12 |  | 18 | 18 | 18 |
| 19 |  |  | 12 | 12 | $1 \quad 2$ |  | 19 | 19 | 19 |
| 20 |  |  | 12 | 12 | $\begin{array}{\|ll} 1 & 2 \end{array}$ |  | 20 | 20 | 20 |
| 21 |  |  | $12$ | 12 | $\begin{array}{ll} 1 & 2 \end{array}$ |  | 21 | 21 | 21 |
| 22 |  |  | 12 | $1 \quad 2$ | $12$ |  | 22 | 22 | 22 |
| 23 |  |  | $12$ | 12 | 12 |  | 23 | 23 | 23 |

* 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
** Q. 10 THROUGH Q. 13 THESE QUESTIONS REFER TO THE
BIOLOGICAL PARENTS O
THE CHILD.
IN Q. 11 AND Q.13,
RECORD '00' IF PARENT
NOT LISTED IN
HOUSEHOLD SCHEDULE.
***CODES FOR Qs. 15, 18 AND 20 EDUCATION LEVEL:
0 = PRE-PRIMARY/KINDERGARTEN
1 = PRIMARY
2 = SECONDARY
3 = HIGHER
8 = DON'T KNOW
EDUCATION CLASS:
$00=$ LESS THAN 1 YEAR COMPLETED $98=$ DON'T KNOW




| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES |  |  | SKIP |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 27 | MAIN MATERIAL OF THE FLOOR. <br> RECORD OBSERVATION. | NATURAL FLOOR EARTH/SAND. DUNG. <br> RUDIMENTARY FL <br> WOOD PLANKS. <br> PALM/BAMBOO. <br> FINISHED FLOOR <br> PARQUET OR PO <br> VINYL OR ASPH <br> CERAMIC TILES. <br> CEMENT. <br> ........... <br> CARPET. $\qquad$ <br> OTHER $\qquad$ | ISHED WOOD T STRIPS <br> (SPECIFY) | $\begin{array}{r} \ldots \ldots \ldots . .11 \\ \ldots \ldots \ldots . .12 \\ \ldots \ldots \ldots . .21 \\ \ldots \ldots \ldots . .22 \\ \ldots \ldots \ldots .31 \\ \ldots \ldots \ldots . .32 \\ \ldots \ldots \ldots . .33 \\ \ldots \ldots \ldots . .34 \\ \ldots \ldots \ldots . \\ \\ 96 \end{array}$ |  |
| 28 | Does any member of your household own: <br> A bicycle? <br> A motorcycle or motor scooter? <br> A car or truck? <br> A donkey or horse or camel? <br> A canoe or boat or ship? | BICYCLE MOTORCYCLE/SCO CAR/TRUCK. DONKEY/HORSE/C CANOE/BOAT/SHIP |  | $\begin{aligned} & \mathrm{NO} \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & \hline \end{aligned}$ |  |
| 29A | Does your household own any mosquito nets that can be used to protect against mosquitoes while sleeping? I am talking about nets people sleep under. | YES <br> NO |  | $\begin{gathered} \\ \ldots . . . . . . . . . . ~ \\ \ldots . . . . . . ~ \end{gathered}$ | $\rightarrow 30 \mathrm{G}$ |
| 29B | How many mosquito nets does your household own? | NUMBER OF NETS | $\ldots \ldots \ldots . \square$ |  |  |
| 30A | ASK RESPONDENT TO SHOW YOU THE NET(S) IN THE HOUSEHOLD. ASK OR RECORD APPROPRIATE ANSWER FOR THE FOLLOWING QUESTIONS. IF UNABLE TO OBSERVE THE NETS, CIRCLE APPROPRIATE CODE AND ASK QUESTIONS. | NET 1 SEEN .................. 1 NOT SEEN ................ 2 | NET 2 SEEN ................ 1 NOT SEEN ............... 2 | SEEN $\qquad$ <br> NOT SEEN | ..... 1 <br> ..... 2 |
| 30B | How long ago did your household obtain the mosquito net? | MONTHS <br> MORE THAN 3 <br> YRS AGO $\qquad$ 96 | MONTHS <br> MORE THAN 3 <br> YRS AGO $\qquad$ 96 |  <br> MORE THA YRS AGO | S <br> $\square$ $\ldots . . . . .$ |
| 30C | OBSERVE OR ASK THE BRAND OF MOSQUITO NET(S) IN THE HOUSEHOLD. | PERMANENT NET ${ }^{1}$.................... 1 <br> (SKIP TO 30F)•• <br> PRETREATED <br> NET ${ }^{2}$................... 2 <br> NET WITH KIT.... 3 <br> UNTREATED <br> NET $\qquad$ <br> OTHER $\qquad$ .6 <br> DON'T KNOW/ <br> UNSURE $\qquad$ | PERMANENT NET ${ }^{1}$ $\qquad$ <br> (SKIP TO 30F)،ـ <br> PRETREATED <br> NET $^{2}$................... 2 <br> NET WITH KIT... 3 <br> UNTREATED <br> NET. $\qquad$ <br> OTHER. $\qquad$ 6 <br> DON'T KNOW/ <br> UNSURE $\qquad$ | PERMANE $\mathrm{NET}^{1}$ $\qquad$ <br> (SKIP TO <br> PRETREA <br> $\mathrm{NET}^{2}$ $\qquad$ <br> NET WITH <br> UNTREAT NET. $\qquad$ <br> OTHER .... DON'T KN UNSURE.. |  |
| 30D | Since you got the mosquito net, was it ever soaked or dipped in a liquid to repel mosquitoes or bugs? | $\begin{aligned} & \text { YES .................... } 1 \\ & \text { NO ....................... } 2 \\ & \text { (SKIP TO 30F)^-1 } \\ & \text { NOT SURE ......... } 8 \end{aligned}$ | YES .................... 1 NO...................... 2 (SKIP TO 30F)^-1 NOT SURE......... 8 | YES $\qquad$ <br> NO $\qquad$ (SKIP TO NOT SUR |  |

[^14]

| WOMEN 15-49 |  |  |  | WEIGHT AND HEIGHT MEASUREMENT OF WOMEN 15-49 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { LINE } \\ \text { NO. } \\ \text { FROM } \\ \text { COL.(8) } \end{gathered}$ | NAME <br> FROM <br> COL.(2) | AGE FROM COL.(7) | What is (NAME)'s date of birth? | WEIGHT (KILOGRAMS) | HEIGHT (CENTIMETERS) | MEASURED <br> LYING DOWN OR STANDING UP | RESULT <br> 1 MEASURED <br> 2 NOT PRESENT <br> 3 REFUSED <br> 6 OTHER |
| (36) | (37) | (38) | (39) | (40) | (41) | (42) | (43) |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |



[^15]NATIONAL POPULATION COMMISSION



| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 111 | Now I would like you to read this sentence to me. <br> SHOW CARD TO RESPONDENT. <br> IF RESPONDENT CANNOT READ WHOLE SENTENCE, PROBE: Can you read any part of the sentence to me? | CANNOT READ AT ALL $\qquad$ <br> ABLE TO READ ONLY PARTS OF $\qquad$ <br> ABLE TO READ WHOLE SENTENCE...... 3 <br> NO CARD WITH REQUIRED <br> LANGUAGE $\qquad$ 4 <br> (SPECIFY LANGUAGE) |  |
| 112 | Have you ever participated in a literacy program or any other program that involves learning to read or write (not including primary school)? | YES ..................................................................................................................... NO |  |
| 113 | CHECK 111: |  | $\rightarrow 115$ |
| 114 | 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 |  |
| 115 | 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 |  |
| 116 | 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 |  |
| 117 | What is your religion? |  |  |
| 118 | What is your ethnic group? |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIE | SKIP |
| :---: | :---: | :---: | :---: |
| 201 | Now I would like to ask about all the births you have had during your life. Have you ever given birth? | YES <br> NO | $\rightarrow 206$ |
| 202 | Do you have any sons or daughters to whom you have given birth who are now living with you? | YES NO. | $\rightarrow 204$ |
| 203 | How many sons live with you? <br> And how many daughters live with you? <br> IF NONE, RECORD ‘00’. | SONS AT HOME .................. DAUGHTERS AT HOME $\qquad$ |  |
| 204 | Do you have any sons or daughters to whom you have given birth who are alive but do not live with you? | YES NO. | $\rightarrow 206$ |
| 205 | How many sons are alive but do not live with you? <br> And how many daughters are alive but do not live with you? <br> IF NONE, RECORD ‘00’. | SONS ELSEWHERE ............. <br> DAUGHTERS ELSEWHERE ... |  |
| 206 | Have you ever given birth to a boy or girl who was born alive but later died? <br> IF NO, PROBE: Any baby who cried or showed signs of life but did not survive? | YES <br> NO | $\rightarrow 208$ |
| 207 | How many boys have died? <br> And how many girls have died? <br> IF NONE, RECORD ‘00’. | BOYS DEAD $\qquad$ <br> GIRLS DEAD $\qquad$ |  |
| 208 | SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD ‘00’. | TOTAL............................. |  |
| 209 | CHECK 208: <br> Just to make sure that I have this right: you have had in TOTAL $\qquad$ births during your life. Is that correct? <br> PROBE AND <br> YES <br> NO <br> CORRECT <br> 201-208 AS NECESSARY. |  |  |
| 210 | CHECK 208: <br> ONE OR MORE <br> NO BIRTHS BIRTHS BIRTHS |  | $\rightarrow 226$ |



| 212 | 213 | 214 | 215 | 216 | $\begin{aligned} & 217 \\ & \text { IF ALIVE: } \end{aligned}$ | $218$ <br> IF ALIVE | $219$ <br> IF ALIVE: | $220$ <br> IF DEAD: | 221 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| What name was given to your next baby? <br> (NAME) | Were any of these births twins? | Is <br> (NAME) a boy or a girl? | In what month and year was (NAME) born? <br> PROBE: <br> What is his/her birthday? | Is <br> (NAME) <br> still <br> alive? | How old was (NAME) at his/her last birthday? <br> RECORD AGE IN COMPLETED YEARS. | Is (NAME) living with you? | RECORD HOUSEHOLD LINE NUMBER OF CHILD (RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD) | How old was when he/she <br> IF "1 YR", PR How many m was (NAME)? RECORD DA LESS THAN MONTH; MO LESS THAN YEARS; OR | Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME)? |
| 08 | SING.... 1 <br> MULT... 2 | $\begin{aligned} & \text { BOY.. } 1 \\ & \text { GIRL. } 2 \end{aligned}$ | MONTH $\square$ YEAR |  | AGE IN YEARS | $\begin{aligned} & \text { YES....... } 1 \\ & \text { NO ........ } 2 \end{aligned}$ | LINE NUMBER | DAYS ...... 1 <br> MONTHS. 2 <br> YEARS .... 3 | $\begin{aligned} & \text { YES ......... } 1 \\ & \text { NO ............ } 2 \end{aligned}$ |
| 09 | SING.... 1 <br> MULT... 2 | $\begin{aligned} & \text { BOY.. } 1 \\ & \text { GIRL. } 2 \end{aligned}$ | MONTH $\square$ YEAR |  | AGE IN YEARS | $\begin{aligned} & \text { YES....... } 1 \\ & \text { NO ........ } 2 \end{aligned}$ | LINE NUMBER | DAYS ...... 1 <br> MONTHS. 2 <br> YEARS .... 3 | $\begin{aligned} & \text { YES ......... } 1 \\ & \text { NO ............ } 2 \end{aligned}$ |
| 10 | SING.... 1 <br> MULT... 2 | $\begin{aligned} & \text { BOY.. } 1 \\ & \text { GIRL. } 2 \end{aligned}$ | MONTH $\square$ YEAR |  | AGE IN YEARS | $\begin{aligned} & \text { YES....... } 1 \\ & \text { NO ........ } 2 \end{aligned}$ | LINE NUMBER | DAYS ...... 1 <br> MONTHS. 2 <br> YEARS .... 3 | $\begin{aligned} & \text { YES ......... } 1 \\ & \text { NO ........... } 2 \end{aligned}$ |
| 11 | SING.... 1 <br> MULT... 2 | $\begin{aligned} & \text { BOY.. } 1 \\ & \text { GIRL. } 2 \end{aligned}$ | MONTH YEAR $\square$ |  | AGE IN YEARS | $\begin{aligned} & \text { YES....... } 1 \\ & \text { NO ........ } 2 \end{aligned}$ | LINE NUMBER | DAYS $\qquad$ 1 <br> MONTHS. 2 <br> YEARS .... 3 | $\begin{gathered} \text { YES ......... } 1 \\ \text { NO ........... } 2 \end{gathered}$ |
| 12 | SING.... 1 <br> MULT... 2 | $\begin{aligned} & \text { BOY.. } 1 \\ & \text { GIRL. } 2 \end{aligned}$ | MONTH $\square$ YEAR |  | AGE IN YEARS | $\begin{aligned} & \text { YES....... } 1 \\ & \text { NO ........ } 2 \end{aligned}$ | LINE NUMBER | DAYS ...... 1 <br> MONTHS. 2 <br> YEARS .... 3 | $\begin{aligned} & \text { YES ......... } 1 \\ & \text { NO ........... } 2 \end{aligned}$ |



| NO. | QUESTIONS AND FILTERS | CODING CATEGOR | SKIP |
| :---: | :---: | :---: | :---: |
| 226 | Are you pregnant now? | YES <br> NO <br> UNSURE | $\xrightarrow{\square} \text { 229 }$ |
| 227 | How many months pregnant are you? <br> RECORD NUMBER OF COMPLETED MONTHS. | MONTHS......................... |  |
| 228 | At the time you became pregnant, did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all? | THEN <br> LATER NOT AT ALL |  |
| 229 | Have you ever had a pregnancy that miscarried, was aborted, or ended in a stillbirth? | YES <br> NO | $\rightarrow 237$ |
| 230 | When did the last such pregnancy end? | MONTH $\qquad$ <br> YEAR $\qquad$ $\square$ |  |
| 231 |  | $\mathrm{CY}$ $\square$ | $\longrightarrow 237$ |
| 232 | How many months pregnant were you when the last such pregnancy ended? <br> RECORD NUMBER OF COMPLETED MONTHS. | MONTHS..... |  |
| 233 | Have you ever had any other pregnancies that did not result in live births? | YES <br> NO | $\rightarrow 237$ |
| 236 | When did the last such previous pregnancy end? | MONTH $\qquad$ <br> YEAR $\qquad$ $\square$ |  |
| 237 | When did your last menstrual period start? <br> (DATE, IF GIVEN) | DAYS AGO $\qquad$ 1 <br> WEEKS AGO. $\qquad$ .2 <br> MONTHS AGO $\qquad$ 3 <br> YEARS AGO $\qquad$ 4 <br> IN MENOPAUSE/ HAS HAD HYSTERECTOMY... <br> BEFORE LAST BIRTH $\qquad$ <br> NEVER MENSTRUATED $\qquad$ |  |
| 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 <br> NO <br> DON'T KNOW | $\square_{\bullet} 301$ |
| 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 DURING HER PERIOD RIGHT AFTER HER <br> PERIOD HAS ENDED HALFWAY BETWEEN TWO PE <br> OTHER $\qquad$ <br> (SPECIFY) <br> DON'T KNOW $\qquad$ |  |

SECTION 3. CONTRACEPTION

| 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. 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. |  |  |  |
| :---: | :---: | :---: | :---: |
| 301 | Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)? |  | 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? |
| 02 | MALE STERILIZATION Men can have an operation to avoid having any more children. | YES................................................................. 2 | Have you ever had a partner who had an operation to avoid having any more children? $\qquad$ <br> NO. $\qquad$ |
| 03 | PILL Women can take a pill every day to avoid becoming pregnant. | $\begin{aligned} & \text { YES.................................................................. } 2 \end{aligned}$ | $\begin{aligned} & \text { YES ........................................................................................................ } \end{aligned}$ |
| 04 | IUD Women can have a loop or coil placed inside them by a doctor or a nurse. | YES............................................................... 2 | YES ...................................................... 1 NO......................................... 2 |
| 05 | INJECTABLES Women can have an injection by a health provider which stops them from becoming pregnant for one or more months. | $\begin{aligned} & \text { YES....................................... } 1 \\ & \text { NO......................... } 2 \end{aligned}$ | $\begin{aligned} & \text { YES ........................................................................................................ } \end{aligned}$ |
| 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. | $\begin{aligned} & \text { YES...................................... } 1 \\ & \text { NO........................... } 2 \end{aligned}$ | $\begin{aligned} & \text { YES .......................................................................................................... } \\ & \text { NO...... } \end{aligned}$ |
| 07 | CONDOM Men can put a rubber sheath on their penis before sexual intercourse. | $\begin{aligned} & \text { YES................................................................... } 2 \end{aligned}$ | $\begin{aligned} & \text { YES ........................................................................................................... } \\ & \text { NO...... } \end{aligned}$ |
| 08 | FEMALE CONDOM Women can place a sheath in their vagina before sexual intercourse. | $\begin{aligned} & \text { YES.................................................................. } 2 \end{aligned}$ | $\begin{aligned} & \text { YES ........................................................................................................ } \\ & \text { NO...... } \end{aligned}$ |
| 09 | DIAPHRAGM Women can place a thin flexible disk in their vagina before intercourse. | YES.............................................................. 2 | YES .................................................................................................... NO...... |
| 10 | FOAM OR JELLY Women can place a suppository, jelly, or cream in their vagina before intercourse. | $\begin{aligned} & \text { YES.................................................................. } 2 \end{aligned}$ | $\begin{aligned} & \text { YES ......................................................................................................... } \\ & \text { NO...... } \end{aligned}$ |
| 11 | LACTATIONAL AMENORRHEA METHOD (LAM) Up to 6 months after childbirth, a woman can use a method that requires that she breastfeeds frequently, day and night, and that her menstrual period has not returned. | $\begin{aligned} & \text { YES.................................................................. } 2 \end{aligned}$ | $\begin{aligned} & \text { YES ......................................................................................................... } \\ & \text { NO...... } \end{aligned}$ |
| 12 | RHYTHM OR PERIODIC ABSTINENCE 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................................................................ 2 | YES ................................................................................................. NO...... |
| 13 | WITHDRAWAL Men can be careful and pull out before climax. | YES........................................... 1 NO....................... 2 | YES .................................................................................................. NO...... |
| 14 | EMERGENCY CONTRACEPTION Women can take pills up to three days after sexual intercourse to avoid becoming pregnant. | $\begin{aligned} & \text { YES................................................................... } \\ & \text { NO....... } \end{aligned}$ | $\begin{aligned} & \text { YES .......................................................................................................... } \\ & \text { NO...... } \end{aligned}$ |
| 15 | Have you heard of any other ways or methods that women or men can use to avoid pregnancy? | YES................................... 1 <br> (SPECIFY) <br> NO ................................. 2 |  |


| 303 | CHECK 302: <br> NOT A SINGLE $\square$ "YES" (NEVER USED) | AT LEAST ONE "YES" <br> (EVER USED) | $\longrightarrow 307$ |
| :---: | :---: | :---: | :---: |
| 304 | Have you ever used anything or tried in any way to delay or avoid getting pregnant? | $\begin{aligned} & \text { YES .................................................................................................................. } \\ & \text { NO....... } \end{aligned}$ | ->329 |
| 306 | What have you used or done? <br> 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. <br> How many living children did you have at that time, if any? <br> IF NONE, RECORD ‘00’. | NUMBER OF CHILDREN......... $\square$ |  |
| 308 | CHECK 302 (01): <br> WOMAN NOT <br> WOMAN STERILIZED STERILIZED $\square$ |  | $\rightarrow 311 \mathrm{~A}$ |
| 309 | CHECK 226: <br> NOT PREGNANT <br> PREGNANT OR UNSURE |  | $\longrightarrow 329$ |
| 310 | Are you currently doing something or using any method to delay or avoid getting pregnant? | $\begin{aligned} & \text { YES ................................................................................................................... } \\ & \text { NO....... } \end{aligned}$ | —>329 |
| 311 $311 A$ | Which method are you using? <br> IF MORE THAN ONE METHOD MENTIONED, FOLLOW SKIP INSTRUCTION FOR HIGHEST METHOD ON LIST. <br> CIRCLE 'A' FOR FEMALE STERILIZATION. |  |  |
| 313 | In what facility did the sterilization take place? <br> IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. | PUBLIC SECTOR <br> GOVT. HOSPITAL .............................. 11 <br> GOVT. HEALTH CENTER.................. 12 <br> FAMILY PLANNING CLINIC................ 13 <br> MOBILE CLINIC.................................. 14 <br> OTHER PUBLIC $\qquad$ 16 <br> (SPECIFY) <br> PRIVATE MEDICAL SECTOR <br> PRIVATE HOSPITAL/CLINIC .............. 21 <br> PRIVATE DOCTOR'S OFFICE............ 23 <br> MOBILE CLINIC.................................. 24 <br> NON-GOV. ORGANIZATION.............. 25 <br> OTHER PRIVATE <br> MEDICAL $\qquad$ 26 (SPECIFY) <br> OTHER $\qquad$ 96 <br> (SPECIFY) <br> DON'T KNOW <br> ...... 9 |  |


| 314 | CHECK 311: | YES ...................................................................................................................................................................... |  |
| :---: | :---: | :---: | :---: |
| 316 | In what month and year was the sterilization performed? <br> For how long have you been using (CURRENT METHOD) now without stopping? <br> PROBE: In what month and year did you start using (CURRENT METHOD) continuously? | MONTH...................... YEAR............ YEAR |  |
| 316B | CHECK 316/316A, 215 AND 230: <br> ANY BIRTH OR PREGNANCY TERMINATION AFTER MONTH AND YEAR OF START OF USE OF CONTRACEPTION IN 316/316A <br> GO BACK TO 316/316A, PROBE AND RECORD MONTH AND YEAR A USE OF CURRENT METHOD (MUST BE AFTER LAST BIRTH OR PRE | YES <br> NO <br> T START OF CONTINUOUS GNANCY TERMINATION). |  |
| 317 | CHECK 316/316A: <br> YEAR IS 1998 <br> YEAR IS 1997 <br> OR LATER <br> OR EARLIER |  | —327 |
| 319 | CHECK 311/311A: <br> CIRCLE METHOD CODE <br> IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST. |  | $\begin{aligned} & ->322 \\ & \\ & \rightarrow \\ & \\ & \\ & \rightarrow 331 \\ & \rightarrow 320 A \\ & \rightarrow 331 \\ & \rightarrow 331 \\ & \rightarrow 331 \end{aligned}$ |



| 327 | CHECK 311/311A: <br> CIRCLE METHOD CODE: <br> IF MORE THAN ONE METHOD CODE CIRCLED IN 311/311A, CIRCLE CODE FOR HIGHEST METHOD IN LIST. |  | $\begin{gathered} \longrightarrow 331 \\ \longrightarrow 331 \\ \\ \\ \\ \longrightarrow 331 \\ \longrightarrow 331 \\ \longrightarrow 331 \\ \longrightarrow 331 \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| 328 | Where did you obtain (CURRENT METHOD) the last time? <br> IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. |  | $\left\lvert\, \begin{gathered} \sim \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \end{gathered}\right.$ |
| 329 | Do you know of a place where you can obtain a method of family planning? | YES ........................................................................................................................................... | $\rightarrow 331$ |
| 330 | Where is that? <br> IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. <br> Any other place? <br> RECORD ALL PLACES MENTIONED | PUBLIC SECTOR <br> GOVT. HOSPITAL <br> GOVT. HEALTH CENTER .. $\qquad$ <br> FAMILY PLANNING CLINIC $\qquad$ <br> MOBILE CLINIC $\qquad$ <br> COMMUNITY HEALTH WORKER. $\qquad$ D <br> OTHER PUBLIC $\qquad$ F (SPECIFY) <br> PRIVATE MEDICAL SECTOR <br> PRIVATE HOSPITAL/CLINIC $\qquad$ <br> PHARMACY/ PATENT MEDICINE <br> STORE $\qquad$ H <br> PRIVATE DOCTOR. $\qquad$ <br> MOBILE CLINIC . $\qquad$ <br> COMMUNITY HEALTH WORKER. $\qquad$ <br> OTHER PRIVATE MEDICAL $\qquad$ <br> OTHER SOURCE <br> SHOP. $\qquad$ M <br> CHURCH $\qquad$ <br> FRIEND/RELATIVE. $\qquad$N <br> O <br> NGO. $\qquad$ <br> OTHER $\qquad$ <br> (SPECIFY) x |  |
| 331 | In the last 12 months, were you visited by a community health extension worker or family planning provider who talked to you about family planning? | $\begin{aligned} & \text { YES .................................................................................................................................... } \\ & \text { NO } \end{aligned}$ |  |
| 332 | In the last 12 months, have you visited a health facility for care for yourself (or your children)? | $\begin{aligned} & \text { YES ........................................................................................................................................... } \\ & \text { NO ....... } \end{aligned}$ | $\longrightarrow 401$ |
| 333 | Did any staff member at the health facility speak to you about family planning methods? | YES ................................................................................................................................... |  |


| 401 | CHECK 224: <br> ONE OR MORE BIRTHS IN 1998 OR LATER | $\begin{array}{r} \mathrm{BII} \\ \mathrm{IN} \\ \text { OR LA } \end{array}$ | $\begin{aligned} & \text { VO } \\ & \text { HS } \\ & \text { 98 } \\ & \text { R } \end{aligned}$ | $-\mid \longrightarrow 487$ |
| :---: | :---: | :---: | :---: | :---: |
| 402 | ENTER IN THE TABLE THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 1998 OR LATER. <br> ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. <br> (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST TWO COLUMNS OF ADDITIONAL QUESTIONNAIRES). <br> 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 <br> LINE NUMBER $\qquad$ $\square$ | NEXT-TO-LAST-BIRTH <br> LINE NUMBER. $\qquad$ $\square$ | SECOND-FROM-LAST-BIRTH <br> LINE NUMBER $\square$ |
| 404 | FROM 212 AND 216 |  |  |  |
| 405 | At the time you became pregnant with (NAME), did you want to become pregnant then, did you want to wait until later, or did you not want to have any (more) children at all? |  |  |  |
| 406 | How much longer would you like to have waited? |  | MONTHS <br> YEARS. $\square$ <br> DON'T KNOW. $\qquad$ 998 | MONTHS <br> YEARS <br> DON'T KNOW. $\qquad$ |
| 407 | Did you see anyone for antenatal care for this pregnancy? <br> IF YES: Whom did you see? Anyone else? <br> PROBE FOR THE TYPE OF PERSONS AND RECORD ALL PERSONS SEEN. |  |  |  |
| 407A | Where did you receive antenatal care for this pregnancy? <br> Anywhere else? | OTHER |  |  |
| 408 | How many months pregnant were you when you first received antenatal care for this pregnancy? | MONTHS $\qquad$ $\square$ <br> DON'T KNOW $\qquad$ |  |  |



| 422 | What drugs did you take? <br> RECORD ALL MENTIONED. IF TYPE OF DRUG IS NOT DETERMINED, SHOW TYPICAL ANTI-MALARIA DRUGS TO RESPONDENT. | FANSIDAR............................................A <br> CHLOROQUINE...................................B <br> HALFAN. $\qquad$ <br> DARAPRIM/METAPRIM. $\qquad$ <br> D <br> AMODIAQUINE $\qquad$ <br> NIVAQUINE. $\qquad$ <br> MALOZINE. $\qquad$ <br> UNKNOWN DRUG. $\qquad$ <br> OTHER $\qquad$ <br> X <br> (SPECIFY) |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 422A | CHECK 422: <br> DRUGS TAKEN FOR MALARIA PREVENTION. |  |  |  |
| 422B | How many times did you take Fansidar during this pregnancy? | NUMBER OF TIMES.................. |  |  |
| 422C | CHECK: 407 <br> ANTENATAL CARE RECEIVED DURING THE PREGNANCY? |  |  |  |
| 422D | Did you get the Fansidar during an antenatal visit, during another visit to a health facility or from some other source? | ANTENATAL VISIT $\qquad$ .1 <br> ANOTHER FACILITY VISIT.................. 2 OTHER SOURCE $\qquad$ 8 <br> (SPECIFY) |  |  |
| 423 | 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..................................................................................................... 8 AVERAGE................................ SMALLER THAN VERY SMALL........ DON'T KNOW.... |
| 424 | Was (NAME) weighed at birth? | YES.......................................................................................................................................... 8 |  | YES.......................................................................................................................................... 8 |
| 425 | How much did (NAME) weigh? <br> RECORD WEIGHT FROM HEALTH CARD, IF AVAILABLE. | GRAMS FROM CARDS $\qquad$ <br> GRAMS FROM $\text { RECALL................. } 2$ <br> DON'T KNOW $\qquad$ | GRAMS FROM CARDS $\qquad$ <br> GRAMS FROM $\qquad$ <br> DON'T KNOW $\qquad$ | GRAMS FROM CARDS $\qquad$ .1 <br> GRAMS FROM $\qquad$ <br> DON'T KNOW $\qquad$ |
| 426 | Who assisted with the delivery of (NAME)? <br> Anyone else? <br> PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS ASSISTING. <br> IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY |  |  |  |



|  |  | OTHER $\qquad$ 96 (SPECIFY) |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 433 | In the first two months after delivery, did you receive a vitamin A dose like this? <br> (SHOW AMPULE/ CAPSULE/SYRUP) | YES........................................................................................................................................................ |  |  |
| 434 | Has your period returned since the birth of (NAME)? |  |  |  |
| 435 | Did your period return between the birth of (NAME) and your next pregnancy? |  | YES................................................... 1 NO....................................................... 2 | YES................................................... 1 NO...................................................... 2 |
| 436 | For how many months after the birth of (NAME) did you not have a period? | MONTHS $\qquad$ $\square$ <br> DON'T KNOW $\qquad$ .98 | MONTHS $\qquad$ $\square$ DON'T KNOW $\qquad$ 98 | MONTHS $\qquad$ $\square$ DON'T KNOW $\qquad$ .98 |
| 437 | CHECK 226: <br> IS RESPONDENT PREGNANT? |  |  |  |
| 438 | Have you resumed sexual relations since the birth of (NAME)? | YES.............................................................................................................. (SKIP TO 440) |  |  |
| 439 | For how many months after the birth of (NAME) did you not have sexual relations? | MONTHS | MONTHS | MONTHS <br> DON'T KNOW. |
| 440 | Did you ever breastfeed (NAME)? | YES....................................................................................................................... | YES................................................................................................................. (SKIP TO 447) | YES................................................................................................................ (SKIP TO 447) |
| 441 | How long after birth did you first put (NAME) to the breast? <br> IF LESS THAN 1 HOUR, RECORD '00' HOURS. IF LESS THAN 24 HOURS, RECORD HOURS, OTHERWISE, RECORD DAYS. | IMMEDIATELY $\qquad$ .00 <br> HOURS DAYS. $\qquad$ |  |  |
| 442 | In the first three days after delivery, before your milk began flowing regularly, was (NAME) given anything to drink other than breast milk? | YES................................................................................................................................................................... |  | YES.................................................................................................................................................................... |
| 443 | What was (NAME) given to drink before your milk began flowing regularly? <br> Anything else? <br> RECORD ALL LIQUIDS MENTIONED. |  |  |  |
| 444 | CHECK 404 IS CHILD LIVING? | (SKIP TO 446) | LIVING | (SKIP TO 446) |
| 445 | Are you still breastfeeding (NAME)? |  | YES .............................................. 1 (SKIP TO 448) NO................................................. 2 |  |


| 446 | For how many months did you breastfeed (NAME)? | MONTHS $\qquad$ <br> DON'T KNOW $\qquad$ |  |  | MONTHS $\qquad$ <br> DON'T KNOW $\qquad$ .98 |  |  | MONTHS $\qquad$ <br> DON'T KNOW. $\qquad$ 98 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |
| 447 | CHECK 404 IS CHILD LIVING? | LIVING <br> DEAD <br> (GO BACK TO 405 IN NEXT COLUMN; OR IF NO MORE BIRTHS, GO TO 454) (SKIP TO 450) |  |  |  |  |  | LIVING <br> DEAD <br> (GO BACK TO 405 IN SECOND COLUMN OF NEW QUESTIONNAIRE; OR IF NO MORE BIRTHS, GO TO 454) <br> (SKIP TO 450) |  |  |
| 448 | How many times did you breastfeed last night between sunset and sunrise? <br> IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER | NUMBER OF NIGHT TIME FEEDINGS $\square$ |  |  | NUMBER OF NIGHT TIME feedings $\square$ |  |  | NUMBER OF NIGHT TIME <br> FEEDINGS |  |  |
| 449 | How many times did you breastfeed yesterday during the daylight hours? <br> IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER | NUMBER OF DAYLIGHT FEEDINGS $\square$ |  |  | NUMBER OF DAYLIGHT FEEDINGS $\qquad$ |  |  | NUMBER OF DAYLIGHT FEEDINGS $\square$ |  |  |
| 450 | Did (NAME) drink anything from a bottle with a nipple yesterday or last night? | YES.......................................................................................................................................................... |  |  |  |  |  | YES........................................................................................................................................................ |  |  |
| 451 | Was sugar added to any of the foods or liquids (NAME) ate yesterday? | YES..................................................................................................................................................... |  |  | YES...............................................................................................................................................NOODON'T KNOW..... |  |  | YES................................................................................................................................................... |  |  |
| 452 | How many times did (NAME) eat solid, semisolid, or soft foods other than liquids yesterday during the day or at night? <br> IF 7 OR MORE TIMES, RECORD '7' | NUMBER OF TIMES <br> DON'T KNOW $\qquad$ |  |  | NUMBER OF TIMES. <br> DON'T KNOW $\qquad$ 8 |  |  | NUMBER OF TIMES $\square$ <br> DON'T KNOW. $\qquad$ 8 |  |  |
| 453 |  | GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 454. |  |  | GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 454. |  |  | GO BACK TO SECOND COLUM OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO 454. |  |  |




| 470 | Did you seek advice or treatment for the fever/cough? | YES................................................................................................................. (SKIP TO 471A) | YES................................................................................................................................ (SKIP TO 471A) |  |
| :---: | :---: | :---: | :---: | :---: |
| 471 | Where did you seek advice or treatment? <br> Anywhere else? <br> RECORD ALL SOURCES MENTIONED |  |  |  |
| 471A | Has (NAME) been ill with convulsions at any time during the last 2 weeks? |  |  |  |
| 472A | CHECK 466 AND 471A: <br> HAD FEVER OR CONVULSIONS? |  |  |  |
| 473A | Was (NAME) given any drugs for the (fever/convulsions)? | YES................................................................................................................................ 8 (SKIP TO 474R) | YES................................................................. 1 NO.................................................................... 8 (SKIP TO 474R) |  |
| 474 | What drugs did (NAME) take? <br> RECORD ALL MENTIONED <br> ASK TO SEE DRUG(S) IF TYPE OF DRUG IS NOT KNOWN. IF TYPE OF DRUG IS STILL NOT DETERMINED, SHOW TYPICAL ANTI-MALARIAL DRUGS TO RESPONDENT. |  |  |  |
| 474A | Did (NAME) get any injection or suppository for the (fever/convulsions)? |  | INJECTION.................................................................................................................................. | INJECTION................................................................................................................... C |
| 474B | CHECK 474: <br> WHICH MEDICINES? |  |  |  |
| 474C | How long after the (fever/convulsions) started did (NAME) first take chloroquine? | SAME DAY ................................................. 0 NEXT DAY.............................. 1 TWO DAYS AFTER THE FEVER. ..... 2 THREE OR MORE DAYS AFTER THE FEVER......................................................................... |  | SAME DAY ........................................................................................... 3 NEXT DAY....................................................................... |


| 474D | For how many days did (NAME) take the chloroquine? <br> IF 7 OR MORE DAYS, RECORD ' 7 '. | DAYS $\qquad$ $\square$ <br> DON'T KNOW. $\qquad$ 8 | DAYS. $\qquad$ <br> DON'T KNOW. $\qquad$ 8 | DAYS $\qquad$ DON'T KNOW. $\qquad$ 8 |
| :---: | :---: | :---: | :---: | :---: |
| 474E | Did you have the chloroquine at home or did you get it from somewhere else? <br> IF MORE THAN ONE SOURCE MENTIONED, ASK: Where did you get the chloroquine first? | AT HOME.................................................................................................. 8 | AT HOME.................................................................................................. 8 | AT HOME................................................... 1 OTHER SOURCE........................................................... |
| 474F | CHECK 474: <br> WHICH MEDICINES? |  |  |  |
| 474G | How long after the (fever/convulsions) started did (NAME) first take Fansidar? |  | SAME DAY................................................. 0 NEXT DAY.............................. 1 TWO DAYS AFTER THE FEVER...... 2 THREE OR MORE DAYS AFTER THE FEVER.................................... 3 DON'T KNOW................................. 8 |  |
| 474H | For how many days did (NAME) take Fansidar? <br> IF 7 OR MORE DAYS, RECORD ' 7 '. | DAYS $\qquad$ DON'T KNOW. $\qquad$ 8 | DAYS $\qquad$ DON'T KNOW. $\qquad$ . 8 | DAYS $\qquad$ DON'T KNOW. $\qquad$ 8 |
| 474I | Did you have Fansidar at home or did you get it from somewhere else? <br> IF MORE THAN ONE SOURCE MENTIONED, ASK: Where did you get the Fansidar first? | AT HOME...................................... 1 OTHER SOURCE......................................................................... | AT HOME...................................... 1 OTHER SOURCE........................................................................ | AT HOME...................................... 1 OTHER SOURCE....................................................................... |
| 474J | CHECK 474: <br> WHICH MEDICINES? |  |  |  |
| 474K | How long after the (fever/convulsions) started did (NAME) first take (Amodiaquine/Camoquine)? |  | SAME DAY ............................................... 0 NEXT DAY ............................ 1 TWO DAYS AFTER THE FEVER...... 2 THREE OR MORE DAYS AFTER THE FEVER ................................. 3 DON'T KNOW ............................... 8 | SAME DAY ............................................... 0 NEXT DAY ............................. 1 TWO DAYS AFTER THE FEVER ...... 2 THREE OR MORE DAYS AFTER THE FEVER ..................................... 3 DON'T KNOW ............................... 8 |
| 474L | For how many days did (NAME) take (Amodiaquine/Camoquine)? <br> IF 7 OR MORE DAYS, RECORD ' 7 ' | DAYS $\qquad$ <br> DON'T KNOW. $\qquad$ .8 | DAYS. $\qquad$ <br> DON'T KNOW. $\qquad$ | DAYS $\qquad$ <br> DON'T KNOW. $\qquad$ .8 |
| 474M | Did you have the (Amodiaquine/Camoquine) at home or did you get it from somewhere else? <br> IF MORE THAN ONE SOURCE MENTIONED, ASK: Where did you get the (Amodiaquine/Camoquine) first? | AT HOME...................................................... 1 OTHER SOURCE................................................................. | AT HOME...................................................... 1 OTHER SOURCE................................................................... | AT HOME......................................................... 1 OTHER SOURCE................................................................ |
| 474N | CHECK 474: <br> WHICH MEDICINES? |  |  | $\left.\begin{array}{lll}\text { CODE 'D' } \\ \text { CIRCLED } \\ \\ \text { CODE 'D' } \\ \text { NOT } \\ \text { CIRCLED }\end{array}\right)$ |





| 489 | When (your child/one of your children) is seriously ill, can you decide by yourself whether or not the child should be taken for medical treatment? <br> IF SAYS NO CHILD EVER SERIOUSLY ILL, ASK: <br> If (your child/one of your children) became seriously ill, could you decide by yourself whether the child should be taken for medical treatment? <br> YES. <br> NO. $\qquad$ <br> DEPENDS.... |  | $\text { .............................. } 2$ |  |
| :---: | :---: | :---: | :---: | :---: |
| 490 | Now I would like to ask you some questions about medical care for you yourself. <br> 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, a <br> BIG small problem or no problem? PROBLEM <br> Knowing where to go. <br> 1 <br> 1 <br> 1 <br> 1 <br> 1 <br> 1 <br> Concern that there may not be a female health provider. | SMALL PROBLEM <br> 2 <br> 2 <br> 2 <br> 2 <br> 2 <br> 2 <br> 2 | NO PROBLEM <br> 3 <br> 3 <br> 3 <br> 3 <br> 3 <br> 3 <br> 3 |  |
| 491 | CHECK 215 AND 218: <br> HAS AT LEAST ONE CHILD <br> DOES NOT HAVE ANY BORN IN 2000 OR LATER CHILDREN BORN IN AND LIVING WITH HER 2000 OR LATER AND LIVING WITH HER <br> RECORD NAME OF YOUNGEST CHILD LIVING WITH HER (AND CONTINUE TO 492) <br> (NAME) | $\square$ |  | -494 |
| 492 | Now I would like to ask you about liquids (NAME FROM Q. 491) drank over the last seven days, including yesterday. <br> How many days during last seven days did (NAME FROM Q. 491) drink each of the following? <br> FOR EACH ITEM GIVEN AT LEAST ONCE IN LAST SEVEN DAYS, BEFORE PROCEEDING TO THE NEXT ITEM, ASK: <br> In total, how many times yesterday during the day or at night did (NAME FROM Q. 491) drink (ITEM)? <br> Plain water? <br> Commercially produced infant formula? <br> Any other milk such as tinned, powdered, or fresh animal milk? <br> Fruit juice? <br> Herbal drink? <br> Any other liquids such as sugar water, tea, coffee, carbonated drinks, or soup broth? <br> IF 7 OR MORE TIMES, RECORD ' 7 '. <br> IF DON'T KNOW, RECORD '8'. | LAST 7 DAYS <br> NUMBER OF DAYS <br> a. <br> b <br> c <br> d <br> e <br> f |  | RDAY/ IGHT <br> R OF S |



| 499B | In the last 3 months, on how many days did you drink an alcoholcontaining beverage? <br> IF EVERY DAY: RECORD ‘90'. | NUMBER OF DAYS $\square$ <br> NONE $\qquad$ |  |
| :---: | :---: | :---: | :---: |
| 499C | Have you ever gotten "drunk" from drinking an alcohol-containing beverage? | $\begin{aligned} & \text { YES ................................................................................................................. } \\ & \text { NO. } \end{aligned}$ | $\rightarrow 501$ |
| 499D | CHECK 499B <br> DRANK ALCOHOL ON AT LEAST ONE DAY | NONE | ->501 |
| 499E | In the last 3 months, on how many occasions did you get "drunk"? | NUMBER OF TIMES $\square$ <br> NONE/NEVER $\qquad$ |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 501 | Are you currently married or living with a man? | YES, CURRENTLY MARRIED ................. 1 YES, LIVING WITH A MAN..................... 2 NO, NOT IN UNION ............................. 3 | $\xrightarrow{\square} 505$ |
| 502 | Have you ever been married or lived with a man? | YES, FORMERLY MARRIED ......................... 1 YES, LIVED WITH A MAN ...................................................................................... | $\begin{aligned} & \longrightarrow 510 \\ & \longrightarrow 514 \end{aligned}$ |
| 504 | What is your marital status now: are you widowed, divorced, or separated? | WIDOWED ................................................................................................................................................. | $\underset{\sim}{\square} 510$ |
| 505 | Is your husband/partner living with you now or is he staying elsewhere? |  |  |
| 506 | 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 <br> LINE NO. $\qquad$ $\square$ |  |
| 507 | Does your husband/partner have any other wives besides yourself? | YES.............................................................................................................................................................. | $\begin{aligned} & \longrightarrow 510 \\ & \longrightarrow 510 \end{aligned}$ |
| 508 | How many other wives does he have? | NUMBER. $\square$ <br> DON'T KNOW $\qquad$ 98 | $\longrightarrow 510$ |
| 509 | Are you the first, second, ... wife? | RANK... |  |
| 510 | Have you been married or lived with a man only once, or more than once? |  |  |
| 511 | CHECK 510: |  | $\longrightarrow 514$ |
| 512 | How old were you when you started living with him? | AGE............................... |  |
| 514 | Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. <br> How old were you when you first had sexual intercourse (if ever)? | NEVER.................................................... 00 <br> AGE IN YEARS .................... <br> FIRST TIME WHEN STARTED LIVING WITH (FIRST) HUSBAND/PARTNER ... 95 | $\longrightarrow 524$ |
| 514A | CHECK 106: $\begin{array}{r\|r} 15-24 & \square \\ \text { YEARS OLD } & \begin{array}{r} 25-49 \\ \end{array} \text { Y } \end{array}$ |  | $\longrightarrow 515$ |
| 514B | The first time you had sexual intercourse, was a condom used? | YES ................................................................................................................... |  |



| NO. | QUESTIONS AND FILTERS | CODING CATEGOR | SKIP |
| :---: | :---: | :---: | :---: |
| 520A | What was the main reason you used a condom on that occasion? | RESPONDENT WANTED TO PREVENT STI/HIV. RESPONDENT WANTED TO PREVENT PREGNANCY RESPONDENT WANTED TO PREVENT BOTH STI/HIV AN PREGNANCY $\qquad$ DID NOT TRUST PARTNER/FEL PARTNER HAD OTHER PARTNERS. $\qquad$ PARTNER REQUESTED/INSIS <br> OTHER $\qquad$ (SPECIFY) <br> DON'T KNOW . $\qquad$ |  |
| 521 | What is your relationship to this other man? <br> IF MAN IS "BOYFRIEND" OR "FIANCÉ", ASK: <br> Was your boyfriend/fiancé living with you when you last had sex with him? <br> IF YES, CIRCLE '01'. <br> IF NO, CIRCLE '02'. | SPOUSE/COHABITING PARTN MAN IS BOYFRIEND/FIANCÉ. OTHER FRIEND $\qquad$ CASUAL ACQUAINTANCE RELATIVE. $\qquad$ COMMERCIAL SEX WORKER <br> OTHER $\qquad$ (SPECIFY) | $\rightarrow 522 \mathrm{~A}$ |
| 521A | CHECK 106: |  | $\longrightarrow 522$ |
| 521B | Was this man younger, about the same age or older than you? <br> IF OLDER: Do you think that he was less than 10 years older than you on 10 or more years older than you? | YOUNGER <br> ABOUT THE SAME AGE LESS THAN 10 YEARS OLDER 10 OR MORE YEARS OLDER OLDER, DON'T KNOW DIFFER DON'T KNOW. |  |
| 522 | For how long have you had sexual relations with this man? | DAYS $\qquad$ .1 <br> WEEKS $\qquad$ 2 <br> MONTHS $\qquad$ .3 <br> YEARS. 4 $\qquad$ |  |
| 522A | Other than these two men, have you had sex with any other man in the last 12 months? | YES <br> NO. | $\longrightarrow 524$ |
| 522B | The last time you had sexual intercourse with this other man, was a condom used? | YES <br> NO. | $\rightarrow 522 \mathrm{D}$ |
| 522C | What was the main reason you used a condom on that occasion? | RESPONDENT WANTED TO PREVENT STI/HIV. RESPONDENT WANTED TO PREVENT PREGNANCY RESPONDENT WANTED TO PREVENT BOTH STI/HIV AN PREGNANCY $\qquad$ DID NOT TRUST PARTNER/FEL PARTNER HAD OTHER PARTNERS.. $\qquad$ PARTNER REQUESTED/INSIS OTHER $\qquad$ (SPECIFY) <br> DON'T KNOW $\qquad$ |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORI | SKIP |
| :---: | :---: | :---: | :---: |
| 522D | What is your relationship to this man? <br> IF MAN IS "BOYFRIEND" OR "FIANCÉ", ASK: <br> Was your boyfriend/fiancé living with you when you last had sex with him? <br> IF YES, CIRCLE '01'. <br> IF NO, CIRCLE '02'. | SPOUSE/COHABITING PAR MAN IS BOYFRIEND/FIANCE OTHER FRIEND $\qquad$ CASUAL ACQUAINTANCE RELATIVE. $\qquad$ COMMERCIAL SEX WORKE <br> OTHER $\qquad$ | $\rightarrow$-523 |
| 522D1 | CHECK 106: |  | $\rightarrow$ 522E |
| 522D2 | Was this man younger, about the same age or older than you? <br> IF OLDER: Do you think that he was less than 10 years older than you on 10 or more years older than you? | YOUNGER <br> ABOUT THE SAME AGE <br> LESS THAN 10 YEARS OLD <br> 10 OR MORE YEARS OLDER <br> OLDER, DON'T KNOW DIFF <br> DON'T KNOW . |  |
| 522E | For how long have you had sexual relations with this man? | DAYS $\qquad$ 1 <br> WEEKS $\qquad$ 2 <br> MONTHS. $\qquad$ .3 <br> YEARS. $\qquad$ 4 |  |
| 523 | In total, with how many different men have you had sex in the last 12 months? | NUMBER OF PARTNERS.. |  |
| 524 | Do you know of a place where a person can get male condoms? | YES <br> NO | $\longrightarrow$-527 |
| 525 | Where is that? <br> IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. <br> (NAME OF PLACE) <br> Any other place? <br> RECORD ALL SOURCES MENTIONED. | PUBLIC SECTOR <br> GOVERNMENT HOSPITAL GOVT. HEALTH CENTER. FAMILY PLANNING CLINIC MOBILE CLINIC $\qquad$ COMMUNITY HEALTH WO <br> OTHER PUBLIC $\qquad$ (SPE <br> PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINI PHARMACY/PATENT MED STORE <br> PRIVATE DOCTOR $\qquad$ <br> MOBILE CLINIC $\qquad$ <br> COMMUNITY HEALTH WO <br> OTHER PRIVATE MEDICAL $\qquad$ <br> OTHER SOURCE <br> SHOP $\qquad$ <br> CHURCH $\qquad$ <br> FRIENDS/RELATIVES $\qquad$ <br> NGO $\qquad$ <br> OTHER $\qquad$ |  |
| 526 | If you wanted to, could you yourself get a condom? | YES <br> NO <br> DON'T KNOW/UNSURE |  |
| 527 | Do you know of a place where a person can get female condoms? | YES <br> NO | $\longrightarrow$-530 |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 528 | Where is that? <br> IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. <br> (NAME OF PLACE) <br> Any other place? <br> RECORD ALL SOURCES MENTIONED. | PUBLIC SECTOR <br> GOVERNMENT HOSPITAL .................A <br> GOVT. HEALTH CENTER....................B <br> FAMILY PLANNING CLINIC.................C <br> MOBILE CLINIC $\qquad$ <br> COMMUNITY HEALTH WORKER .......E <br> OTHER PUBLIC $\qquad$ F (SPECIFY) <br> PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC. $\qquad$ PHARMACY/PATENT MEDICINE STORE $\qquad$ H <br> PRIVATE DOCTOR $\qquad$ <br> MOBILE CLINIC $\qquad$ <br> COMMUNITY HEALTH WORKER .......K <br> OTHER PRIVATE MEDICAL $\qquad$ L <br> OTHER SOURCE <br> SHOP. $\qquad$ M <br> CHURCH $\qquad$ . <br> FRIENDS/RELATIVES $\qquad$ <br> NGO $\qquad$ O P P <br> OTHER $\qquad$ X |  |
| 529 | If you wanted to, could you yourself get a female condom? | YES ................................................................................................................................................. |  |
| 530 | Is it acceptable or not acceptable to you for information on condoms to be provided: <br> On the radio? <br> On the television? <br> In newspaper or magazine? |  |  |
| 531 | In the last few months, have you heard/read about condoms <br> On the radio? <br> On the television? <br> In a newspaper or magazine? <br> From a poster? <br> From leaflets or brochures? <br> From town crier? <br> Mobile public announcement? |  |  |

SECTION 6. FERTILITY PREFERENCES

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 601 | CHECK 311/311A: <br> NEITHER <br> HE OR SHE STERILIZED STERILIZED |  | $\rightarrow 614$ |
| 602 | CHECK 226: | HAVE (A/ANOTHER) CHILD..................... 1 NO MORE/NONE $\qquad$ SAYS SHE CAN'T GET PREGNANT........ 3 UNDECIDED/DON'T KNOW: <br> AND PREGNANT. $\qquad$ <br> AND NOT PREGNANT OR UNSURE $\qquad$ | $\longrightarrow 604$ $\longrightarrow 614$ $\longrightarrow 610$ $\longrightarrow 608$ |
| 603 | CHECK 226: <br> NOT PREGNANT <br> PREGNANT OR UNSURE <br> How long would you like to wait After the birth of the child you are from now before the birth of expecting now, how long would (a/another) child? you like to wait before the birth of another child? | MONTHS $\qquad$ <br> YEARS $\qquad$ <br> SOON/NOW $\qquad$ <br> SAYS SHE CAN'T GET PREGNANT.... 994 <br> AFTER MARRIAGE. $\qquad$ 995 <br> OTHER $\qquad$ 996 <br> DON'T KNOW $\qquad$ 998 |  |
| 604 | CHECK 226: <br> NOT PREGNANT <br> PREGNANT OR UNSURE |  | -610 |
| 605 | CHECK 310: USING A CONTRACEPTIVE METHOD? <br> NOT <br> NOT CURRENTLY <br> CURR ASKED USING $\square$ | NTLY <br> ING | $\rightarrow 608$ |
| 606 | CHECK 603: <br> NOT <br> 24 OR MORE MONTHS ASKED OR 02 OR MORE YEARS | -23 MONTHS 00-01 YEAR | $\rightarrow 610$ |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 607 | CHECK 602: <br> WANTS TO HAVE A/ANOTHER CHILD <br> You have said that you do not want (a/another) child soon, but you are not using any method to avoid pregnancy. <br> Can you tell me why? <br> Any other reason? <br> WANTS NO MORE/ NONE <br> You have said that you do not want any (more) children, but you are not using any method to avoid pregnancy. <br> Can you tell me why? <br> Any other reason? |  |  |
| 608 | In the next few weeks, if you discovered that you were pregnant, would that be a big problem, a small problem, or no problem for you? |  |  |
| 609 | CHECK 310: USING A CONTRACEPTIVE METHOD? | $\begin{aligned} & \text { YES, } \\ & \text { CURRENTLY } \end{aligned}$  <br> USING | $\checkmark 614$ |
| 610 | Do you think you will use a contraceptive method to delay or avoid pregnancy at any time in the future? | YES ........................................................................................................................................................................ | 612 |
| 611 | Which contraceptive method would you prefer to use? |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 612 | What is the main reason that you think you will not use a contraceptive method at any time in the future? |  | $\mid-614$ |
| 613 | Would you ever use a contraceptive method if you were married? |  |  |
| 614 | CHECK 216: <br> HAS LIVING CHILDREN $\square$ NO LIVING CHILDREN $\square$ <br> If you could go back to the time <br> If you could choose exactly the you did not have any children and number of children to have in your could choose exactly the number whole life, how many would that of children to have in your whole be? life, how many would that be? <br> PROBE FOR A NUMERIC RESPONSE. | NUMBER $\qquad$ $\square$ <br> OTHER $\qquad$ 96 (SPECIFY) | $\checkmark 616$ |
| 615 | 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? |  |  |
| 616 | Would you say that you approve or disapprove of couples using a method to avoid getting pregnant? | APPROVE .................................................... 1 DISAPPROVE DON'T KNOW/UNSURE ................................ 3 |  |
| 617 | In the last 3 months have you heard/read about family planning: <br> On the radio? <br> On the television? <br> In a newspaper or magazine? <br> From a poster? <br> From leaflets or brochures? <br> From town crier? <br> Mobile public announcement? |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES |  | SKIP |
| :---: | :---: | :---: | :---: | :---: |
| 619 | In the last 3 months, have you discussed the practice of family planning with your friends, neighbours, or relatives? | YES $\mathrm{NO} .$ | $\begin{array}{r}. . . . . . . . . . . ~ \\ \hline . . . . . . . ~ \\ \hline\end{array}$ | $\rightarrow 621$ |
| 620 | With whom? <br> Anyone else? <br> RECORD ALL PERSONS MENTIONED. | HUSBAND/PARTNER <br> MOTHER <br> FATHER <br> SISTER(S) <br> BROTHER(S) <br> DAUGHTER(S) <br> SON(S) <br> MOTHER-IN-LAW <br> FRIENDS/NEIGHBOURS <br> OTHER $\qquad$ |  |  |
| 621 | CHECK 501: | NO, OT IN NION |  | $\rightarrow 628$ |
| 622 | CHECK 311/311A: <br> AT LEAST ONE CODE CIRCLED <br> NO CODE | RCLED |  | $\rightarrow 624$ |
| 623 | You have told me that you are currently using contraception. 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 MAINLY HUSBAND/PARTNER. JOINT DECISION. $\qquad$ <br> OTHER $\qquad$ | .............$~$$\qquad$ 6 |  |
| 624 | Now I want to ask you about your husband's/partner's views on family planning. <br> Do you think that your husband/partner approves or disapproves of couples using a contraceptive method to avoid pregnancy? | APPROVES DISAPPROVES <br> DON'T KNOW | ..........$~$ <br> ........$~$ |  |
| 625 | How often have you talked to your husband/partner about family planning in the past year? | NEVER ONCE OR TWICE MORE OFTEN. |  |  |
| 627 | Do you think your husband/partner wants the same number of children that you want, or does he want more or fewer than you want? | SAME NUMBER. <br> MORE CHILDREN <br> FEWER CHILDREN $\qquad$ <br> DON'T KNOW $\qquad$ |  |  |
| 628 | Husbands and wives do not always agree on everything. Please tell me if you think a wife is justified in refusing to have sex with her husband when: <br> She knows her husband has a sexually transmitted infection? She knows her husband has sex with women other than his wives? She has recently given birth? She is tired or not in the mood? | YES HAS STI................................. 1 OTHER WOMEN............... 1 RECENT BIRTH ................ 1 TIRED/MOOD....................... 1 | NO DK |  |
| 628A | When a wife knows her husband has a sexually transmitted infection, is she justified in asking that he use a condom? | $\begin{aligned} & \text { YES .................. } \\ & \text { NO ............... } \\ & \text { DON'T KNOW } \end{aligned}$ |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 701 | CHECK 501 AND 502: | NEVER MARRIED <br> AND NEVER $\square$ <br> LIVED WITH A MAN | $\begin{aligned} & \longrightarrow 703 \\ & \rightarrow 707 \end{aligned}$ |
| 702 | How old was your husband/partner on his last birthday? | AGE IN COMPLETED YEARS |  |
| 703 | Did your (last) husband/partner ever attend school? | $\qquad$ | $\rightarrow 706$ |
| 704 | What was the highest level of school he attended: primary, secondary, or higher? | PRIMARY $\qquad$ <br> 1 <br> SECONDARY. <br> 2 <br> HIGHER.......................................... 3 <br> DON'T KNOW.................................. 8 | $\rightarrow 706$ |
| 705 | What was the highest (class/form/year) he completed at that level? | CLASS $\qquad$ DON'T KNOW. $\qquad$ 98 |  |
| 706 | CHECK 701: <br> CURRENTLY MARRIED/ LIVING WITH A MAN <br> What is your husband's/partner's occupation? <br> That is, what kind of work does he mainly do? <br> FORMERLY MARRIED/ LIVED WITH A MAN <br> What was your (last) husband's/ partner's occupation? <br> That is, what kind of work did he mainly do? |  |  |
| 707 | Aside from your own housework, are you currently working? | YES.............................................. 1 NO................................................. 2 | $\rightarrow 710$ |
| 708 | 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. <br> Are you currently doing any of these things or any other work? | YES <br> 1 <br> NO. $\text { .. } 2$ | $\rightarrow 710$ |
| 709 | Have you done any work in the last 12 months? | YES <br> 1 <br> NO. <br> .2 | $\rightarrow 719$ |
| 710 | What is your occupation, that is, what kind of work do you mainly do? |  |  |
| 711 | CHECK 710: <br> WORKS IN <br> DOES NOT WOR AGRICULTURE IN AGRICULTUR | $\mathrm{K} \square$ | $\longrightarrow 713$ |
| 712 | 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......................................................................... 4 |  |
| 713 | 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.................................................. |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 714 | Do you usually work at home or away from home? | HOME....................................................................................... AWAY....... |  |
| 714A | IS A CHILD LIVING AT HOME WHO IS AGE 5 OR LESS? <br> YES $\square$ | NO | $\longrightarrow 715$ |
| 714B | Who usually takes care of (NAME OF YOUNGEST CHILD AT HOME) while you are working? |  |  |
| 715 | 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 |  |
| 716 | Are you paid or do you earn in cash or kind for this work or are you not paid at all? | CASH ONLY............................................... 1 CASH AND KIND ............................................................................................................................................ | ${\underset{\rightharpoonup}{\bullet}}_{\bullet 719}$ |
| 717 | Who mainly decides how the money you earn will be used? |  |  |
| 718 | On average, how much of your household's expenditures do your earnings pay for: none, almost none, less than half, about half, more than half, or all? |  |  |
| 719 | Who in your family usually has the final say on the following decisions: <br> Your own health care? <br> Making large household purchases? <br> Making household purchases for daily needs? <br> Visits to family or relatives? <br> What food should be cooked each day? <br> Children's health care? <br> Children's education? | RESPONDENT = 1 <br> HUSBAND/PARTNER = 2 <br> RESPONDENT \& HUSBAND/PARTNER JOINTLY $=3$ <br> SOMEONE ELSE $=4$ <br> RESPONDENT \& SOMEONE ELSE JOINTLY = 5 <br> DECISION NOT MADE/NOT APPLICABLE $=6$ |  |
| 720 | PRESENCE OF OTHERS AT THIS POINT (PRESENT AND LISTENING, PRESENT BUT NOT LISTENING OR NOT PRESENT) | PRES/LISTEN.PRES/ <br> NOT <br> LISTEN.$~$NOT <br> PRES |  |


| NO. | QUESTIONS AND FILTERS | CODING CATE | IES |  | SKIP |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 721 | 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: <br> If she goes out without telling him? <br> If she neglects the children? <br> If she argues with him? <br> If she refuses to have sex with him? <br> If she burns the food? <br> If food is not cooked on time? | DK GOES OUT ............. 1 NEGL. CHILDREN. .1 ARGUES ............... 1 REFUSES SEX ...... 1 BURNS FOOD ....... 1 FOOD NOT COOKED ON TIME ............ 1 | $\begin{aligned} & \mathrm{NO} \\ & \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & 2 \end{aligned}$ | 8 8 8 8 8 8 |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 801 | Now I would like to talk about something else. Have you ever heard of an illness called AIDS? | $\begin{aligned} & \text { YES ................................................................................................................... } \\ & \text { NO ....... } \end{aligned}$ | >817 |
| 801A | How can a person get AIDS? <br> Any other ways? <br> RECORD ALL MENTIONED. | SEX WITH PROSTITUTES .......................A SEXUAL INTERCOURSE <br> WITH MULTIPLE PARTNERS $\qquad$ <br> SEX WITH PROSTITUTES $\qquad$ <br> NOT USING CONDOM $\qquad$ <br> HOMOSEXUAL CONTACT $\qquad$ <br> BLOOD TRANSFUSION $\qquad$ <br> INJECTIONS $\qquad$ G <br> KISSING $\qquad$ . H <br> MOSQUITO BITES $\qquad$ . 1 <br> CIRCUMCISION $\qquad$ <br> RAZOR BLADES/BARBER/CLIPPER.......K <br> SHARP OBJECTS $\qquad$ <br> OTHER $\qquad$ w <br> (SPECIFY) <br> OTHER $\qquad$ X DON'T KNOW $\qquad$ Z |  |
| 802 | Is there anything a person can do to avoid getting AIDS or the virus that causes AIDS? |  | $\xrightarrow{\square} 809$ |
| 803 | What can a person do? <br> Anything else? <br> RECORD ALL WAYS MENTIONED. |  |  |
| 804 | Can people reduce their chances of getting the AIDS virus by having just one sex partner who is not infected and who has no other partners? |  |  |
| 805 | Can a person get the AIDS virus from mosquito bites? | YES ............................................................................................................................................................... NO DON'T KNOW |  |
| 806 | Can people reduce their chances of getting the AIDS virus by using a condom every time they have sex? | YES ........................................................................................................................................................................... |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES |  | SKIP |
| :---: | :---: | :---: | :---: | :---: |
| 807 | Can people get the AIDS virus by sharing food with a person who has AIDS? | $\begin{aligned} & \text { YES ................ } \\ & \text { NO ................ } \\ & \text { DON'T KNOW } \end{aligned}$ | $\begin{array}{r} . . . . . . . . . . . . ~ \\ . \\ . . . . . . . . . . . . ~ \\ . \end{array}$ |  |
| 808 | Can a person reduce their chance of getting the AIDS virus by not having sex at all? | YES <br> NO <br> DON'T KNOW | $\begin{aligned} & \text {............... } 1 \\ & . . . . . . . . . . . . ~ \\ & . . . . . . . . . . ~ \\ & 8 \end{aligned}$ |  |
| 808A | Can people get the AIDS virus because of witchcraft or other supernatural means? | YES <br> NO <br> DON'T KNOW | $\begin{aligned} & \text {............... } 1 \\ & . . . . . . . . . . . . ~ \\ & . . . . . . . . . ~ \end{aligned}$ |  |
| 809 | Is it possible for a healthy-looking person to have the AIDS virus? |  | $\begin{aligned} & \text {............... } 1 \\ & . . . . . . . . . . . . ~ \\ & . . . . . . . . . . ~ \end{aligned}$ |  |
| 810 | Do you know someone personally who has the virus that causes AIDS or someone who died of AIDS? | YES NO. | $\begin{aligned} & . . . . . . . . . . . . . ~ \\ & . . . . . . . . . . ~ \end{aligned}$ |  |
| 811 | Can the virus that causes AIDS be transmitted from a mother to a child? | YES <br> NO <br> DON'T KNOW | $\begin{aligned} & . . . . . . . . . . . . . . ~ \\ & . . . . . . . . . . . ~ \\ & . . . . . . . . . . . ~ \\ & \hline \end{aligned}$ | 813 |
| 812 | Can the virus that causes AIDS be transmitted from a mother to a child: <br> During pregnancy? <br> During delivery? <br> By breastfeeding? | YES DURING PREG ......... 1 DURING DELIVERY.. 1 BREASTFEEDING .... 1 | DK $\begin{aligned} & 8 \\ & 8 \\ & 8 \end{aligned}$ |  |
| 812A | Have you heard of any drugs that a woman infected with the AIDS virus can take to reduce the risk of transmission to the baby during pregnancy? | YES <br> NO <br> DON'T KNOW | .............$~$ <br> ...........$~$ |  |
| 813 | CHECK 501: <br> YES, CURRENTLY MARRIED/ <br> LIVING WITH A MAN | NOT IN UNION |  | $\rightarrow 814 \mathrm{~A}$ |
| 814 | Have you ever talked with (your husband/the man you are living with) about ways to prevent getting the virus that causes AIDS? | YES $\mathrm{NO} .$ | $\begin{aligned} & \text {............ } 1 \\ & \text {.......... } 2 \end{aligned}$ |  |
| 814A | In your opinion, is it acceptable or unacceptable for AIDS to be discussed: <br> On the radio? <br> On the TV? <br> In newspapers/magazines? <br> In Church/Mosque? <br> At home? <br> In School? | ON THE RADIO $\qquad$ <br> ON THE TV $\qquad$ <br> IN NEWSPAPERS/ MAGAZINES $\qquad$ <br> IN CHURCH/MOSQUE <br> AT HOME . $\qquad$ <br> IN SCHOOL. $\qquad$ | NOT ACCEPT ABLE |  |
| 814B | Would you buy fresh vegetables from a seller who has the AIDS virus? | YES <br> NO DON'T KNOW | $\begin{aligned} & . . . . . . . . . . . . . . . ~ \\ & . . . . . . . . . . . . ~ \\ & \hline . . . . . . . . . ~ \\ & \hline \end{aligned}$ |  |
| 815 | If a member of your family got infected with the virus that causes AIDS, would you want it to remain a secret or not? | YES, SECRET NO, NOT SECRET DK/NOT SURE | $\begin{aligned} & . . . . . . . . . . . . . . . ~ \\ & . . . . . . . . . . . . ~ \\ & . \end{aligned}$ |  |
| 816 | If a relative of yours became sick with the virus that causes AIDS, would you be willing to care for her or him in your own household? | YES <br> NO <br> DK/NOT SURE/DEPEND | $\begin{aligned} & . . . . . . . . . . . . . . . ~ \\ & . . . . . . . . . . . ~ \\ & \hline . . . . . . . . . . ~ \\ & \hline \end{aligned}$ |  |
| 816A | If a female teacher has the AIDS virus, should she be allowed to continue teaching in the school? | CAN CONTINUE SHOULD NOT CONTINU DK/NOT SURE/DEPEND | $\begin{aligned} & . . . . . . . . . . . . . . . ~ \\ & . . . . . . . . . . . . ~ \\ & . . . . . . . . . . . ~ \end{aligned}$ |  |
| 816B | Should children age 12-14 be taught about using a condom to avoid AIDS? | YES NO . DK/NOT SURE/DEPEND | ..............$~$ <br> ............$~$ <br> . <br> .........$~$ |  |
| 816C | I don't want to know the results, but have you ever been tested to see if you have the AIDS virus? | YES $\mathrm{NO} .$ | $\text { ................. } 1$ | $\rightarrow 816 \mathrm{D}$ |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 816C1 | When was the last time you were tested? | LESS THAN 12 MONTHS ...................................................................................................... $12-23$ MONTHS 2 YEARS OR MORE ...... |  |
| 816C2 | 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 .................................................................... |  |
| 816C3 | I don't want to know the results, but did you get the results of the test? | $\begin{aligned} & \text { YES ................................................................................................................ } \\ & \text { NO } \end{aligned}$ | L•816FX |
| 816D | Would you want to be tested for the AIDS virus? | YES ....................................................................................................................................................... |  |
| 816E | Do you know a place where you could go to get an AIDS test? | $\begin{aligned} & \text { YES .................................................................................................................. } 1 \\ & \text { NO ....... } \end{aligned}$ | -816G |
| 816F | Where can you go for the test? <br> RECORD ONLY FIRST RESPONSE GIVEN. |  |  |
| 816FX | Where did you go for the test? <br> IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. |  |  |
| 816G | Do you think your chances of getting AIDS are small, moderate, great, or no risk at all? |  | $\begin{aligned} & ->816 \mathrm{I} \\ & \rightarrow 816 \mathrm{I} \\ & \rightarrow 816 \mathrm{~K} \\ & \rightarrow 816 \mathrm{~J} \end{aligned}$ |
| 816H | Why do you think that you have (NO RISK/A SMALL CHANCE) of getting AIDS? <br> Any other reasons? <br> RECORD ALL MENTIONED. |  |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 816I | Why do you think that you have a (MODERATE/GREAT CHANCE) of getting AIDS? <br> Any other reasons? <br> RECORD ALL MENTIONED. | DO NOT USE CONDOMS $\qquad$ <br> MORE THAN ONE SEXUAL PARTNER...B <br> SEX WITH PROSTITUTES $\qquad$ C <br> SPOUSE HAS OTHER PARTNER(S) ..... D <br> HOMOSEXUAL CONTACT. $\qquad$ <br> HAD BLOOD TRANSFUSION...................F <br> HAD INJECTIONS WITH <br> UNSTERILISEDNEEDLES. $\qquad$ G <br> SEEK PROTECTION FROM <br> TRADITIONAL HEALER $\qquad$ <br> OTHER $\qquad$ W (SPECIFY) <br> OTHER $\qquad$ x <br> DON'T KNOW. <br> (SPECIFY) <br> DONT KNOW ...................................Z |  |
| 816J | Since you heard of AIDS, have you changed your behaviour to prevent getting AIDS? <br> IF YES, what did you do? <br> RECORD ALL MENTIONED. |  |  |
| 816K | From which sources of information have you learned most about AIDS? <br> Any other source? <br> RECORD ALL MENTIONED. |  |  |
| 817 | (Apart from AIDS), have you heard about (other) infections that can be transmitted through sexual contact? | $\begin{aligned} & \text { YES .................................................................................................................... } \\ & \text { NO ....... } \end{aligned}$ | 819A |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 818 | If a man has a sexually transmitted infection, what symptoms might he have? <br> Any others? <br> RECORD ALL SYMPTOMS MENTIONED. | ABDOMINAL PAIN $\qquad$ <br> GENITAL DISCHARGE/DRIPPING ..........B <br> FOUL SMELLING DISCHARGE .............. C <br> BURNING PAIN ON URINATION ............ D <br> REDNESS/INFLAMMATION IN <br> GENITAL AREA $\qquad$ <br> SWELLING IN GENITAL AREA ................F <br> GENITAL SORES/ULCERS ..................... G <br> GENITAL WARTS $\qquad$ H <br> GENITAL ITCHING $\qquad$ <br> BLOOD IN URINE .................................... <br> LOSS OF WEIGHT ..................................K <br> IMPOTENCE ...........................................L <br> OTHER $\qquad$ W (SPECIFY) <br> OTHER $\qquad$ X (SPECIFY) <br> NO SYMPTOMS $\qquad$ <br> DON'T KNOW $\qquad$ |  |
| 819 | If a woman has a sexually transmitted infection, what symptoms might she have? <br> Any others? <br> RECORD ALL SYMPTOMS MENTIONED. |  |  |
| 819A | CHECK 514: <br> HAS HAD SEXUAL INTERCOURSE $\square$ | T HAD SEXUAL OURSE | 901 |
| 819A1 | CHECK 817: <br> KNOWS STIs |  | 819C |
| 819B | 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 sexuallytransmitted infection? | YES ........................................................................................................................................................................ |  |
| 819C | Sometimes, women experience a bad-smelling, abnormal genital discharge. <br> During the last 12 months, have you had a bad-smelling, abnormal genital discharge? | YES ....................................................................................................................................................................... |  |
| 819D | Sometimes women have a genital sore or ulcer. <br> During the last 12 months, have you had a genital sore or ulcer? |  |  |
| 819E | CHECK 819B, 819C, 819D: <br> AT LEAST ONE 'YES' | OTHER | -901 |
| 819F | The last time you had (PROBLEM FROM 819B/819C/819D), did you seek any kind of advice or treatment? | $\begin{aligned} & \text { YES .................................................................................................................. } \\ & \text { NO ........ } \end{aligned}$ | 819 H |



SECTION 9. FEMALE GENITAL CUTTING (CIRCUMCISION)

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 901 | Have you ever heard of female circumcision? | $\begin{aligned} & \text { YES ............................................................................................................. } 12 \\ & \text { NO ....... } \end{aligned}$ | $\rightarrow$-903 |
| 902 | In a number of countries, there is a practice in which a girl may have part of her genitals cut. Have you ever heard about this practice? | $\begin{aligned} & \text { YES .................................................................................................................. } \\ & \text { NO } \end{aligned}$ | $\rightarrow$-925 |
| 903 | Have you ever been circumcised? | YES ........................................................................................................................................................................ | $\xrightarrow[-]{\square} 909$ |
| 904 | Now I would like to ask you what was done to you at this time. <br> Was any flesh removed from the genital area? |  | $\rightarrow 906$ |
| 905 | Was the genital area cut on the surface without removing any flesh? |  |  |
| 906 | Was your genital area sewn closed? | YES .......................................................................................................................................................... NO DON'T KNOW |  |
| 907 | How old were you when this occurred? <br> IF THE RESPONDENT DOES NOT KNOW THE EXACT AGE, PROBE TO GET AN ESTIMATE. | AGE IN COMPLETED YEARS..... $\square$ DURING INFANCY $\qquad$ 95 DON'T KNOW $\qquad$ 98 |  |
| 908 | Who did the circumcision? |  |  |
| 909 | CHECK 214 AND 216: <br> HAS AT LEAST ONE <br> HAS NO LIVING LIVING DAUGHTER DAUGHTER |  | ->919 |
| 910 | Have any of your daughters been circumcised? <br> IF YES: How many? | NUMBER CIRCUMCISED $\qquad$ $\square$ <br> NO DAUGHTER CIRCUMCISED $\qquad$ | --918 |
| 911 | To which of your daughters did this happen most recently? $\qquad$ <br> (DAUGHTER'S NAME) <br> INTERVIEWER: CHECK 212 AND RECORD THE LINE NUMBER FOR THE DAUGHTER | DAUGHTER'S LINE NUMBER FROM Q212 $\qquad$ |  |
| 912 | Now I would like to ask you what was done to (NAME OF THE DAUGHTER FROM Q.911) at this time? <br> Was any flesh removed from her genital area? |  | $\rightarrow 914$ |
| 913 | Was her genital area cut on the surface without removing any flesh? | YES ....................................................................................................................................................................... NO DON'T |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 914 | Was her genital area sewn closed? |  |  |
| 915 | How old was (NAME OF THE DAUGHTER FROM Q.911) when this occurred? <br> IF THE RESPONDENT DOES NOT KNOW THE AGE, PROBE TO GET AN ESTIMATE. | AGE IN COMPLETED YEARS..... $\square$ DURING INFANCY $\qquad$ 95 DON'T KNOW $\qquad$ 98 |  |
| 916 | Who did the circumcision? |  |  |
| 917 | At the time of circumcision or afterwards, did (NAME OF THE DAUGHTER FROM Q.911) have any of the following: <br> Excessive bleeding? <br> Difficulty in passing urine or urine retention? <br> Swelling in the genital area? <br> Infection in the genital area? / Wound that did not heal properly? |  YES NO DK   <br> EXCESSIVE BLEEDING............. 1 2 8  <br> DIF. IN PASSING URINE/    <br> URINE RETENTION ................ 1 2 8  <br> SWELLING..................... 1 2 8  <br> INFECTION/NOT HEAL    <br> PROPERLY........................ 1 2 8  | $] \rightarrow 919$ |
| 918 | Do you intend to have any of your daughters circumcised in the future? |  |  |
| 919 | What benefits do girls themselves get if they undergo this circumcision? <br> PROBE: Any other benefits? <br> RECORD ALL MENTIONED. |  |  |
| 920 | What benefits do girls themselves get if they do not undergo this circumcision? <br> PROBE: Anything else? <br> RECORD ALL MENTIONED. |  |  |
| 921 | Would you say that this practice is a way to prevent a girl from having sex before marriage or does it have no effect? | PREVENT SEX ................................................................................................................................... NO EFFECT DON'T KNOW ....... |  |
| 922 | Do you believe that this practice is required by your religion? | YES .......................................................................................................................................................................... NO |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES |
| :--- | :--- | :--- | :--- | :--- | :--- |$|$| SKIP |
| :--- |

NOTE: GO BACK TO THE HOUSEHOLD QUESTIONNAIRE AND ADMINISTER THE HEIGHT AND WEIGHT SECTION.

## TO BE FILLED IN AFTER COMPLETING INTERVIEW

COMMENTS ABOUT RESPONDENT:
$\qquad$
$\qquad$
$\qquad$
$\qquad$

COMMENTS ON SPECIFIC QUESTIONS:
$\qquad$
$\qquad$
$\qquad$
$\qquad$

ANY OTHER COMMENTS:
$\qquad$
SUPERVISOR'S OBSERVATIONS
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

NAME OF THE SUPERVISOR:
DATE: $\qquad$

EDITOR'S OBSERVATIONS
$\qquad$

NAME OF EDITOR:
DATE: $\qquad$

NATIONAL POPULATION COMMISSION


## INTRODUCTION AND CONSENT

GREETINGS. My name is and I am working with the National Population Commission.
We are conducting a national survey about the health of women, men and children. We would very much appreciate your participation in this survey. I would like to ask you about your health. This information will help the government to plan health services. We won't take too much of your time. Whatever information you provide will be kept strictly confidential and will not be shown to other persons. 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?


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIE | SKIP |
| :---: | :---: | :---: | :---: |
| 101 | RECORD THE TIME (START OF INTERVIEW). | HOUR $\qquad$ <br> MINUTES $\qquad$ |  |
| 102 | First I would like to ask some questions about you and your household. For most of the time until you were 12 years old, did you live in a city, in a town, or in a village? | CITY <br> TOWN <br> VILLAGE |  |
| 103 | How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)? <br> IF LESS THAN ONE YEAR, RECORD '00' YEARS. | YEARS $\qquad$ <br> ALWAYS $\qquad$ <br> VISITOR $\qquad$ | $\xrightarrow[-]{\square} 105$ |
| 104 | Just before you moved here, did you live in a city, in a town, or in a village? | CITY <br> TOWN. <br> VILLAGE |  |
| 105 | In the last 12 months, have you ever traveled away from this community and slept away? | YES <br> NO | $\rightarrow 108$ |
| 106 | In the last 12 months, on how many separate occasions have you traveled away from this community and slept away? | NUMBER OF TRIPS AWAY.... |  |
| 107 | In the last 12 months, have you been away from this community for more than 1 month at a time? | $\begin{aligned} & \text { YES ........................................................................................ } \\ & \text { NO ....... } \end{aligned}$ |  |
| 108 | In what month and year were you born? | MONTH $\qquad$ <br> DOES NOT KNOW MONTH <br> YEAR $\qquad$ $\square$ <br> DOES NOT KNOW YEAR $\qquad$ |  |
| 109 | How old were you at your last birthday? <br> COMPARE AND CORRECT 108 AND/OR 109 IF INCONSISTENT. | AGE IN COMPLETED YEARS |  |
| 110 | Have you ever attended school? | YES NO. | $\rightarrow 114$ |
| 111 | What is the highest level of school you attended: primary, secondary, or higher? | PRIMARY SECONDARY HIGHER. |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 112 | What is thehighest (class/form/year) you completed at that level? | CLASS/FORM/YEAR ............. $\square^{\square}$ |  |
| 113 | CHECK 111: <br> PRIMARY <br> SECONDARY OR HIGHER |  | $\rightarrow 117$ |
| 114 | Now I would like you to read this sentence to me. <br> SHOW CARD TO RESPONDENT. <br> 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. ABLE TO READ WHOLE SENTENCE........................ 2 NO CARD WITH REQUIRED LANGUAGE $\qquad$ 4 (SPECIFY LANGUAGE) |  |
| 115 | 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 |  |
| 116 | CHECK 114: |  | $\rightarrow 118$ |
| 117 | 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 AT LEAST ONCE A WEEK LESS THAN ONCE A WEEK NOT AT ALL |  |
| 118 | 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 ............................... 12 AT LEAST ONCE A WEEK ................. 2 LESS THAN ONCE A WEEK ................. 3 NOT AT ALL................................... 4 |  |
| 119 | Do you watch television almost every day, at least once a week, less than once a week or not at all? | ALMOST EVERY DAY AT LEAST ONCE A WEEK LESS THAN ONCE A WEEK NOT AT ALL |  |
| 120 | Are you currently working? | $\begin{aligned} & \text { YES ................................................................................................................... } \\ & \text { NO } \end{aligned}$ | $\longrightarrow 123$ |
| 121 | Have you done any work in the last 12 months? | $\begin{array}{\|l} \text { YES ....................................................................................................................... } \\ \text { NO ....... } \end{array}$ | $\longrightarrow 123$ |
| 122 | What have you been doing for most of the time over the last 12 months? | GOING TO SCHOOL/STUDYING ............. 1 LOOKING FOR WORK ........................... 2 RETRED............................. 3 UNABLE TO WORK, LLL/ HANDICAPPED........................................... 5 HOUSEWORK/CHILDCARE........... 6 OTHER_ $\quad$ (SPECIFY) | $]-129$ |
| 123 | What is your occupation, that is, what kind of work do you mainly do? | $\qquad$ $\qquad$ |  |
| 124 | CHECK 123: <br> WORKS IN $\square$ <br> DOES NOT WORK AGRICULTURE IN AGRICULTURE $\square$ |  | $\longrightarrow 126$ |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 125 | 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? |  |  |
| 126 | During the last 12 months, how many months did you work? | NUMBER OF MONTHS $\qquad$ |  |
| 127 | Are you paid in cash or kind for this work or are you not paid at all? | CASH ONLY....................................................................................................................................................................................... | $\text { - } 129$ |
| 127A | Who mainly decides how the money you earn will be used? |  |  |
| 128 | On average, how much of your household's expenditures do your earnings pay for: almost none, less than half, about half, more than half, or all? |  |  |
| 129 | What is your religion? |  |  |
| 130 | What is your ethnic group? |  |  |


| 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 only in the children that are biologically yours. Have you ever fathered any children with any woman? |  | $\xrightarrow{\text { ᄀ.206 }}$ |
| 202 | Do you have any sons or daughters that you have fathered who are now living with you? | YES ................................................................................................................................ NO | $\rightarrow 204$ |
| 203 | How many sons live with you? <br> And how many daughters live with you? <br> IF NONE, RECORD ‘00'. | SONS AT HOME DAUGHTERS AT HOME $\square$ |  |
| 204 | Do you have any sons or daughters you have fathered who are alive but do not live with you? | $\begin{aligned} & \text { YES .............................................................................................................................. } \end{aligned}$ | $\rightarrow$-206 |
| 205 | How many sons are alive but do not live with you? <br> And how many daughters are alive but do not live with you? <br> IF NONE, RECORD ‘00'. | SONS ELSEWHERE $\square$ |  |
| 206 | Have you ever fathered a son or a daughter who was born alive but later died? <br> IF NO, PROBE: Any baby who cried or showed signs of life but survived only a few hours or days? |  | $]_{-208}$ |
| 207 | How many boys have died? <br> And how many girls have died? <br> IF NONE, RECORD ‘00'. | BOYS DEAD. $\qquad$ <br> GIRLS DEAD $\qquad$ $\square$ |  |
| 208 | (In addition to the children that you have just told me about), have you ever fathered <br> a) Any other living sons or daughters who are biologically yours but who are not legally yours or do not have your last name? <br> b) Any other sons or daughters who died and who were biologically your children but were not legally yours or did not have your last name? <br> NO TO BOTH $\square$ OTHER $\square$ PROBE AND $\rightarrow$ CORRECT 201-207 AS NECESSARY |  |  |
| 209 | SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'. | TOTAL ............................... ${ }^{\square}$ |  |
| 210 |  |  | $\begin{aligned} & \longrightarrow 213 \\ & \longrightarrow 301 \end{aligned}$ |
| 211 | Do the children that you have fathered all have the same biological mother? | YES ................................................................ 1 NO............................................................ 2 | $\rightarrow 213$ |
| 212 | In all how many women have you fathered children with? | NUMBER OF WOMEN............ $\square$ |  |
| 213 | How old were you when your (first) child was born? | AGE IN YEARS ...................... $\square$ |  |
| 214 | At the time when this child was born, were you married to the child's mother? | YES .................................................................................................................... |  |

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. 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 RECOGNISED, AND CODE 2 IF NOT RECOGNISED. THEN, FOR EACH METHOD WITH CODE 1 CIRCLED IN 301, ASK 302, IF APPLICABLE.

| 301 | Which ways or methods have you heard about? FOR METHODS NOT MENTIONED SPONTANEOUSLY, ASK: Have you ever heard of (METHOD)? |  | 302 Have you ever used (METHOD)? |
| :---: | :---: | :---: | :---: |
| 01 | FEMALE STERILISATION Women can have an operation to avoid having any more children. | YES...................................................................... |  |
| 02 | MALE STERILISATION Men can have an operation to avoid having any more children. | YES....................................................................... | Have you ever had an operation to avoid having any more children? $\begin{aligned} & \text { YES ........................................................................................................ } \\ & \text { NO } \end{aligned}$ |
| 03 | PILL Women can take a pill every day to avoid becoming pregnant. | YES........................................................................ |  |
| 04 | IUD Women can have a loop or coil placed inside them by a doctor or a nurse. | $\begin{aligned} & \text { YES ....................................................................... } \\ & \text { NO ........ } \end{aligned}$ |  |
| 05 | INJECTABLES Women can have an injection by a health provider which stops them from becoming pregnant for one or more months. | YES....................................................................... |  |
| 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........................................................................ |  |
| 07 | CONDOM Men can put a rubber sheath on their penis before sexual intercourse. | YES........................................................................ | YES ................................................................................................... NO |
| 08 | FEMALE CONDOM Women can place a sheath in their vagina before sexual intercourse. | YES........................................................................... |  |
| 09 | DIAPHRAGM Women can place a thin flexible disk in their vagina before intercourse. |  |  |
| 10 | FOAM OR JELLY Women can place a suppository, jelly, or cream in their vagina before intercourse. |  |  |
| 11 | LACTATIONAL AMENORRHEA METHOD (LAM) Up to 6 months after childbirth, a woman can use a method that requires that she breastfeeds frequently, day and night, and that her menstrual period has not returned. | YES......................................................................... |  |
| 12 | RHYTHM OR PERIODIC ABSTINENCE 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...................................................................... | YES .................................................................................................................................................. NO. |
| 13 | WITHDRAWAL Men can be careful and pull out before climax. | YES........................................................................ | YES .................................................................................................. NO |
| 14 | EMERGENCY CONTRACEPTION Women can take pills up to three days after sexual intercourse to avoid becoming pregnant. | $\begin{aligned} & \text { YES ..................................................................... } 1 \\ & \text { NO ........ } \end{aligned}$ |  |
| 15 | Have you heard of any other ways or methods that women or men can use to avoid pregnancy? | YES................................... 1 <br> (SPECIFY) <br> NO ............................... 2 |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 303 | Now I would like to ask you about a woman's risk of pregnancy. <br> 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 ......................................................................................................................................................... NO....... DON'T | $\xrightarrow{\square} 305$ |
| 304 | 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 <br> DURING HER PERIOD........................... 2 <br> RIGHT AFTER HER PERIOD <br> HAS ENDED .................................... 3 <br> HALFWAY BETWEEN TWO PERIODS... 4 <br> OTHER $\qquad$ 6 <br> (SPECIFY) <br> DON'T KNOW $\qquad$ |  |
| 305 | Do you think that a woman who is breastfeeding her baby can become pregnant? |  |  |
| 311 | CHECK 301(07) AND 302(07): KNOWLEDGE AND USE OF CONDOMS |  | $\begin{aligned} & \longrightarrow 324 \\ & \longrightarrow 324 \end{aligned}$ |
| 314 | Now when you have sex, do you use a condom every time, sometimes, or not at all? | EVERY TIME................................................................................................................................................................................... | $\begin{aligned} & \longrightarrow 324 \\ & \square .324 \end{aligned}$ |
| 315 | When do you use a condom? <br> PROBE: Any other times? <br> RECORD ALL SITUATIONS MENTIONED. | ON PARTNER'S FERTILE DAYS ............ A DURING WIFE'S/PARTNER'S MENSTRUATION............................. B WHEN NOT USING SOME OTHER METHOD....................................... C WITH A STRANGER.......................... D WITH A COMMERCIAL SEX WORKER.. E WITH ANYONE OTHER THAN WIFE/REGULAR PARTNER............... F WITH WIFE/REGULAR PARTNER ........................................... G OTHER |  |
| 324 | CHECK 301(02) AND 302(02): KNOWLEDGE OF MALE STERILIZATIO |  | $\begin{aligned} & \longrightarrow 326 \\ & \longrightarrow 328 \end{aligned}$ |
| 325 | Once you have had all the children you want, would you yourself ever consider getting sterilized? | WOULD CONSIDER........................................ 1 WOULD NOT CONSIDER ........................ 3 UNSURE/DEPENDS...................... 4 | $\begin{aligned} & \longrightarrow 327 \\ & \longrightarrow 328 \end{aligned}$ |
| 326 | In your opinion what are some of the advantages of male sterilization? <br> PROBE: Any other advantages? <br> RECORD ALL ADVANTAGES MENTIONED. |  | $\left[\begin{array}{l} \square \\ \\ \\ \\ \\ \end{array}\right.$ |


| 327 | Why would you never consider getting sterilized? <br> PROBE: Any other reasons? <br> RECORD ALL REASONS MENTIONED. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 328 | I will now read you some statements about contraception. Please tell me if you agree or disagree with each one. <br> a) Contraception is women's business and a man should not have to worry about it. <br> b) Women who use contraception may become promiscuous. <br> c) A woman is the one who gets pregnant so she should be the one to use contraception. |  | AGREE <br> 1 <br> 1 <br> 1 | DISAGREE <br> 2 <br> 2 <br> 2 | DK <br> 8 <br> 8 <br> 8 |  |
| 329 | Do you currently smoke cigarettes or tobacco? <br> IF YES: What type of cigarette/tobacco do you smoke? <br> RECORD ALL TYPES MENTIONED. | YES, CIGARETTES $\qquad$ <br> YES, PIPE $\qquad$ <br> YES, OTHER TOBACCO $\qquad$ <br> NO $\qquad$ |  |  |  |  |
| 330 | CHECK 329: <br> CODE 'A' |  |  |  |  | $\longrightarrow 332$ |
| 331 | In the last 24 hours, how many cigarettes did you smoke? | CIGARETTES ..................... $\square$ |  |  |  |  |
| 332 | Have you ever drunk an alcohol-containing beverage? | $\begin{aligned} & \text { YES ........................................................................................................................... } \\ & \text { NO....... } \end{aligned}$ |  |  |  | $\rightarrow 401$ |
| 333 | In the last 3 months, on how many days did you drink an alcoholcontaining beverage? <br> IF EVERY DAY, RECORD ‘90’. | NUMBER OF DAYS $\qquad$ $\square$ <br> NONE $\qquad$ 95 |  |  |  |  |
| 334 | Have you ever gotten "drunk" from drinking an alcohol-containing beverage? | YES ..................................................................................................................... |  |  |  | $\rightarrow 401$ |



| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES |  | SKIP |
| :---: | :---: | :---: | :---: | :---: |
| 401 | Are you currently married or living with a woman? | YES, CURRENTLY MARRIED .................. 1YES, LIVING WITH A WOMAN .............. 2NO, NOT IN UNION ............................. 3 |  | $\begin{aligned} & -404 \\ & \rightarrow 406 \end{aligned}$ |
| 402 | Do you have one wife or more than one wife? <br> IF ONLY ONE WIFE, ENTER '01’. <br> IF MORE THAN ONE, ASK: How many wives do you currently have? | NUMBER OF WIVES ............. |  |  |
| 403 | Are there any other women with whom you live as if married? | YES.................................................................................................................NO...... |  | -405 |
| 404 | Are you living with one (other) woman or more than one (other) woman as if married? <br> IF ONE LIVE-IN PARTNER, ENTER ‘01'. <br> IF MORE THAN ONE, ASK: How many women are you living with as if married? | NUMBER OF $\qquad$ LIVE-IN PARTNERS |  |  |
| 405 | Apart from the woman/women you have already mentioned, do you currently have any other regular or occasional sexual partner? | $\begin{aligned} & \text { REGULAR PARTNER(S) ONLY ............. } 1 \\ & \text { OCCASIONAL PARTNER(S) ONLY ...... } 2 \\ & \text { REGULAR AND OCCASIONAL } \\ & \text { PARTNER(S)........................................ } 3 \\ & \text { NO OTHER PARTNER ....................... } 4 \end{aligned}$ |  | $\square \rightarrow 409$ |
| 406 | Do you currently have any regular sexual partners, occasional sexual partners, or no sexual partner at all? | REGULAR PARTNER(S) ONLY .............. 1OCCASIONAL PARTNER(S) ONLY ...... 2REGULAR AND OCCASIONALPARTNER(S).................................... 3NO SEXUAL PARTNER ...................... 4 |  |  |
| 407 | Have you ever been married or lived with a woman? | YES, FORMERLY MARRIED .................... 1YES, LIVED WITH A WOMAN.............................................................................. |  | $\begin{array}{\|l} \mid \rightarrow 411 \\ \longrightarrow 416 \end{array}$ |
| 408 | What is your marital status now: are you widowed, divorced, or separated? |  |  | $\rightarrow \rightarrow 411$ |
| 409 | WRITE THE LINE NUMBERS FROM THE HOUSEHOLD QUESTIONNAIRE FOR EACH WIFE/PARTNER REPORTED IN QUESTIONS 402 AND 404 ONLY. IF A WIFE/PARTNER DOES NOT LIVE IN THE HOUSEHOLD, ENTER 'OO' IN THE LINE NUMBER BOXES. THE NUMBER OF LINES FILLED IN MUST BE EQUAL TO THE NUMBER OF WIVES AND PARTNERS. (IF RESPONDENT HAS MORE THAN FIVE WIVES/PARTNERS USE ADDITIONAL QUESTIONNAIRE(S). |  |  |  |
|  | CHECK 402 AND 404 | LINE NUMBER IN HHD. QUEST | WIFE PARTNER <br> 1 <br> 1 2 <br> 1 2 <br> 1 <br> 2 <br> 1 <br> 2 |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGOR | SKIP |
| :---: | :---: | :---: | :---: |
| 410 | CHECK 409: <br> ONLY ONE WIFE/ <br> MORE THAN ONE PARTNER WIFE/PARTNER |  | $\longrightarrow 412$ |
| 411 | Have you been married or lived with a woman only once, or more than once? | ONCE <br> MORE THAN ONCE | $\begin{aligned} & \longrightarrow 414 \\ & \longrightarrow 413 \end{aligned}$ |
| 412 | Have you ever been married to or lived as if married to any woman other than those you have just mentioned? | YES NO. | $\longrightarrow 414$ |
| 413 | In total, how many women have you been married to or lived with as if married in your whole life? | NUMBER OF WOMEN ......... |  |
| 414 | CHECK 409 AND 411: | MONTH $\qquad$ DOES NOT KNOW MONTH . $\qquad$ YEAR $\qquad$ $\square$ DOES NOT KNOW YEAR $\qquad$ | $\longrightarrow 416$ |
| 415 | How old were you when you started living with her? | AGE |  |
| 416 | Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. <br> How old were you when you first had sexual intercourse with a woman (if ever)? | NEVER <br> AGE IN YEARS $\qquad$ <br> FIRST TIME WHEN STARTE WITH (FIRST) WIFE/PARTNE | $\rightarrow 448$ |
| 416A | CHECK 109: $\begin{array}{r} 25-59 \\ \text { YEARS OLD } \end{array}$ |  | $\rightarrow 417$ |
| 416B | The first time you had sexual intercourse, was a condom used? | $\begin{aligned} & \text { YES. } \\ & \text { NO... } \end{aligned}$ |  |
| 416C | What is your relationship to the woman with whom you had your first sexual intercourse? | GIRL-FRIEND $\qquad$ <br> SPOUSE $\qquad$ <br> CASUAL PARTNER. <br> COMMERCIAL SEX WORKER <br> OTHER $\qquad$ |  |
| 417 | When was the last time you had sexual intercourse with a woman? <br> RECORD ‘YEARS AGO’ ONLY IF LAST INTERCOURSE WAS ONE OR MORE YEARS AGO. <br> IF 12 MONTHS OR MORE, ANSWER MUST BE RECORDED IN YEARS. | DAYS AGO $\qquad$ <br> WEEKS AGO $\qquad$ <br> MONTHS AGO $\qquad$ 3 <br> YEARS AGO $\qquad$ 4 | $\longrightarrow 445$ |
| 418 | The last time you had sexual intercourse with a woman, did you use a condom? | YES. NO.. | $\rightarrow$ 420 |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 419 | What was the main reason you used a condom on that occasion? | RESPONDENT WANTED TO <br> PREVENT STI/HIV.. <br> RESPONDENT WANTED TO <br> PREVENT PREGNANCY. <br> RESPONDENT WANTED TO <br> PREVENT BOTH STI/HIV AND <br> PREGNANCY. $\qquad$ <br> DID NOT TRUST PARTNER/FELT <br> SHE HAD OTHER PARTNERS <br> PARTNER REQUESTED/INSISTED ....... 5 <br> OTHER $\qquad$ 6 <br> (SPECIFY) <br> DON'T KNOW.. $\qquad$ | $\rightarrow 424$ |
| 420 | CHECK 302(02): |  | $\longrightarrow 424$ |
| 421 | The last time you had sexual intercourse with a woman, did you or she do something or use any method to avoid a pregnancy? | YES ....................................................... 1 NO............................................................................ | $\begin{array}{\|l} \longrightarrow 423 \\ \longrightarrow 424 \end{array}$ |
| 422 | What method was used? <br> IF MORE THAN ONE METHOD USED, RECORD THE HIGHEST METHOD ON THE LIST. |  | $]$ |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 423 | What is the main reason a method was not used? |  |  |
| 424 | What is your relationship to the woman with whom you last had sex? <br> IF WOMAN IS "GIRLFRIEND" OR "FIANCÉE", ASK: <br> Was your girlfriend/fiancée living with you when you last had sex? <br> IF YES, RECORD '01'. <br> IF NO, RECORD '02'. | SPOUSE/COHABITING PARTNER....... 01 WOMAN IS GIRLFRIEND/FIANCÉE ..... 02 OTHER FRIEND ................................... 03 CASUAL ACQUAINTANCE ................... 04 RELATIVE. COMMERCIAL SEX WORKER ............. 06 <br> OTHER $\qquad$ 96 (SPECIFY) | $\longrightarrow$-426 |
| 425 | For how long have you had (did you have) sexual relations with this woman? <br> IF ONLY HAD SEXUAL RELATIONS WITH THIS WOMAN ONCE, RECORD '01' DAYS. | DAYS $\qquad$ <br> WEEKS $\qquad$ 2 <br> MONTHS. $\qquad$ 3 <br> YEARS $\qquad$ 4 |  |
| 426 | Have you had sex with any other woman in the last 12 months? | YES .............................................................................................................. 2 | - 445 |
| 427 | The last time you had sexual intercourse with another woman, was a condom used? | YES ................................................................................................................ NO....... | $\rightarrow 429$ |
| 428 | What is the main reason you used a condom on that occasion? | ```RESPONDENT WANTED TO PREVENT STI/HIV. IV........................... 01 01 RESPONDENT WANTED TO PREVENT A PREGNANCY ............................... 02 RESPONDENT WANTED TO PREVENT BOTH STI/HIV AND PREGNANCY``` $\qquad$ ```NoneNone ``` $\qquad$ ```NoneNone ``` $\qquad$ ```None ``` |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 429 | CHECK 302(02): <br> RESPONDENT STERILIZED |  | $\rightarrow 433$ |
| 430 | The last time you had sexual intercourse with this other woman, did you or she do something or use any method to avoid a pregnancy? | YES ................................................................................................................................................. | $\xrightarrow{-432}$ |
| 431 | What method was used? <br> IF MORE THAN ONE METHOD USED, RECORD THE HIGHEST METHOD ON THE LIST. |  | -433 |
| 432 | What is the main reason a method was not used? |  |  |
| 433 | What is your relationship to this woman? <br> IF WOMAN IS "GIRLFRIEND" OR "FIANCÉE", ASK: <br> Was your girlfriend/fiancée living with you when you last had sex? <br> IF YES, RECORD '01'. <br> IF NO, RECORD '02'. |  | $\longrightarrow 435$ |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 434 | For how long have you had (did you have) sexual relations with this woman? <br> IF ONLY HAD SEXUAL RELATIONS WITH THIS WOMAN ONCE, RECORD '01' DAYS. | DAYS <br> WEEKS <br> MONTHS $\qquad$ <br> YEARS $\qquad$ |  |
| 435 | Other than these two women, have you had sex with any other woman in the last 12 months? |  | $\rightarrow 445$ |
| 436 | The last time you had sexual intercourse with this third woman, was a condom used? | YES ............................................................................................................... NO....... | $\rightarrow$-438 |
| 437 | What is the main reason you used a condom on that occasion? | RESPONDENT WANTED TO <br> PREVENT STI/HIV............................. 1 <br> RESPONDENT WANTED TO <br> PREVENT A PREGNANCY................. 2 <br> RESPONDENT WANTED TO <br> PREVENT BOTH STI/HIV AND <br> PREGNANCY. $\qquad$ <br> DID NOT TRUST PARTNER/FELT SHE <br> HAD OTHER PARTNERS <br> PARTNER REQUESTED/INSISTED....... 5 <br> OTHER $\qquad$ <br> (SPECIFY) <br> DON'T KNOW . $\qquad$ .8 | $]_{1-442}$ |
| 438 | CHECK 302(02): |  | —>442 |
| 439 | The last time you had sexual intercourse with the third woman, did you or she do something or use any method to avoid a pregnancy? |  | $\xrightarrow{\longrightarrow 441}$ |
| 440 | What method was used? <br> IF MORE THAN ONE METHOD USED, RECORD THE HIGHEST METHOD ON THE LIST. |  | $\square \rightarrow 442$ |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 441 | What is the main reason a method was not used? | CASUAL SEX PARTNER SO <br> DOES NOT CARE $\qquad$ <br> CONTRACEPTION WOMEN'S BUSINESS $\qquad$ <br> FERTILITY-RELATED REASONS <br> WIFE/PARTNER MENOPAUSAL/HAD HYSTERECTOMY $\qquad$ COUPLE SUBFECUND/INFECUND .24 WIFE/PARTNER WAS PREGNANT. 25 WIFE/PARTNER WAS POSTPARTUM <br> AMENORRHEIC $\qquad$ .26 <br> WIFE/PARTNER WAS <br> BREASTFEEDING. $\qquad$ <br> WANTED (MORE) CHILDREN...................... 28 <br> OPPOSITION TO USE $\qquad$ <br> WIFE/PARTNER OPPOSED $\qquad$ <br> OTHERS OPPOSED $\qquad$ 34 <br> LACK OF KNOWLEDGE $\qquad$ <br> KNOWS NO SOURCE. $\qquad$ <br> METHOD-RELATED REASONS <br> HEALTH CONCERNS <br> FEAR OF SIDE EFFECTS $\qquad$ 51 52 5 <br> LACK OF ACCESS/TOO FAR $\qquad$ <br> COST TOO MUCH. $\qquad$ <br> INCONVENIENT TO USE. $\qquad$ <br> INTERFERES WITH BODY'S NORMAL PROCESSES $\qquad$ <br> OTHER $\qquad$ 96 <br> DON'T KNOW <br> (SPECIFY) $\qquad$ 98 |  |
| 442 | What is your relationship to this woman? <br> IF WOMAN IS "GIRLFRIEND" OR "FIANCÉE", ASK: <br> Was your girlfriend/fiancée living with you when you last had sex? <br> IF YES, RECORD '01'. <br> IF NO, RECORD '02'. |  | $\longrightarrow$-444 |
| 443 | For how long have you had (did you have) sexual relations with this woman? <br> IF ONLY HAD SEXUAL RELATIONS WITH THIS WOMAN ONCE, RECORD '01' DAYS. | DAYS $\qquad$ <br> WEEKS $\qquad$ <br> MONTHS <br> YEARS $\square$ |  |
| 444 | In total, with how many different women have you had sex in the last 12 months? | NUMBER OF PARTNERS ...... $\square$ |  |
| 445 | Have you ever paid for sex? | YES ................................................................................................................. NO....... | $\longrightarrow 448$ |
| 446 | How long ago was the last time you paid for sex? | DAYS AGO <br> WEEKS AGO <br> MONTHS AGO. <br> YEARS AGO $\qquad$ |  |
| 447 | The last time that you paid for sex, was a condom used on that occasion? | YES .................................................................................................................. NO....... |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 448 | Do you know of a place where a person can get condoms? | YES ............................................................................................................... NO....... | $\rightarrow 451$ |
| 449 | Where is that? <br> IF SOURCE IS HOSPITAL, HEALTH CENTER, OR CLINIC, WRITE THE NAME OF THE PLACE. PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. <br> (NAME OF PLACE) <br> Any other place? <br> RECORD ALL MENTIONED. |  |  |
| 450 | If you wanted to, could you yourself get a condom? | YES................................................................... 12 NO......................................... 28 DON'T KNOW/UNSURE................ 8 |  |
| 451 | CHECK 302(07), 416B, 418, 427, 436, AND 447: USE OF CONDOMS <br> AT LEAST <br> OTHER <br> ONE YES |  | $\rightarrow$ - 455 |
| 452 | How old were you when you used a condom for the first time? | AGE $\qquad$ $\square$ <br> DON'T KNOW $\qquad$ 98 |  |
| 453 | Why did you use a condom that first time? <br> PROBE: Any other reason? <br> RECORD ALL REASONS MENTIONED. | TO AVOID A PREGNANCY....................A TO AVOID GETTING AIDS/HIV.............B TO AVOID GETTING AN STI...........C TO AVOID INFECTING A PARTNER.....D TO EXPERIMENT/TRY A CONDOM......E PARTNER REQUESTED/INSISTED.......F OTHER_ |  |
| 454 | Have you ever experienced any problems when using condoms? <br> IF YES: What problems have you experienced? <br> PROBE: Any other problems? <br> RECORD ALL PROBLEMS MENTIONED. |  |  |
| 455 | Is it acceptable or not acceptable to you for information on condoms to be provided: <br> On the radio? <br> On the television? <br> In newspaper or magazine? |  |  |



## SECTION 5: FERTILITY PREFERENCES

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 505 | CHECK 203 AND 205: <br> HAS LIVING CHILDREN <br> NO LIVING CHILDREN <br> If you could go back to the time If you could choose exactly the you did not have any children and number of children to have in your could choose exactly the number whole life, how many would that of children to have in your whole be? life, how many would that be? <br> PROBE FOR A NUMERIC RESPONSE. | NONE $\qquad$ <br> NUMBER. $\qquad$ $\square$ <br> OTHER $\qquad$ 96 (SPECIFY) | $\text { — } 507$ <br> $\longrightarrow 507$ |
| 506 | 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 <br> GIRLS <br> EITHER <br> NUMBER.... $\square$ $\square$ $\square$ <br> OTHER $\qquad$ 96 |  |
| 507 | Would you say that you approve or disapprove of couples using a method to avoid getting pregnant? | APPROVE................................................................................................................................. |  |
| 508 | In the last 3 months have you heard/read about family planning: <br> On the radio? <br> On the television? <br> In newspaper or magazine? <br> From a poster? <br> From leaflet or brochure? <br> From town crier? <br> Mobile public announcement? |  |  |
| 509 | Is it acceptable or not acceptable to you for information on Family Planning to be provided: <br> On the radio? <br> On the television? <br> In newspaper or magazine? |  NOT  <br> ACCEPT-  ACCEPT- <br> ABLE ABLE DK <br> RADIO...........1 2 8 <br> TELEVISION....1 2 8 <br> NEWSPAPER/   <br> MAGAZINE.... 1 2 8 |  |
| 510 | In the last 3 months, have you discussed the practice of family planning with your friends, neighbours, or relatives? | YES ............................................................................................................... 1 NO...... | $\rightarrow 512$ |
| 511 | With whom? <br> Anyone else? <br> RECORD ALL MENTIONED. |  |  |
| 512 | In the last 3 months, have you discussed the practice of family planning with a health worker or health professional? | YES ................................................................................................................... NO...... |  |

SECTION 7. AIDS AND OTHER SEXUALLY-TRANSMITTED INFECTIONS

| 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........................................................................................................................... NO ...... | $\rightarrow 724$ |
| 701A | How can a person get AIDS? <br> Any other ways? <br> RECORD ALL MENTIONED. |  |  |
| 702 | Is there anything a person can do to avoid getting AIDS or the virus that causes AIDS? | YES........................................................................................................................................................................ NO DON'T KNOW...... | $\rightarrow 709$ |
| 703 | What can a person do? <br> Anything else? <br> RECORD ALL MENTIONED. |  |  |
| 704 | Can people reduce their chances of getting the AIDS virus by having just one sex partner who is not infected and has no other partners? | YES......................................................................................................................................................................... NO DON'T KNOW...... |  |
| 705 | Can a person get the AIDS virus from mosquito bites? | YES ............................................................................................................................................................................ NO DON'T KNOW..... |  |
| 706 | Can people reduce their chances of getting the AIDS virus by using a condom every time they have sex? | YES............................................................................................................................................................................ NO ...... DON'T KNOW...... |  |
| 707 | Can a person get the AIDS virus by sharing food with a person who has AIDS? | YES......................................................................................................................................................................... |  |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 708 | Can people reduce their chance of getting the AIDS virus by not having sex at all? | YES............................................................................................................................................................................ NO DON'T KNOW...... |  |
| 708A | Can people get the AIDS virus because of witchcraft or other supernatural means? | YES............................................................................................................................................................................ NO DON'T KNOW...... |  |
| 709 | Is it possible for a healthy-looking person to have the AIDS virus? | YES.......................................................................................................................................................................... NO DON'T KNOW...... |  |
| 710 | Do you know someone personally who has the virus that causes AIDS or someone who died of AIDS? | $\begin{aligned} & \text { YES............................................................................................................................. } \\ & \text { NO ......... } \end{aligned}$ |  |
| 711 | Can the virus that causes AIDS be transmitted from a mother to a child? | YES ......................................................................................................................................................................... NO DON'T KNOW..... | $1 \_713$ |
| 712 | Can the virus that causes AIDS be transmitted from a mother to her child... <br> During pregnancy? <br> During delivery? <br> By breastfeeding? |  YES NO  DK <br> DURING PREGNANCY....... 1 2 8  <br> DURING DELIVERY.......... 1 2 8  <br> BY BREASTFEEDING....... 1 2 8  |  |
| 712A | Have you heard of any drugs that a woman infected with the AIDS virus can take to reduce the risk of transmission to the baby during pregnancy? | YES........................................................................................................................................................................ NO DON'T KNOW...... |  |
| 713 | CHECK 401: <br> YES, CURRENTLY NO, NOT IN UNION <br> MARRIED/LIVING <br> WITH A WOMAN |  | $\rightarrow 715$ |
| 714 | Have you ever talked with (your wife/woman you are living with) about ways to prevent getting the virus that causes AIDS? <br> IF MORE THAN ONE WIFE/PARTNER, ASK ABOUT ANY OF HIS WIVES/PARTNERS. | YES..................................................................................................................... NO ....... |  |
| 715 | In your opinion, is it acceptable or unacceptable for AIDS to be discussed: <br> on the radio? <br> on the TV? <br> in newspapers/magazines? <br> in Church/Mosque? <br> at home? <br> at school? |  |  |
| 715A | Would you buy fresh vegetables from a seller who has the AIDS virus? | YES................................................................................................................................................................. NO DOES NOT KNOW...... |  |
| 716 | If a member of your family got infected with the virus that causes AIDS, would you want it to remain a secret or not? |  |  |
| 717 | If a relative of yours became sick with the virus that causes AIDS, would you be willing to care for her or him in your own household? | YES................................................................................................................................................... NO DK/NOT SURE/DEPENDS |  |
| 718 | If a female teacher has the AIDS virus, should she be allowed to continue teaching in school? | CAN CONTINUE .......................................... 1 SHOULD NOT CONTINUE .................. 2 DON'T KNOW /UNSURE/DEPENDS ...... 8 |  |
| 719 | Should children aged 12-14 be taught about using a condom to avoid AIDS? | YES.......................................................................................................................................................... NO DK/NOT SURE/DEPENDS...... |  |
| 720 | I don't want to know the results, but have you ever been tested to see if you have the AIDS virus? | YES.................................................................................................................... NO ....... | $\rightarrow 721$ |



| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 723D | Why do you think that you have a (MODERATE/GREAT CHANCE) of getting AIDS? <br> Any other reasons? <br> RECORD ALL MENTIONED. |  |  |
| 723E | Since you heard of AIDS, have you changed your behaviour to prevent getting AIDS? <br> IF YES, what did you do? <br> RECORD ALL MENTIONED. |  <br> NO MORE HOMOSEXUAL CONTACTS G ENSURE INJECTION WITH <br> STERILIZED NEEDLES $\qquad$ H <br> OTHER $\qquad$ W (SPECIFY) <br> OTHER $\qquad$ X <br> (SPECIFY) <br> NO BEHAVIOUR CHANGE $\qquad$ Y |  |
| 723F | From which sources of information have you learned most about AIDS? <br> Any other sources? <br> RECORD ALL MENTIONED. | RADIO .................................................. A T.V. ......................................................... B NEWSPAPER/MAGAZINE .................. C PAMPHLETS/POSTERS ........................ D HEALTH WORKERS ............................... E CHURCHES/MOSQUES ..........................F SCHOOLS/TEACHERS ........................ G COMMUNITY MEETINGS ....................... H FRIENDS/RELATIVES ...............................I WORKPLACE ........................................... J OTHER $\quad$ (SPECIFY) |  |
| 724 | (Apart from AIDS), have you heard about (other) infections that can be transmitted through sexual contact? | $\begin{aligned} & \text { YES....................................................................................................................... } \\ & \text { NO ....... } \end{aligned}$ | 727 |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 725 | If a man has a sexually transmitted infection, what symptoms might he have? <br> Any others? <br> RECORD ALL MENTIONED. |  |  |
| 726 | If a woman has a sexually transmitted infection, what symptoms might she have? <br> Any others? <br> RECORD ALL MENTIONED. |  |  |
| 727 | CHECK 416: |  | $\rightarrow 801$ |
| 727A | CHECK 724: <br> KNOWS STIs <br> DOES NOT KNOW STIs |  | $\rightarrow$-729 |
| 728 | 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 sexuallytransmitted infection? | YES................................................................................................................................................................... NOO DON'T KNO. |  |
| 729 | Sometimes, men experience an abnormal discharge from their penis. During the last 12 months, have you had an abnormal discharge from your penis? | YES .......................................................................................................................................................................... NO DON'T KNOW..... |  |
| 730 | Sometimes men have a sore or ulcer on or near their penis. During the last 12 months, have you had a sore or ulcer on or near your penis? |  |  |
| 731 | CHECK 728/729/730: <br> AT LEAST <br> ONE 'YES' OTHER |  | $\rightarrow 801$ |
| 732 | The last time you had (PROBLEM(S) FROM 728/729/730), did you seek any kind of advice or treatment? | YES.................................................................................................................. NO | $\rightarrow 734$ |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES |
| :--- | :--- | :--- | :--- | :--- |


| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES |  |  |  |  | SKIP |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 801 | 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: | HUSBAND |  | WIFE | BOTH | DON'T KNOW/ DEPENDS |  |
|  | a) making large household purchases? | a) | 1 | 2 | 3 | 8 |  |
|  | b) making small daily household purchases? | b) | 1 | 2 | 3 | 8 |  |
|  | c) deciding when to visit family, friends 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 and when to have them? | e) | 1 | 2 | 3 | 8 |  |
| 802 | Sometimes a husband is annoyed or angered by things that his wife/partner does. In your opinion, is a husband justified in hitting or beating his wife in the following situations... | YES |  | NO | DON'T KNOW/ DEPENDS |  |  |
|  | a) If she goes out without telling him? | a) | 1 | 2 | 8 |  |  |
|  | b) If she neglects the children? | b) | 1 | 2 | 8 |  |  |
|  | c) If she argues with him? | c) | 1 | 2 | 8 |  |  |
|  | d) If she refuses to have sex with him? | d) | 1 | 2 | 8 |  |  |
|  | e) If she burns the food? | e) | 1 | 2 | 8 |  |  |
|  | f) If the food is not cooked on time? | f) | 1 | 2 | 8 |  |  |
| 803 | Husbands and wives do not always agree on everything. Please tell me if you think a wife is justified in refusing to have sex with her husband if... |  | YES | NO | DON'T KNOW/ DEPENDS |  |  |
|  | a) She is tired and not in the mood? | a) | 1 | 2 | 8 |  |  |
|  | b) She has recently given birth? | b) | 1 | 2 | 8 |  |  |
|  | c) She knows her husband has sex with women other than his wives? | c) | 1 | 2 | 8 |  |  |
|  | d) She knows her husband has a sexually transmitted infection? | d) | 1 | 2 | 8 |  |  |
| 803A | When a wife knows her husband has a sexually transmitted disease, is she justified in asking that he use a condom? | YES............................................................................................................................................................................NODON'T KNOW..... |  |  |  |  |  |
| 804 | 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 | NO | DON'T KNOW/ DEPENDS |  |  |
|  | a) Get angry and reprimand her? | a) | 1 | 2 | 8 |  |  |
|  | b) Refuse to give her money or other means of financial 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 and have sex with another woman? | d) | 1 | 2 | 8 |  |  |

SECTION 9. FEMALE GENITAL CUTTING (CIRCUMCISION)

| NO. | QUESTIONS AND FILTERS | CODING CATEGORIES | SKIP |
| :---: | :---: | :---: | :---: |
| 901 | Have you ever heard of female circumcision? | YES ...................................................................................................................... | $\rightarrow 903$ |
| 902 | In a number of countries, there is a practice in which a girl may have part of her genitals cut. Have you ever heard about this practice? | YES ................................................................................................................ | $\rightarrow 909$ |
| 903 | What benefits do girls themselves get if they undergo circumcision? <br> PROBE: Any other benefits? <br> RECORD ALL MENTIONED. | CLEANLINESS/HYGIENE $\qquad$ . A <br> SOCIAL ACCEPTANCE $\qquad$ B <br> BETTER MARRIAGE PROSPECTS $\qquad$ <br> PRESERVE VIRGINITY/PREVENT <br> PREMARITAL SEX. $\qquad$ <br> MORE SEXUAL PLEASURE FOR <br> THE MAN $\qquad$ <br> RELIGIOUS APPROVAL . $\qquad$ .F <br> OTHER $\qquad$ X (SPECIFY) <br> NO BENEFITS $\qquad$ Y <br> DON'T KNOW. $\qquad$ Z |  |
| 904 | What benefits do girls themselves get if they do not undergo circumcision? <br> PROBE: Anything else? <br> RECORD ALL MENTIONED. | FEWER MEDICAL PROBLEMS $\qquad$ A <br> AVOIDING PAIN $\qquad$ B <br> MORE SEXUAL PLEASURE FOR <br> HER. $\qquad$ <br> MORE SEXUAL PLEASURE FOR <br> THE MAN . $\qquad$ D <br> FOLLOWS RELIGION. $\qquad$ E <br> OTHER $\qquad$ X <br> (SPECIFY) <br> NO BENEFITS $\qquad$ Y <br> DON'T KNOW. $\qquad$ Z |  |
| 905 | Would you say that this practice is a way to prevent a girl from having sex before marriage or does it have no effect on premarital sex? | PREVENT SEX .................................................................................................................................... NO EFFECT DON'T KNOW |  |
| 906 | Do you believe that this practice is required by your religion? | YES .......................................................................................................................................................................... |  |
| 907 | Do you think that this practice should be continued, or should it be discontinued? |  |  |
| 908 | Do you think that women want this practice to be continued, or discontinued? |  |  |
| 909 | RECORD THE TIME. | HOURS $\qquad$ <br> MINUTES $\qquad$ |  |


| World Summit for Children Indicators, Nigeria 2003 |  |  |
| :---: | :---: | :---: |
|  |  | Total |
| Under-five mortality rate | 201 per 1,000 | 0.0 |
| Infant mortality rate | 100 per 1,000 | 0.0 |
| Underweight prevalence |  | 28.7 |
| Stunting prevalence |  | 38.3 |
| Wasting prevalence |  | 9.2 |
| Use of safe drinking water sources ${ }^{1}$ |  | 42.8 |
| Use of sanitary means of excreta disposal |  | 74.3 |
| Children reaching grade five ${ }^{2}$ |  | 97.3 |
| Net primary school attendance rate ${ }^{2}$ |  | 60.1 |
| Proportion entering primary school ${ }^{2}$ |  | 23.0 |
| Contraceptive prevalence - women in union |  | 12.6 |
| Contraceptive prevalence - all women |  | 13.3 |
| Antenatal care ${ }^{3}$ |  | 60.1 |
| Childbirth care |  | 36.2 |
| Low birth weight ${ }^{4}$ |  | 12.1 |
| lodized salt consumption ${ }^{5}$ |  | 97.3 |
| Children receiving vitamin A supplements ${ }^{3}$ |  | 33.7 |
| Mothers receiving vitamin A supplements ${ }^{3}$ |  | 19.6 |
| Night blindness in pregnant women |  | 7.7 |
| Exclusive breastfeeding |  | 17.2 |
| Continued breastfeeding at 12-15 months |  | 88.9 |
| Continued breastfeeding at 20-23 months |  | 32.1 |
| Timely complementary feeding |  | 63.7 |
| Tuberculosis immunization coverage |  | 48.3 |
| DPT immunization coverage |  | 21.4 |
| Polio immunization coverage |  | 29.4 |
| Measles immunization coverage |  | 35.9 |
| Children protected against neonatal tetanus |  | 40.2 |
| ORT use |  | 29.4 |
| Home management of diarrhoea |  | 13.5 |
| Care seeking for acute respiratory infections |  | 32.8 |
| Children's living arrangements ${ }^{2}$ |  | 10.9 |
| Orphans in households ${ }^{2}$ |  | 6.2 |
| Home management of illness |  | 29.6 |
| Malaria treatment |  | 33.9 |
| Knowledge of preventing HIV/AIDS ${ }^{6}$ |  | 42.3 |
| Knowledge of misconceptions of HIV/AIDS ${ }^{7}$ |  | 27.8 |
| Knowledge of mother-to-child transmission of HIV |  | 41.3 |
| Attitude to people with HIV/AIDS ${ }^{8}$ |  | 60.3 |
| Women who know where to be tested for HIV |  | 33.3 |
| Women who have been tested for HIV |  | 7.1 |
| ${ }^{1}$ Piped water, protected well water, rainwater, or bottled water <br> ${ }^{2}$ Based on de jure children <br> ${ }^{3}$ For the last live birth in the five years preceding the survey <br> ${ }^{4}$ For children without a reported birth weight, the proportion with low birth weight is assumed to be the same as the proportion with low birth weight in each birth size category among children who have a reported birth weight. <br> ${ }^{5} 15$ parts per million or more <br> ${ }^{6}$ Having sex with only one partner who has no other partners and using a condom every time they have sex <br> ${ }^{7}$ Say that AIDS cannot be transmitted through mosquito bites and that a healthy-looking person can have the AIDS virus <br> ${ }^{8}$ Express a discriminatory attitude toward people with HIV or AIDS |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |


[^0]:    ${ }^{1}$ Although the policy has been approved by the government, some changes are still expected.

[^1]:    ${ }^{1}$ Refers to respondents who attended secondary school or higher and respondents who can read a whole sentence or part of a sentence

[^2]:    ${ }^{1}$ Never-married, divorced, separated, or widowed women

[^3]:    Note: Total includes 42 cases with missing information on employment.
    ${ }^{1}$ Either by herself or jointly with others

[^4]:    ${ }^{1}$ Had sexual intercourse in the month preceding the survey

[^5]:    Note: If more than one method is used, only the most effective method is considered in this tabulation.
    LAM = Lactational amenorrhoea method

[^6]:    Note: Figures in parentheses are based on 25-29 unweighted cases.
    ${ }^{1}$ Excludes women who had sexual intercourse within the last 4 weeks
    ${ }^{2}$ Excludes women who are not currently married

[^7]:    ${ }^{1}$ Non-numeric responses include "it is up to God," "any number," and "don't know."

[^8]:    ${ }^{1}$ There are slight differences in the definitions of the regions because of changes in state boundaries that occurred after the 1990 survey. For example, the creation of Kwara and Kogi states affects the dividing line between the Northeast and Northwest regions. However, any impact this has on the results of the comparative analysis should be negligible.

[^9]:    ${ }^{1}$ Sum of percentage delivered at a public sector facility and percentage delivered at a private sector facility
    ${ }^{2}$ Includes only the most recent birth in the five years preceding the survey

[^10]:    ${ }^{1}$ Dropout rate $=($ Dise $1-$ Dose 3 $) * 100 /$ Dose 1

[^11]:    ${ }^{1}$ Excludes pregnant women and women with a birth in the preceding 2 months

[^12]:    Note: Figures in parentheses are based on 25-49 unweighted cases.
    ${ }^{1}$ Corresponds to UNAIDS Knowledge Indicator 5 "Knowledge of prevention of mother to child transmission of HIV"

[^13]:    Note: Figures in parentheses are based on 15-49 unweighted cases.

[^14]:    ${ }^{1}$ 'Permanent' is a pretreated net that does not require any further treatment
    2 'Pretreated' net that requires additional treatments every 6-12 months

[^15]:    * FOR CHILDREN NOT INCLUDED IN ANY BIRTH HISTORY, ASK DAY, MONTH AND YEAR. FOR ALL OTHER CHILDREN, COPY MONTH AND YEAR FROM 215 IN MOTHER'S BIRTH HISTORY AND ASK DAY.

