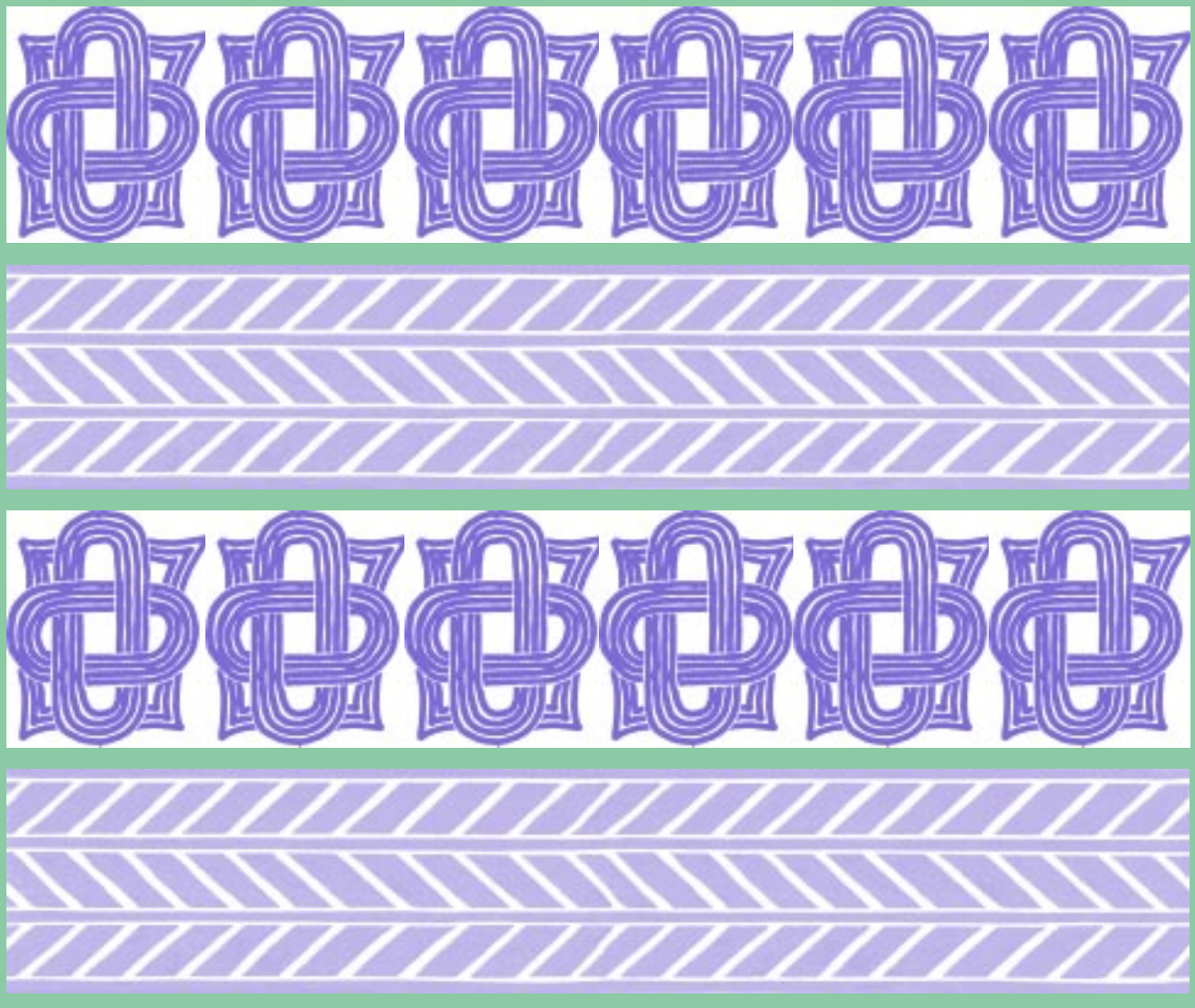
Nigeria Demographic and Health Survey 1999

National Population Commission



Nigeria
Demographic and Health Survey
1999

National Population Commission
Abuja, Nigeria

December 2000

National Population Commission

United Nations Population Fund

U.S. Agency for International Development

This report presents results from the 1999 Nigeria Demographic and Health Survey (NDHS) which was undertaken by the National Population Commission. Financial assistance for the survey was provided by the the United Nations Population Fund (UNFPA) and the U.S. Agency for International Development (USAID). ORC/Macro provided limited technical support in data processing, analysis, and report writing after the data were collected.

Additional information about the NDHS may be obtained from the main office of the National Population Commission, Lukulu Street, Wuse Zone 3, Private Mail Bag 0281, Abuja (09-523-0773 or 09-523-1026).

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CONTENTS

Page

Page

TABLES

Page

Page

Page

FIGURES

Page

FOREWORD

The National Population Commission's programme of demographic data production is continuously developed in response to the requirements to provide veritable indicators to facilitate the execution of government policies and programmes such as: the 1988 Population Policy and the current Poverty Alleviation Programme of the Federal Government of Nigeria. It is in recognition of this statutory responsibility that the 1999 NDHS was conducted in all states of the Federation and the Federal Capital Territory.

The main objectives of the NDHS are to collect and analyse information on reproductive health including family planning and infant and child mortality, as well as to measure the nutritional status of mothers and children. Compared with the 1990 NDHS, the current survey was expanded in scope to include questions on housing facilities and on awareness and behaviour with regard to the HIV/AIDS pandemic. The 1999 NDHS provides relevant details on these issues and updates the indicators derived from the 1990 survey. Coming at the beginning of the new civilian administration, they constitute benchmark data on which subsequent policy interventions in the social sectors will be evaluated in the future.

I would like to acknowledge the assistance of the UNFPA and USAID for providing the funding and technical assistance for the data collection, processing, analysis and report preparation, and the various stakeholders who participated in the series of preparatory seminars and workshops prior to the survey and the preliminary report writing stage.

Lastly, the individual and collective contributions of all the principal professional staff of the National Population Commission, the erstwhile Chairman, Lt. Col. Chris Ugokwe (rtd) and members of the Commission are highly commendable. It is my strong belief that this report will be of immense benefit to researchers and programme officers by filling the existing gaps in health and demographic statistics in the country.

Dr Akintobi A. Kadejo
Director-General

August 2000

ACKNOWLEDGMENTS

Between July 1994 and September 2000, a great number of people participated in activities culminating in the implementation of the Nigeria Demographic and Health Survey (NDHS). These people spent time designing the survey, executing the field operations, processing and analysing the data and producing this report. We would like to mention Dr. Akintobi Kadejo, who in 1994 as the Director, Population Statistics Department of the National Population Commission (NPC) and more recently as Director-General of the Commission, provided technical guidance and moral support.

Others include members of the erstwhile Board of the Commission and the Census Technical Group. Particular mention must be made of the core project team—Mr. Samuel Alaneme, Mr. Inuwa Jalingo, Mr. Dotun Atobasire, and Dr. Samuel Kalu—who, with the Survey Director, were involved in all stages of administration of the project.

Successful implementation of a data-gathering exercise such as the NDHS in a country as vast as Nigeria depends on many institutions and individuals. Financial assistance for the project came from the United Nations Population Fund (UNFPA), while the U.S. Agency for International Development (USAID) financed the techncial support for data processing and report writing through their contract with Macro International Inc. The survey benefitted from the interest and experience of UNFPA, which included the project as one of the major activities in their 4th Country Programme. The 1999 NDHS became the cornerstone of UNFPA sub-project NIR/P38-40 98-2001. The invaluable contributions of UNFPA Chief Technical Adviser, Dr. Gabriel Fosu, to the project are commendable. Dr. Bunmi Dosumu, a Senior Program Manager with USAID/Nigeria, facilitated the support received from both USAID and Macro International Inc. Her commitment to the success of the survey is exemplary. The technical assistance of Macro staff in data processing and report writing is gratefully acknowledged. Many of them took exceptional interest in the NDHS. In this regard, the role of Ms. Annie Cross, Ms. Elizabeth Britton, Ms. Jeanne Cushing, Dr. Jeremiah Sullivan, and Dr. Shea Rutstein deserve special mention. The survey also benefitted from the experience, intellectual guidance, and reviews of the draft report by Dr. Jacob Adetunji, a consultant for Macro International Inc.

Many colleagues in the National Population Commission provided valuable inputs into this report. Comments on the first draft of the report received from Professors Tola Atinmo, Olukunle Adegbola, Chris Oyeka, F.A.Oyekanmi, Drs. A.B. Sulaiman, A. O. Ketiku, A.A. Adeyemo, Uche Isiugo-Abanihe, Jude Edochie, and representatives of the World Health Organisation, Federal Office of Statistics, UNICEF, Family Health International, the National AIDS Control and Prevention Programme, the Planned Parenthood Federation of Nigeria, the Department of Community Development and Population Activities of the Federal Ministry of Health, and the Women's Health Organisation of Nigeria, among others, enriched the final report. The contributions of the Project Accountants—Mr. A. Ozoilo and Mrs. Endurance Emefiele—and the secretariat staff—Mrs. Yemi Oni, Mrs. Akpambang and other staff of the Census and Surveys Department—are gratefully acknowledged.

The report uses data and ideas from past research studies on the theme of the survey, many of which are acknowledged in the references.

Osamwonyi Osagie
Project Director
August 2000

EXECUTIVE SUMMARY

The 1999 Nigeria Demographic and Health Survey (NDHS) is a nationally representative survey of 8,199 women age 15-49 and 3,082 men age 15-64, designed to provide information on levels and trends of fertility, family planning practice, maternal and child health, infant and child mortality, and maternal mortality, as well as awareness of HIV/AIDS and other sexually transmitted diseases (STDs) and female circumcision. Fieldwork for the survey took place between March and May 1999.

Fertility

The total fertility rate during the five years before the survey is 5.2 births per woman. This shows a drop from the level of 6.0 births per woman as reported in the 1990 NDHS and 5.4 from the 1994 Sentinel Survey. The total fertility rate may, however be higher due to evidence that some births were probably omitted in the data. Fertility is substantially higher in the Northeast and Northwest regions and lower in the Southeast, Southwest, and Central regions. Fertility rates are also lower for more educated women.

Childbearing begins early in Nigeria, with about half of women 25 years and above becoming mothers before reaching the age of 20. The median age at first birth is 20.

The level of teenage childbearing has declined somewhat, with the proportion of girls age 15-19 who have either given birth or are pregnant with their first child declining from 28 percent in 1990 to 22 percent in 1999. Teenage childbearing is higher in rural than urban areas and for those with no education than those with education.

The data from the survey indicate that there is a strong desire for children and a preference for large families with 66 percent of married women and 71 percent of married men indicating a desire to have more children. Even among those with six or more children, 30 percent of married women and 55 percent of married men want to have more children. This indicates a decline for women from the 35 percent reported in the 1990 NDHS. Overall, women report a mean ideal number of children of 6.2, compared with 7.8 children for men.

Despite the increasing level of contraceptive use, the 1999 NDHS data show that unplanned pregnancies are common, with almost one in five births reported to be unplanned. Most of these (16 percent of births) are mistimed (wanted later), while 3 percent were unwanted at all.

Family Planning

Knowledge about family planning methods is increasing in Nigeria, with about 65 percent of all women and 82 percent of all men having heard of at least one method of contraception.

Among women, the pill is the best known method (53 percent) while among men, the condom is the best known method (70 percent). Radio is a main source of information about family planning, with 35 percent of women and 61 percent of men reporting that they heard a family planning message on the radio in the few months before interview. The proportions of women and men who have seen a television message are 23 and 40 percent, respectively. Only 17 percent of women had seen a family planning message in the print media.

The contraceptive prevalence rate in Nigeria has also increased, with 15 percent of married women and 32 percent of married men now using some method of family planning. The use of modern methods is

lower at 9 percent for married women and 14 percent for men. Although traditional contraceptive methods are not actively promoted, their use is relatively high with about 6 percent of married women and 17 percent of married men reporting that they are using periodic abstinence or withdrawal. In 1990, only 6 percent of married women were using any method, with only 4 percent using a modern method.

There are significant differentials in levels of family planning use. Urban women and men are much more likely to be using a method than rural respondents. Current use among married women is higher in the Southwest regions (26 percent), Southeast (24 percent), and Central (18 percent) regions than in the Northwest and Northeast (3 percent each). The largest differences occur by educational attainment. Only 6 percent of married women with no education are using a method of contraception, compared with 45 percent of those with more than secondary school.

Users of modern contraception are almost as likely to obtain their methods from government as private sources. Forty-three percent of users obtain their methods from the public sector—mostly government hospitals and health centres—while 43 percent use private medical sources such as pharmacies and private hospitals and clinics; 8 percent get their methods from other private sources like friends, relatives, shops and non-governmental organisations.

Maternal Health

The results of the survey show that antenatal care is not uncommon in Nigeria, with mothers receiving antenatal check-ups from either a doctor, nurse or midwife for two out of three births in the three years preceding the survey. However, the content of antenatal care visits appears to be lacking in at least one respect: survey data indicate deficiencies in tetanus toxoid coverage during pregnancy. Mothers reported receiving the recommended two doses of tetanus toxoid for only 44 percent of births and one dose for 11 percent of births. Almost 40 percent of births occurred without the benefit of a tetanus vaccination.

In Nigeria, home deliveries are still very common, with almost three in five births delivered at home. Compared with 1990, the proportion of home deliveries has declined, with more births now taking place in health facilities. Increasing the proportion of births occurring in facilities is important since they can be attended by medically trained personnel which can result in fewer maternal deaths and delivery complications. Currently, 42 percent of births are attended by doctors, nurses or midwives.

The 1999 NDHS data show that about one in four Nigerian women age 15-49 reported being circumcised. The practice of female genital cutting is more prevalent in the south and central parts of the country and is almost non-existent in the north.

Child Health

The 1999 NDHS data indicate a decline in childhood vaccination coverage, with the proportion of children fully immunised dropping from 30 percent of children age 12-23 months in 1990 to only 17 percent in 1999. Only a little over half of young children receive the BCG vaccine and the first doses of DPT and polio vaccines. Almost 40 percent of children have not received any vaccination.

Diarrhoea and respiratory illness are common causes of childhood death. In the two weeks before the survey, 11 percent of children under three years of age were ill with acute respiratory infections (ARI) and 15 percent had diarrhoea. Half of children with ARI and 37 percent of those with diarrhoea were taken to a health facility for treatment. Of all the children with diarrhoea, 34 percent were given fluid prepared from packets of oral rehydration salts (ORS) and 38 percent received a home-made sugar-salt solution.

The infant mortality rate for the five-year period before the survey (early 1994 to early 1999) is 75 per thousand live births. The under-five mortality is 140 deaths per 1,000 births, which means that one in seven children born in Nigeria dies before reaching his/her fifth birthday. However, both these figures are probably considerably higher in reality since an in-depth examination of the data from the birth histories reported by women in the NDHS shows evidence of omission of births and deaths. For this reason, the dramatic decline observed in childhood mortality between the 1990 and 1999 NDHS surveys needs to be viewed with considerably skepticism. Based on the reported birth history information, the infant mortality rate fell from 87 to 75 deaths per 1,000 births, while the under-five mortality rate dropped from 192 to 140.

Problems with the overall levels of reported mortality are unlikely to severely affect differentials in childhood mortality. As expected, mother's level of education has a major effect on infant and child mortality. Whereas the lowest infant mortality rate was reported among children of mothers with post-secondary education (41 per thousand live births), the corresponding figure among infants of mothers with no schooling is 77 per thousand live births.

Data were also collected in the NDHS on the availability of various health services. The data indicate that the vast majority of Nigerian households live within five kilometres of a health facility, with health centres being the closest, followed by clinics and hospitals.

Breastfeeding and Nutrition

Breastfeeding is widely practiced in Nigeria, with 96 percent of children being breastfed. The median duration of breastfeeding is 19 months. Although it is recommended that children be exclusively breastfed with no supplements for the first 4 to 6 months, only 20 percent of children 0-3 months are exclusively breastfed, as are 8 percent of children 4-6 months. Two-thirds of children 4-6 months are being given supplements in addition to breast milk.

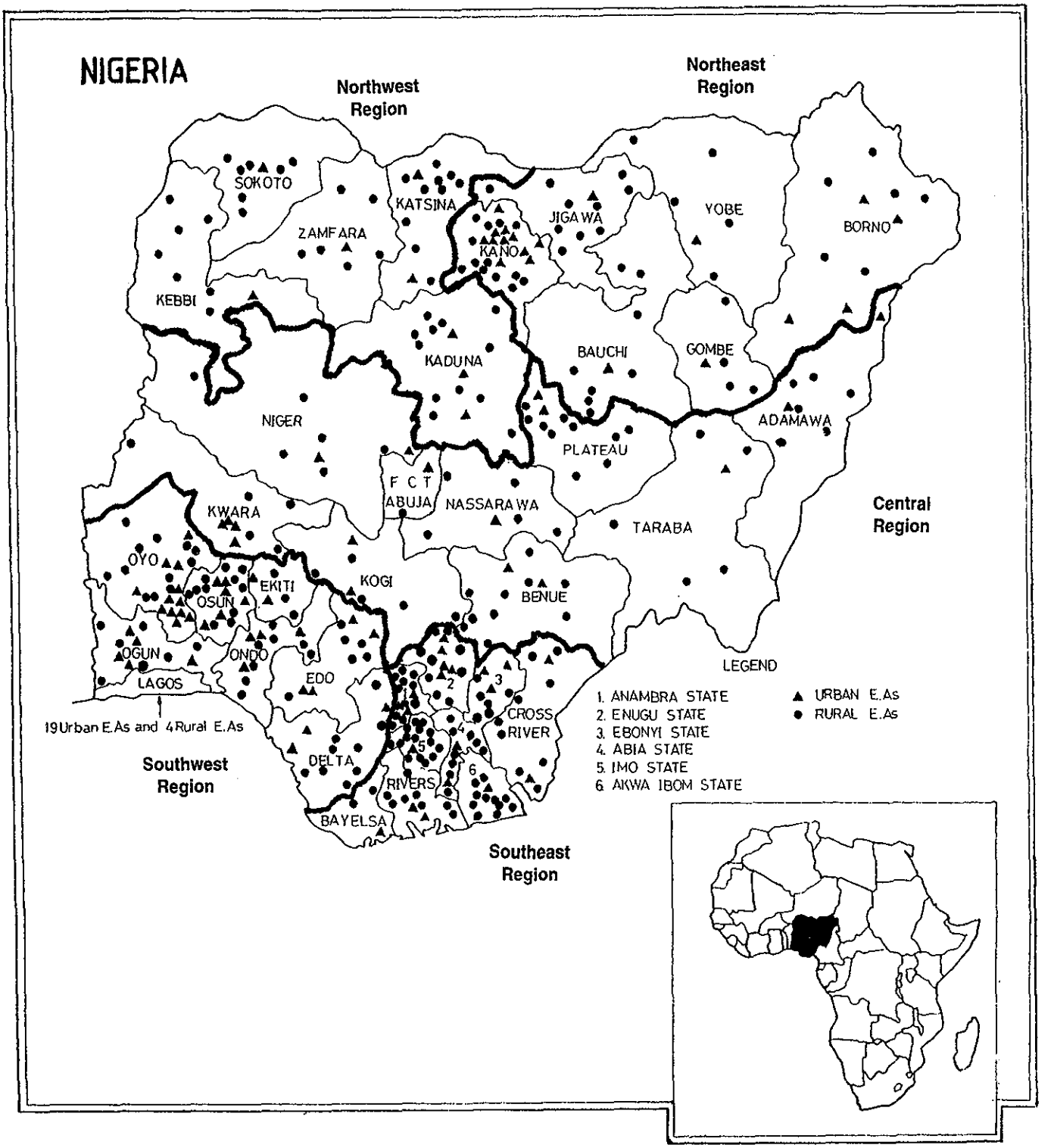
In the NDHS, interviewers weighed and measured children under three born to women who were interviewed. Unfortunately, data were either missing or implausible for more than half of these children. Of the half with plausible data, 46 percent of children under 3 are classified as stunted (low height-for-age), 12 percent are wasted (low weight-for-height) and 27 percent are underweight (low weight-for-age).

The 1999 NDHS also collected information on the nutritional status of women who had a birth in the three years prior to the survey. Sixteen percent of these women are considered to be too thin, with a body mass index of less than 18.5. Women of short stature (height less than 145 cm) comprise 7 percent of the women measured.

HIV/AIDS and Other Sexually Transmitted Diseases

Survey data indicate that awareness of HIV/AIDS is becoming more widespread. Three-quarters of women and 90 percent of men in Nigeria have heard of AIDS. The radio and relatives and friends are the most commonly cited sources of information about HIV/AIDS among both women and men. However, knowledge of ways to avoid HIV/AIDS is not so widespread. More than a quarter of women and 14 percent of men say they do not know of any way to avoid HIV/AIDS and 6 percent of women and 3 percent of men say there is no way to avoid it. Only 14 percent of women and 29 percent of men say that using condoms is a means of avoiding the disease. On the other hand, three in five men and women who have heard of AIDS know that a healthy-looking person can be infected with the AIDS virus and over 80 percent know that AIDS is a fatal disease that cannot be cured.

Two-thirds of Nigerian women and men believe that they have no chance of contracting HIV/AIDS, while almost all the rest believe their chances are small. Perhaps one reason is that many Nigerians say they have changed their sexual behavior to avoid getting AIDS. For example, 37 percent of women and 42 percent of men say they restrict themselves to only one partner; one-fourth of the women say they asked their partners to remain faithful. Condoms are acknowledged by a large majority of respondents to be a way of preventing HIV/AIDS and other sexually-transmitted diseases. Men are almost twice as likely (38 percent) as women (20 percent) to have ever used condoms either for family planning or disease prevention. However, only 7 percent of women and 15 percent of men reported having used a condom the last time they had sexual intercourse. The most widely known sexually transmitted disease apart from AIDS is gonorrhoea.


NIGERIA
Northwest Region
Northeast Region
Central Region
Southwest Region
Southeast Region
SOKOTO
ZAMFARA
KATSINA
KANO
JIGAWA
YOBE
BORNO
KEBBI
KADUNA
BAUCHI
GOMBE
NIGER
ADAMAWA
PLATEAU
F C T ABUJA
NASSARAWA
TARABA
KWARA
OYO
EKITI
OSUN
KOGI
BENUE
OGUN
ONDO
EDO
LAGOS
CROSS RIVER
DELTA
RIVERS
BAYELSA
19 Urban E.As and 4 Rural E.As
LEGEND
1. ANAMBRA STATE
2. ENUGU STATE
3. EBONYI STATE
4. ABIA STATE
5. IMO STATE
6. AKWA IBOM STATE
URBAN E.As
RURAL E.As

CHAPTER 1

INTRODUCTION

1.1 Geography, History, and Economy

Geography

Nigeria lies on the west coast of Africa between 4 and 14 degrees north latitude and between 2 and 15 degrees east longitude. It occupies approximately 923,768 square kilometres of land, stretching from the Gulf of Guinea on the Atlantic coast in the south to the fringes of the Sahara Desert in the north. The territorial boundaries are defined by the Republics of Niger and Chad in the north, the Cameroon Republic on the east, and the Republic of Benin in the west. The Gulf of Guinea delimits the southern boundary.

Nigeria is topographically characterised by two main land forms: lowlands and highlands. Lowlands predominate in the Niger-Benue valley in the south, the Sokoto-Rima basin in the northwest, and in the Chad basin in the northeast. Highlands are found mainly in the north and central areas, where they rise to a high at Jos Plateau; they are also found in the southeast, where they rise to a high at Obudu in Cross River State.

As with land forms, two main wind systems define the climatic conditions in Nigeria. The southwest monsoon wind blows from the Atlantic Ocean towards the hinterland between bringing rainfall April and September. The northeast trade wind, which is hot, dry, and dust-laden, blows from the Sahara Desert between October and March, having a cooling effect on the entire country. The intensity of both of these winds diminishes inland. The mean temperature oscillates between 25 and 40 centigrade, while the rainfall ranges from 2,650 mm in the southeast to less than 600 mm 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. With a wide range of climatic, vegetational, and soil conditions, Nigeria possesses potential for a wide range of agricultural production.

History

Nigeria is a federal republic consisting of 36 states and a Federal Capital Territory. The states are subdivided into 774 administrative units of unequal size called Local Government Areas (LGAs). In some states, especially in the far north, these LGAs are grouped into emirates, districts, or traditional council areas. The 36 states are also grouped into six geopolitical zones that reflect ethnic identity in most cases.

The history of the people of Nigeria goes back to antiquity. Evidence of an Iron Age culture was found in relics left behind by the peoples that lived in the Niger-Benue valley. These historical artifacts are known to have been made by the Nok culture.

The growth of the Nigerian nation-state, however, can be traced to 1914 when the British colonial administration merged the North and South protectorates and the colony of Lagos into one administrative unit. Nigeria became an independent nation in 1960 and since then, has had different administrative structures. Within the boundaries of Nigeria are found many social groups with distinct but similar cultural traits, which are reflected in the diverse behaviour of the people. There are about 374 identifiable ethnic groups, but the Igbos, Hausas, and Yorubas are the major groups.

Economy

Nigeria is one of Africa's most endowed economies, with an abundance of both natural and human resources. Its citizens are noted for their high degree of resourcefulness and entrepreneurial skills. Ironically, the country's per capita income of U.S.$350 in 1999 is one of the lowest in the world. The economy is largely agricultural. Sectoral contributions to the gross domestic product may give a distorted picture of reality since more than 50 percent of the population is engaged in agriculture. The structure and growth of the economy is therefore not easy to categorise.

The main feature of the economy has always been that a high proportion of the national income is derived from the export of a wide range of mineral and agricultural products, with crude oil currently taking the lead. Since 1980, crude oil production has accounted for more than two-thirds of the gross domestic product and more than 80 percent of total government revenue. There exists vast industrial and commercial concerns that are largely dominated by state enterprises. There are also large, multinational companies, as well as poorly organised small-scale enterprises.

All these economic features have combined to create a diverse private sector. The lack of a broad economic base and political instability have recently led to a large-scale 'brain drain' of skilled manpower. Inflation and unemployment are relatively high.

The economy has fluctuated between growth and decline within the past two decades. Between 1980 and 1985, it registered negative growth of 3.4 percent per annum; however, between 1987 and 1995, it grew at 3.5 percent per annum. The main economic indicators in the years preceding the survey are less than satisfactory. In 1999, the growth of the gross domestic product was estimated at 2.7 percent, up from 2.4 percent achieved in 1998. However, it fell below the minimum 3.0 percent target for the year. The aggregate index of agricultural production increased by 3.7 percent in 1999, compared with 3.5 percent in 1998, while industrial production fell by 1.4 percent from the 1998 level. The average industrial- capacity utilisation in the same year stood at 31 percent, representing a marginal increase of 2 percent over the 1998 figure. Inflation was estimated at 8.0 percent in December 1999.

The Central Bank recently reported that the country's balance of payments improved markedly in 1999 as a result of the rise in global oil prices; however, the performance of non-oil exports remained unimpressive.

Since the onset of democratic administration in 1999, economic policies have become more favourable to investment. Bold steps have been taken to privatise the government's equity in major manufacturing, oil, and service companies.

1.2 Population

The total population of Nigeria as reported in the 1991 census was 88,992,220 (Table 1.1). Using a growth rate of 2.9 percent per annum, the National Population Commission (NPC) estimates the current population of Nigeria to be about 115 million.

The spatial distribution of the population 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 kilometre occur in parts of Akwa Ibom, Imo, Anambra, and Enugu States, as well as around Kano, Katsina, and Sokoto States. However, the average population density of the country in 1991 was 96 persons per kilometre. The most densely populated states are Lagos, Anambra, Imo, and Akwa Ibom. Except for Lagos, all the states

Table 1.1 Demographic indicators

Demographic indicators from various sources, Nigeria 1963-91

Indicator	Census 1963	NFS 1981-82 and NDSS 1980	NDHS 1990	Census 1991
Population (millions)	55.7	84.7	U	88.9
Density (pop./sq. km)	60	92	U	96.0
Percentage urban	19	23	24	36.3
Crude birth rate (CBR)	66	46	39	44.6[a]
Crude death rate (CDR)	27	16	U	14
Total fertility rate (TFR)	U	6.3	6.0	5.9[a]
Infant mortality rate (IMR)	U	85	87	93
Life expectancy at birth	36	48	U	53.2

U = Unknown (not available)
[a] From the post-enumeration survey
Sources: National Population Commission, 1998; Federal Office of Statistics, 1990

with high population densities are located in the southeast 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. Other states in the north with a population density of more than 100 persons per square kilometre are Katsina (140 per square kilometre) and Jigawa (127 per square kilometre).

The population of Nigeria is predominantly rural, with about 36 percent living in urban areas. The states with a predominantly urban population are Lagos (94 percent), Oyo (69 percent), and Anambra (62 percent). The states with small urban populations are Jigawa (7 percent), Taraba (10 percent), Akwa Ibom (12 percent), Kebbi (12 percent) and Sokoto (14 percent).

1.3 Population and Health Policies and Programmes

Population Policies and Programmes

In the light of the perceived high population growth rate and its adverse effect on national development, the federal government adopted a National Policy on Population for Development, Unity, Progress and Self-Reliance (NPP) in 1998. The policy was designed to enable Nigeria to balance the rate of population growth with the available resources. The four main goals of the NPP are as follows:

1. To improve the living standards and the quality of life of the people

2. To promote their health and welfare, especially through preventing premature deaths and illness among the high-risk groups

3. To achieve lower population growth rates, through reduction of birth rates by voluntary fertility regulation methods that are compatible with the attainment of the economic and social goals of the nation

4. To achieve a more even distribution of the population between urban and rural areas (Federal Ministry of Health, 1988).

To achieve these goals and to promote national awareness of the adverse effects of rapid population growth, the following objectives were set out:

a) Promote awareness among the citizens of population problems and the effects of rapid population growth on development.

b) Provide everyone with information and education on the value of reasonable family size to both the individual family and the future of the nation in achieving self-reliance.

c) Educate all young people about population matters, sexual relationships, fertility regulations, and family planning before they enter the ages of marriage and childbearing to encourage them to maintain responsible parenthood and reasonable family size to the best of their ability.

d) Make family planning services readily available to all couples at an affordable cost at the earliest possible time to enable them to regulate their fertility.

e) Provide fertility management programmes that will respond to the needs of sterile or sub-fertile couples to achieve reasonable self-fulfillment.

f) Improve demographic data collection and analysis on a regular basis and use such data for economic and social-development planning.

g) Enhance integrated rural and urban development in order to improve the living conditions in the rural areas and to slow down the rate of rural-urban migration (Federal Ministry of Health, 1988).

At the inception of the NPP, the government mobilised resources to implement the population programme. The Population Activities Fund Agency (PAFA) was established to manage a population activities fund with donor and government funds. PAFA was expected to mobilise more funds from other sources. The World Bank discontinued its involvement in 1996 after about three years of operation; therefore, the agency currently relies solely on government funding to promote population programmes in such areas as child and maternal health, advocacy, service delivery, and hospital services.

Bilateral and international agencies that have supported the National Population Programme include the United Nations Population Fund (UNFPA), the U.S. Agency for International Development (USAID), and the World Bank. USAID has long been the main provider of contraceptives for the private sector. The British Department for International Development has also continually supported the National Population Programme. The Planned Parenthood Federation of Nigeria (PPFN), an affiliate of the International Planned Parenthood Federation, is the doyen of population activities in the country. The MacArthur Foundation and the Ford Foundation, among others, support various non-governmental organisations.

The population policy is widely commended internationally, but its implementation has been dogged by inconsistencies and other problems that are sometimes beyond its control. Chief among these problems are cultural norms that lead to high fertility and religious beliefs about family planning. The low status and level of education of women; poor quality of family planning service delivery; and lack of information, especially in rural areas, are also factors. Poor institutional mechanisms for coordination and implementation of the various population programmes, both private and public, have limited the achievements of the policy in its 12 years of existence.

Health Policies and Programmes

The federal government has several programmes and policies aimed at improving health 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 non-governmental organisations.

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

i) primary health care, which is largely the responsibility of local governments, with the support of the State Ministry of Health

ii) secondary health care, which provides specialised services to patients referred from the primary health care level and is the responsibility of the state government

iii) Tertiary health care, which provides highly specialised 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; immunisation 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 centres should include maternal and child health care, including family planning services.

The health sector is characterised by wide regional disparities in status, service delivery, and resource availability. More health services are located in the southern states to the disadvantage of 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 immunisation and prevention of HIV/AIDS.

1.4 Objectives, Organisation and Design of the NDHS

Objectives

The main objective of the 1999 Nigeria Demographic and Health Survey (NDHS) is to provide up-to-date information on fertility and childhood mortality levels; nuptiality; fertility preferences; awareness, approval, and use of family planning methods; breastfeeding practices; nutrition levels; and maternal and child health. This information is intended to assist policymakers and administrators in evaluating and designing programmes and strategies for improving health and family planning services in Nigeria.

Organisation

The 1999 NDHS is a joint project between the National Population Commission (NPC), the United Nations Population Fund Activities (UNPFA) and the U.S. Agency for International Development (USAID). The project was funded by these three organisations, while Macro International Inc., located in Maryland, provided limited technical support in data processing, analysis, and report writing after the data were collected.

The NPC set up an NDHS committee to coordinate activities pertaining to the survey. Under the direction of the committee, the Census and Survey Department of the commission conducted the survey. The committee organised seminars and workshops at which the commission's senior demographers gave inputs on the survey instruments. The DHS Model Questionnaire (which had been sent from Macro International Inc. upon request) was adapted to Nigerian cultural conditions in a symposium held on 11 September 1998.

After the workshop, other stakeholders were invited to a two-day workshop in Kaduna on 3 and 4 November 1998. The participants in the workshop included USAID; UNFPA; Population Activities Fund Agency (PAFA); Family Health International (FHI); the Planned Parenthood Federation of Nigeria (PPFN); the Federal Ministry of Health (MOH); and academics from universities in Lagos, Ibadan, Ile-Ife, Sokoto, and Nsukka. The participants expressed their interest in the survey and suggested that specific questions and modules be added to the questionnaire, such as AIDS/STD, a male questionnaire, and maternal mortality.

The NDHS committee was responsible for the execution of the project. The project director was in charge of the day-to-day administration of the project with the assistance of the deputy project director. A project coordinator, whose responsibilities included coordinating the state activities, supervising logistics, and ensuring standards, was positioned at the headquarters in Lagos. The seven commission zonal directors acted as zonal coordinators for the survey in their respective zones, while state coordinators were assigned the administration of the survey at the state level. The actual interviews of households and individuals were conducted by teams of seven people, consisting of one supervisor, one field editor, one male interviewer, and four female interviewers. Altogether, there were 34 teams for the 36 states and the Federal Capital Territory.

1.5 Sample Design and Implementation

The 1999 Nigeria Demographic and Health Survey (NDHS) was a nationally representative probability sample of women age 10-49 living in households. The sampling frame used for the survey was constructed from the enumeration areas (EAs) into which the country was delineated for the 1991 population census. Currently, the frame contains 212,079 EAs.

The sample was stratified into rural and urban areas and was selected in two stages. It was designed to produce reliable estimates of most of the variables for the rural and urban segments of the country as well as each of five statistical regions, namely, the Northeast region, the Northwest region, the Central region, the Southeast region, and the Southwest region. Each of these five regions was treated as a sampling domain. The distribution of the states across these regions is shown fully in Appendix A. The regions used for this survey differ from the six geopolitical zones of the country and the seven administrative zones of the National Population Commission.

The primary sampling unit was the EA. Altogether, 400 EAs were selected with equal probability. In all, 119 urban EAs and 281 rural EAs were selected. To ensure data quality, the selection of the EAs

was done centrally by trained statisticians at the Liaison Office of the National Population Commission (NPC) in Lagos. The list of selected EAs was sent to the NPC offices in each state to identify the EAs, draw sketch maps, and conduct a listing of all households in each selected EA. NPC's comptrollers at the local government offices thereafter cross-checked the work of the state officers to ensure no omission of any building within the EA.

At the second sampling stage, one in every five households listed was selected for interview. The combination of equal probability selection at the first stage and a fixed sampling rate at the second stage yielded a roughly self-weighting sample design. However, while the returns from the rural stratum showed an appreciable level of self-weighting, the returns from the urban stratum showed a significant level of deviation from self-weighting. The deviation in the urban stratum was due to underlisting of dwellings in some EAs because of changes in EA boundaries over time. Therefore, in processing and estimating the population parameters, the sample returns were weighted by considering the selection probabilities of the primary sampling units, the expected and eventual field returns, and the differential response rate among the domains. The weights were standardised and entered with the individual data records. Thus, all the tables presented in this report are based on weighted data.

In the selected households, all women age 10-49 were eligible for interview with the Women's Questionnaire. In every third household, men age 15-64 were eligible for interview with the Men's Questionnaire.

Survey Questionnaires

Four questionnaires were used for the main fieldwork: the Service Availability Questionnaire, the Household Questionnaire, the Women's Questionnaire, and the Men's Questionnaire. The Service Availability Questionnaire was implemented at an early stage of the fieldwork and was designed to assess the availability (or supply) of health and family planning services. It was administered at the community level (enumeration area) by interviewing knowledgeable informants in the selected community.

All regular members and visitors in the selected household were listed on the Household Questionnaire. For each person listed, information was collected on name, sex, age, and education. The household questionnaire was used to identify both men and women who were eligible for the individual questionnaire and to collect data on housing characteristics.

The Women's Questionnaire was administered to all women age 10-49 who were listed on the Household Questionnaire. The decision to interview women age 10-14 was influenced by pretest findings on teenage pregnancy, motherhood, and the age at commencement of sexual activities. Since most of the variables presented in this report are not relevant for the youngest women, the analysis has been restricted to women age 15-49. Women were asked questions on the following topics:

- Background characteristics (age, education, religion, etc.)
- Female genital cutting practices
- Fertility preferences
- Husband's background and respondent's work
- Knowledge of AIDS
- Maternal mortality
- Height and weight of respondents and their children under three.

The Men's Questionnaire was used to interview men age 15-64 living in every third household. It was similar to that for women except that it omitted the sections on antenatal and delivery care, breastfeeding, vaccinations, causes of death, female genital cutting, and height and weight.

Training

Two levels of training were organised. The first level was the training of trainers, which took place in Lagos between 16 and 20 November 1998. The trainees consisted of zonal and state directors of NPC and selected senior headquarters/liaison office staff who are well versed in survey methodology. Individuals who participated at some of the workshops organised at the planning stages of the survey acted as the facilitators during this level of training.

The second stage of training took place for two weeks at the seven zonal headquarters of the NPC (namely, Kano, Yola, Port Harcourt, Enugu, Lagos, Ibadan, and Kaduna.) This level of training involved the training of interviewers, supervisors and field editors. Those trained at the first level of training facilitated at this level.

Fieldwork

Immediately after the training exercise, NDHS field personnel went to the field for data collection. The field staff consisted of 34 teams, each composed of one supervisor, one field editor, four female interviewers, one male interviewer, and a driver. Fieldwork was carried out in 400 EAs nationwide between 29 March 29 and 29 May 1999. The people involved in the fieldwork and the complete description of the exercise are presented in Appendices D and A.

Data Processing

The personnel who took part in the processing of NDHS data consisted of 20 data entry operators, two supervisors, and six coders/editors, all of whom are staff of the NPC. Before data processing began, the data entry operators were trained intensively for two weeks by staff from Macro International Inc. (USA).

Data were processed on microcomputers and printers that were provided by Macro International Inc., with funding from USAID. The computers were used to establish the nucleus of a demographic laboratory at the NPC. Data were processed using programmes written by Macro International Inc. with the Integrated System for Survey Analysis (ISSA), which was designed for processing DHS data.

Response Rate

The summary of results from the household and individual interviews is presented in Table 1.2. A total of 7,919 households were sampled, of which 7,736 were determined in the field to be valid households and 7,647 were successfully interviewed, giving a response rate of 99 percent.

Of the 8,918 eligible women age 15-49 in these households, 8,199 were interviewed for a response rate of 92 percent. Every third household was selected for coverage with the Men's Questionnaire. Thus, 2,620 households were sampled, of which 2,571 were found and 2,550 were successfully interviewed. In these households, a total of 3,082 men age 15-64 were identified and 2,680 were interviewed for a response rate of 87 percent.

Table 1.2 Results of the household and individual interviews

Number of households, number of interviews and response rates, according to urban-rural residence, Nigeria 1999

Result	Residence		
	Urban	Rural	Total
FEMALE			
Household interviews			
Households sampled	2,600	5,319	7,919
Households found	2,524	5,212	7,736
Households interviewed	2,482	5,165	7,647
Household response rate	98.3	99.1	98.8
Individual interviews: women			
Number of eligible women	2,984	5,934	8,918
Number of eligible women interviewed	2,697	5,502	8,199
Eligible woman response rate	90.4	92.7	91.9
MALE			
Household interviews			
Households sampled	849	1,771	2,620
Households found	834	1,737	2,571
Households interviewed	825	1,725	2,550
Household response rate	98.9	99.3	99.2
Individual interviews: men			
Number of eligible men	1,056	2,026	3,082
Number of eligible men interviewed	882	1,798	2,680
Eligible man response rate	83.5	88.7	87.0

CHAPTER 2

CHARACTERISTICS OF HOUSEHOLDS AND RESPONDENTS

This chapter presents information on selected socioeconomic characteristics of the household population and the individual survey respondents. These characteristics include age, sex, education and place of residence. The chapter also considers the environmental conditions surrounding the households such as source of drinking water, availability of electricity, sanitation facilities, and housing materials. Examining the characteristics of respondents is useful in understanding the factors that affect reproductive and contraceptive behaviour. Moreover, the patterns observed in some of these characteristics often provide a quick assessment of the data quality.

2.1 Characteristics of the Household Population

The NDHS Household Questionnaire was used to collect data on the demographic and socioeconomic characteristics of all usual residents and any visitors who had spent the previous night in the sampled household.

Age-Sex Composition

The distribution of the NDHS household population is shown in Table 2.1 by age, sex, and residence. It shows that 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. This pattern is typical of a population with

Table 2.1 Household population by age, sex, and residence

Percent distribution of the de facto household population by five-year age group, according to sex and urban-rural residence, Nigeria 1999

	Urban			Rural			Total		
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total
0-4	14.2	14.0	14.1	16.2	15.1	15.7	15.6	14.8	15.2
5-9	15.3	17.5	16.4	17.6	18.8	18.2	16.9	18.4	17.7
10-14	14.2	10.3	12.3	14.0	9.5	11.8	14.1	9.7	11.9
15-19	11.1	10.5	10.8	9.6	10.2	9.9	10.1	10.3	10.2
20-24	7.6	9.8	8.7	6.2	8.2	7.2	6.6	8.7	7.6
25-29	6.5	8.9	7.7	6.8	8.2	7.5	6.7	8.4	7.6
30-34	6.1	7.2	6.7	5.3	6.3	5.8	5.5	6.6	6.1
35-39	6.1	5.9	6.0	4.6	5.3	5.0	5.0	5.5	5.3
40-44	5.3	4.2	4.7	4.1	3.8	3.9	4.4	3.9	4.2
45-49	3.9	3.0	3.4	3.3	3.3	3.3	3.4	3.2	3.3
50-54	3.3	3.3	3.3	2.9	3.9	3.4	3.0	3.7	3.4
55-59	1.8	1.2	1.5	2.1	2.0	2.0	2.0	1.8	1.9
60-64	1.4	1.5	1.5	2.2	2.1	2.1	2.0	1.9	1.9
65-69	1.3	0.8	1.1	1.8	1.1	1.5	1.7	1.1	1.4
70-74	0.8	0.9	0.9	1.7	1.0	1.3	1.5	0.9	1.2
75-79	0.4	0.3	0.3	0.6	0.4	0.5	0.5	0.4	0.4
80 +	0.5	0.6	0.6	0.9	0.6	0.8	0.8	0.6	0.7
Missing/Don't know	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	5,496	5,472	10,970	13,436	13,210	26,654	18,932	18,683	37,624

Note: Total includes 10 people whose sex was not stated.

high fertility. Although the proportion under age five is smaller than the proportion age 5-9—which is usually taken as evidence of a recent decline in fertility—at least some of this pattern is due to age misreporting of some ten-year-old girls as age 9 (see below).

Overall, there are an equal number of males and females in the population. Figure 2.1 presents a graphic representation of the age and sex structure. The narrowing of the base of the pyramid may result from omission of recent births or displacement of births by age misreporting.

Figure 2.1
Population Pyramid, Nigeria 1999

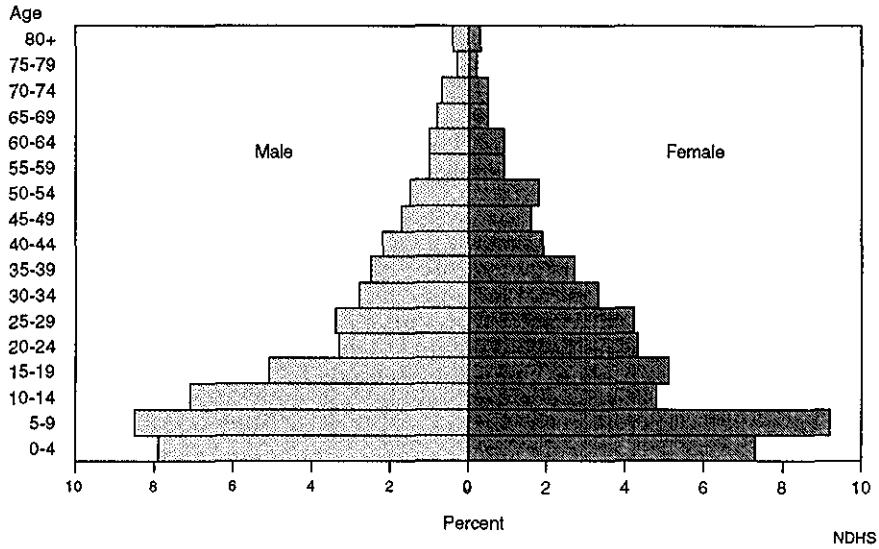
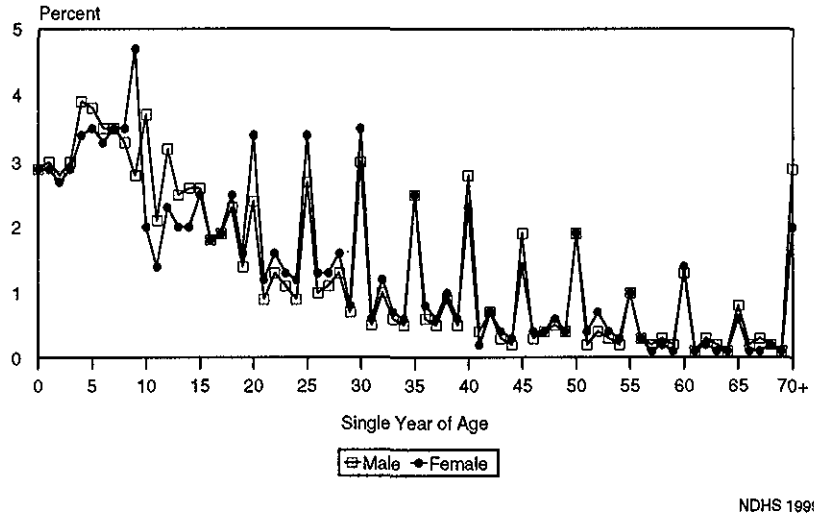


Figure 2.2 shows the distribution of the male and female household population by single year of age. Inspection of the figure reveals several irregularities. Noticeable heaping is observed at ages ending with the digits 0 and 5 and with even numbers, particularly the digits 2 and 8 at the middle and higher ages. The figure further reveals that except for age nine for females, ages ending in odd digits are generally underreported for both sexes. The unexpected heaping at age nine for women is almost certainly due to interviewers reporting younger ages for eligible respondents to lessen their work load, given that women age 10-49 were considered eligible. Age heaping is highly pronounced for age 20 and above among both males and females. It appears to be more pronounced at the younger ages in the rural areas than in the urban areas.

Table 2.2 shows the distribution of the population by broad age groups. Children under age 15 account for 45 percent of Nigeria's population, while those age 15-64 account for 51 percent. The remaining 4 percent of the population are 64 years and older. Over the past two decades, there has been a very slight decline in the proportion under 15 and a slight increase in the older population.

Figure 2.2
Distribution of De Facto Household Population by Single Year of Age and Sex, Nigeria 1999



The population has a low median age of 17.5 years (not shown). This means that half of the population is younger than 17.5 years and the other half is older than 17.5 years.

The table also shows that the dependency ratio is 94; that is, there are 94 persons under 15 or over 64 for every 100 persons age 15-64 in Nigeria. In other words, besides taking care of himself/herself, the average Nigerian of working age is also expected to take care of approximately one other person. The decline in the dependency ratio since 1981-82 indicates a lessening of the economic burden of persons in the productive age range who support those of nonproductive ages.

Table 2.2 Population by age from selected sources

Percent distribution of the population by age group, selected sources, Nigeria 1963-1999

Age group	Census 1963	NDSS 1980	NFS 1981-82	NDHS 1990	Census 1991	Sentinel survey 1994	NDHS 1999
<15	43.1	47.2	49.5	47.1	44.9	45.3	44.8
15-64	54.9	50.2	48.1	48.5	51.8	51.3	51.4
65+	2.0	2.8	2.3	4.3	3.3	3.4	3.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Dependency ratio	82	100	108	106	93	95	94

Sources: 1963 Census, 1980 NDSS; 1981-82 NFS; 1990 NDHS; 1991 Census; 1994 Sentinel Survey (SS); 1999 NDHS

Household Composition

Table 2.3 shows that households in Nigeria are predominantly headed by men (83 percent), with only 17 percent headed by women. The proportion of female-headed households is slightly higher in urban areas (19 percent) than in rural areas (16 percent).

There are only small differences in the composition of urban and rural households by number of members. Thus, the mean household size in rural areas (5.1 persons) is only slightly higher than in urban areas (4.8).

Table 2.3 Household composition

Percent distribution of households by sex of head of household, household size, and presence of foster children in household, according to urban-rural residence, Nigeria 1999

Characteristic	Residence		
	Urban	Rural	Total
Sex of head of household			
Male	81.4	83.8	83.0
Female	18.6	16.2	16.9
Total	100.0	100.0	100.0
Number of usual members			
1	11.4	11.2	11.3
2	11.9	11.0	11.3
3	13.7	12.8	13.1
4	14.6	13.8	14.1
5	15.2	12.9	13.6
6	10.8	10.5	10.6
7	7.7	9.2	8.8
8	5.0	5.4	5.3
9+	9.7	12.8	11.8
Total	100.0	100.0	100.0
Mean size	4.8	5.1	5.0
Percentage with foster children[1]	16.2	16.0	16.1

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

[1] *Foster children* are children under age 15 living in households with neither their mother nor their father present.

Fosterhood and Orphanhood

Foster children are children under 15 years of age who are not living with either of their biological parents. To measure the prevalence of child fostering and orphanhood, four questions were asked in the NDHS Household Questionnaire on the survival status and residence of the parents of children less than 15 years of age. As shown in Table 2.3, 16 percent of households have foster children.

Table 2.4 presents details regarding foster children and orphans under 15 years of age. The data show that almost three-quarters of children under 15 live with both their natural parents, while 8 percent live with their mothers but not their fathers, 4 percent live with only their fathers, and 9 percent live with neither parent (foster children). Information on parents is missing for 7 percent of children.

The table also indicates a low level of orphanhood in Nigeria. Although 4 percent of children under 15 have lost their fathers and 3 percent have lost their mothers, less than one percent are orphans, having lost both parents.

As expected, the percentage of children who are living with both their natural parents decreases with increasing age of the child. There are no major differences in fosterhood or orphanhood by sex of the child or by urban-rural residence. Most children below age 15 live with both parents in all regions of the country, but the proportion is highest in the two northern regions (81 percent) and lowest in the Southeast (58 percent).

Table 2.4 Fosterhood and orphanhood

Percent distribution of de jure children under age 15 by survival status of parents and child's living arrangements, according to background characteristics, Nigeria 1999

Background characteristic	Living with both parents	Living with mother but not father		Living with father but not mother		Not living with either parent				Missing information on father/ mother	Total	Number of children
		Father alive	Father dead	Mother alive	Mother dead	Both alive	Father only alive	Mother only alive	Both dead			
Age												
0-2	81.6	8.5	1.1	1.1	0.2	1.6	0.1	0.0	0.2	5.7	100.0	3,270
3-5	77.6	5.5	1.4	2.1	1.0	5.1	0.2	0.3	0.8	6.0	100.0	3,878
6-9	70.8	5.6	2.3	3.2	1.5	8.2	0.5	1.0	1.1	5.9	100.0	5,323
10-14	62.1	5.8	3.5	4.7	2.2	9.8	1.1	1.5	1.2	8.1	100.0	4,566
Sex												
Male	72.8	6.3	2.2	3.4	1.6	5.7	0.5	0.9	0.7	6.1	100.0	8,904
Female	71.3	6.2	2.1	2.5	1.0	7.7	0.6	0.7	1.0	6.9	100.0	8,129
Residence												
Urban	71.3	7.5	1.7	2.6	1.5	7.8	0.3	0.9	0.5	5.9	100.0	4,750
Rural	72.4	5.7	2.3	3.1	1.3	6.2	0.6	0.7	1.0	6.7	100.0	12,287
Region												
Northeast	80.9	2.0	0.8	2.8	1.3	4.4	0.3	0.8	0.6	6.2	100.0	3,316
Northwest	81.2	2.7	1.0	1.8	1.5	3.3	0.5	0.7	0.3	6.8	100.0	2,553
Southeast	58.3	9.9	5.2	2.5	1.2	10.1	1.1	1.3	1.0	9.2	100.0	3,595
Southwest	68.8	8.6	1.9	4.1	1.2	8.7	0.4	0.5	0.4	5.4	100.0	3,875
Central	74.6	6.4	1.4	3.2	1.4	5.5	0.2	0.6	1.8	4.9	100.0	3,697
Total	72.1	6.2	2.1	3.0	1.3	6.7	0.5	0.8	0.9	6.5	100.0	17,037

Note: By convention, *foster children* are those who are not living with either biological parent. This includes *orphans*, i.e., children with both parents dead.

Educational Level of Household Members

The educational level of the population is often used as an indicator of the socioeconomic development of the country. Moreover, many phenomena, such as reproductive behaviour, use of contraception, infant and child mortality, morbidity, and proper hygienic habits are affected by 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 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 fishing people in the riverine areas. In October 1999, Universal Basic Education (UBE) was launched, making it compulsory for every child to be educated free up to the junior secondary school level in an effort to meet the nation's manpower requirement for national development.

Table 2.5 presents the distribution of the household population age six years and over by level of education, according to sex, age, place of residence, and region. The table shows that 26 percent of men and 38 percent of women have not received any formal education. Roughly one-third of the population has at least some primary school, but not more, while one-quarter of men and one-fifth of women reached secondary school. Seven percent of men and 4 percent of women have a higher education.

Table 2.5 Educational attainment of household population

Percent distribution of the de facto male and female household populations age six and over by highest level of education attained, according to selected background characteristics, Nigeria 1999

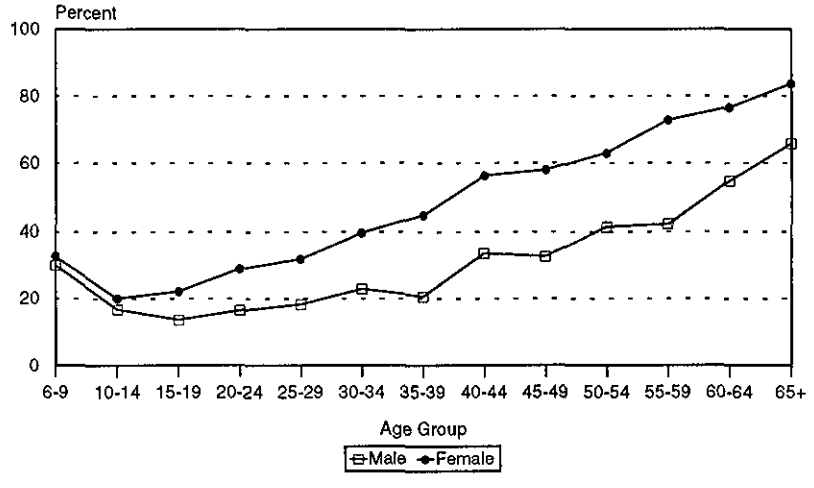
Background characteristic	Level of education					Total	Number of women/ men	Median number of years of schooling
	No education	Primary	Secondary	Higher	Don't know/ missing			
MALE								
Age								
6-9	30.0	60.5	0.4	0.0	9.1	100.0	2,481	0.2
10-14	16.7	57.5	22.1	0.2	3.5	100.0	2,664	3.6
15-19	13.5	20.7	62.0	1.5	2.3	100.0	1,904	7.4
20-24	16.4	18.5	52.4	9.8	2.9	100.0	1,247	9.2
25-29	18.3	20.1	42.5	15.9	3.3	100.0	1,277	10.0
30-34	22.9	21.7	34.7	16.8	3.9	100.0	1,050	8.3
35-39	20.5	25.6	30.8	18.4	4.7	100.0	954	7.9
40-44	33.7	23.2	20.9	17.7	4.5	100.0	839	5.5
45-49	32.7	29.9	16.0	15.1	6.2	100.0	653	5.3
50-54	41.3	29.0	12.4	11.6	5.7	100.0	569	4.1
55-59	42.1	29.2	12.1	9.6	6.9	100.0	374	2.3
60-64	54.7	23.0	7.4	3.9	11.0	100.0	373	0.0
65+	65.7	17.0	3.9	3.3	10.1	100.0	847	0.0
Residence								
Urban	13.9	33.5	35.4	13.2	4.0	100.0	4,544	6.0
Rural	31.2	35.1	23.2	4.7	5.8	100.0	10,715	3.1
Region								
Northeast	50.1	18.6	16.2	4.5	10.5	100.0	2,586	0.0
Northwest	51.6	18.4	13.7	3.5	12.8	100.0	1,970	0.0
Southeast	9.1	50.1	31.6	6.8	2.3	100.0	3,402	5.3
Southwest	12.9	38.8	36.1	9.6	2.6	100.0	3,884	5.8
Central	25.1	35.9	27.2	9.1	2.7	100.0	3,417	4.8
Total	26.1	34.6	26.8	7.2	5.2	100.0	15,259	4.7
FEMALE								
Age								
6-9	32.8	57.8	0.5	0.0	8.8	100.0	2,798	0.2
10-14	20.0	51.7	24.2	0.0	4.2	100.0	1,817	3.8
15-19	22.1	23.0	50.2	1.0	3.7	100.0	1,918	6.1
20-24	28.9	19.3	38.9	7.6	5.3	100.0	1,622	5.9
25-29	31.9	23.0	31.1	8.5	5.6	100.0	1,573	5.6
30-34	39.5	21.7	24.1	8.2	6.5	100.0	1,228	5.1
35-39	44.6	22.3	16.3	9.1	7.7	100.0	1,027	1.7
40-44	56.2	22.3	8.6	5.7	7.2	100.0	728	0.0
45-49	58.0	24.8	4.5	5.2	7.5	100.0	599	0.0
50-54	63.0	15.9	5.2	3.8	12.1	100.0	693	0.0
55-59	72.8	8.2	3.2	2.6	13.2	100.0	331	0.0
60-64	76.6	5.5	1.2	1.5	15.2	100.0	356	0.0
65+	83.6	2.8	0.5	1.3	11.7	100.0	556	0.0
Residence								
Urban	25.4	32.0	29.9	8.1	4.6	100.0	4,529	5.1
Rural	43.3	29.8	16.7	2.1	8.1	100.0	10,745	0.1
Region								
Northeast	64.0	14.4	8.0	1.5	12.2	100.0	2,536	0.0
Northwest	64.6	11.5	5.8	0.6	17.6	100.0	1,935	0.0
Southeast	18.8	44.5	29.1	4.1	3.5	100.0	3,645	4.8
Southwest	22.8	36.5	30.4	6.5	3.7	100.0	3,789	5.3
Central	41.0	31.5	18.3	4.4	4.8	100.0	3,369	1.0
Total	38.0	30.5	20.6	3.9	7.1	100.0	15,273	1.7

Note: Total includes 26 men whose age is missing and 28 women whose age is missing

Men in Nigeria have a distinct educational advantage over women. Men receive roughly three years more education than women, with a median number of years of schooling of 4.7 for males, compared with only 1.7 years for females. At every age group, there are smaller proportions of men than women with no education (Figure 2.3). Despite reductions over time in the proportion of men and women with no education (evidenced by the fact that younger people are less likely to be uneducated), the gender differential in educational attainment has narrowed little.

The proportion of rural males and females with no education is almost double that of urban respondents. The Northwest region has the highest proportion of persons with no education (52 percent of men and 65 percent of women), while the Southeast region has the lowest percentage who have never been to school (9 percent of men and 19 percent of women). The Southwest region has the highest proportion who have attended higher educational institutions (10 percent of men and 7 percent of women).

Figure 2.3
Percentage of Males and Females Who Have No Education by Age Group, Nigeria 1999



School Attendance Rates

Table 2.6 shows school attendance rates by age group, sex, and residence for the population age 6-24 years. A school enrolment rate is the percentage of children in a specific age group who are currently in school.

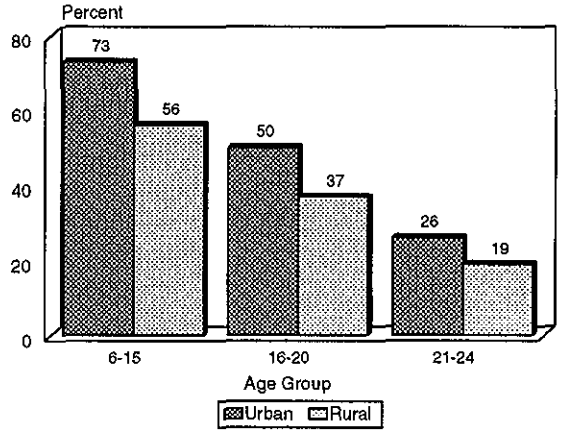
Table 2.6 School attendance

Percent of the de facto household population 6-24 years of age currently in school, by age, sex, and residence, Nigeria 1999

	Male			Female			Total		
Age group	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
6-10	72.6	53.4	58.5	68.8	49.5	54.9	70.7	51.4	56.7
11-15	77.2	65.2	68.8	75.5	60.1	64.9	76.4	63.0	67.1
6-15	74.8	58.4	63.0	71.5	53.3	58.6	73.2	56.0	60.9
16-20	58.3	44.7	49.1	41.1	30.9	33.9	49.7	37.2	41.0
21-24	30.8	24.0	26.4	21.3	15.1	17.4	25.5	19.2	21.4

The table shows that 57 percent of children age 6-10 are in school. The percentage enrolled in school increases to 67 in the age group 11-15 years, after which it drops substantially. Only 41 percent of the population age 16-20 are attending school. Among those in their early twenties, only 21 percent are still in school. School attendance is substantially higher for urban than for rural residents (Figure 2.4). In the population as a whole, males are more likely than females to be enrolled in school in all age groups, with the differential being greatest for the 16-20 age group.

Figure 2.4
Percentage in School by Age and Urban-Rural Residence, Nigeria 1999



NDHS 1999

2.2 Household Facilities

In the Household Questionnaire, respondents were asked about certain characteristics of their households, including availability of electricity, source of drinking water, time to water source, type of toilet facilities, main floor materials, and persons per room. These physical characteristics have an important bearing on exposure to disease for household members, particularly children. They are also useful indicators of the socioeconomic status of the household. Table 2.7 summarises this information by urban-rural residence.

Overall, 45 percent of households in Nigeria have electricity (Figure 2.5). This represents an improvement over the 27 percent reported in the 1990 NDHS. Electricity is available in four of every five urban households (84 percent), which is three times the proportion in rural areas (28 percent).

Access to drinking water and adequate sanitation facilities are important determinants of health conditions. In Nigeria, one in four households has piped water, either piped into their residence or plot or a public tap. More than 40 percent of households use water from a well or borehole, and 25 percent use surface water from a river, pond, or dam. Assuming that water from pipes, private wells, boreholes, and springs are uncontaminated, slightly more than half of Nigerian households drink safe water.

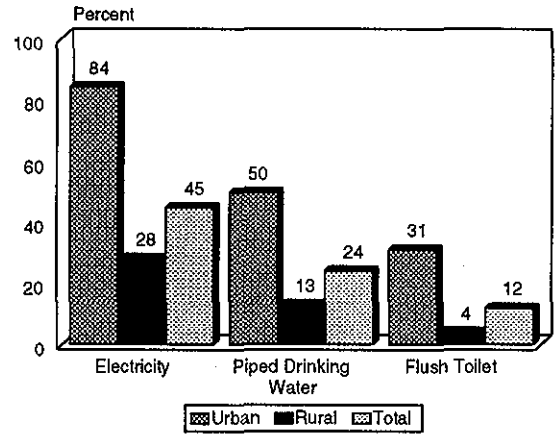
Sources used by households to obtain drinking water differ considerably by area of residence. Twenty-four percent of urban households obtain water from pipes in their residence, yard, or plot, compared with only 4 percent of rural households. In urban areas, 26 percent of households obtain drinking water from public taps, versus 10 percent of rural households. Other sources of water for urban households are private wells and boreholes. In rural areas, one-third (32 percent) of households obtain drinking water from rivers and streams. Other major sources of water for rural dwellers are public wells and wells in the yard or plot.

Table 2.7 Housing characteristics

Percent distribution of households by housing characteristics, according to residence, Nigeria 1999

Characteristic	Residence		
	Urban	Rural	Total
Electricity			
Yes	84.3	27.9	44.9
No	14.9	70.9	54.0
Missing	0.8	1.2	1.1
Total	100.0	100.0	100.0
Source of drinking water			
Pipe in residence/yard/plot	24.0	3.7	9.8
Public tap	25.8	9.5	14.4
Well in residence/yard/plot	16.9	15.1	15.7
Public well	9.6	19.8	16.7
Borehole	12.4	9.1	10.1
Spring	1.1	4.0	3.1
River/stream	3.2	32.2	23.4
Pond/lake	0.5	1.6	1.2
Dam	0.4	0.3	0.3
Rainwater	0.3	0.8	0.6
Tanker truck	1.6	1.1	1.3
Tanker vendor	2.0	1.2	1.4
Bottled water	0.4	0.1	0.2
Other	0.6	0.4	0.5
Missing	1.0	1.0	1.0
Total	100.0	100.0	100.0
Time to water source (in minutes)			
<15 minutes	74.2	48.5	56.3
Median time to source	0.3	14.1	9.4
Sanitation facility			
Own water closet	20.7	2.9	8.3
Shared flush toilet (W.C.)	9.9	1.4	3.9
Traditional pit toilet	46.4	56.7	53.6
Ventilated improved pit (VIP) latrine	8.8	5.2	6.3
Bucket toilet	0.3	0.1	0.1
No facility/bush/field/river	12.3	32.1	26.1
Other	0.6	0.1	0.3
Missing	1.2	1.5	1.4
Total	100.0	100.0	100.0
Main floor material			
Earth/sand	9.8	44.8	34.2
Dung	1.5	4.6	3.7
Wood planks	0.1	0.2	0.2
Palm/bamboo	0.1	0.1	0.1
Vinyl or asphalt strips	0.0	0.2	0.1
Ceramic tiles	1.3	0.1	0.5
Cement	67.1	45.6	52.1
Terazol/Marble	2.0	0.5	0.9
Carpet	16.9	2.8	7.1
Missing	1.2	1.1	1.1
Total	100.0	100.0	100.0
Persons per sleeping room			
1-2	59.0	67.5	65.0
3-4	25.5	23.3	24.0
5-6	10.4	5.2	6.8
7+	3.4	2.0	2.4
Missing/Don't know	1.7	2.0	1.9
Mean	2.7	2.3	2.5
Total	100.0	100.0	100.0
Number of households	2,313	5,334	7,647

Figure 2.5
Percentage of Households with Specific Amenities, by Urban-Rural Residence, Nigeria 1999



NDHS 1999

Proximity to a water source encourages use of more water, which results in better hygiene. Slightly more than half of all Nigerian households are within 15 minutes of a source of water. About three-quarters of urban households (74 percent) are close (within 15 minutes) to a water source, compared with less than half of rural households. The median travel time to the source of drinking water is 14 minutes in rural areas, while it is only a fraction of a minute (0.3 minutes) in urban areas.

NDHS data (Table 2.7) show that 8 percent of all households have their own water closet, while 4 percent share water closets, 54 percent have traditional pit toilets, and 26 percent have no toilet facility. The use of traditional pit toilets is more common in rural than in urban areas (57 percent versus 46 percent). Twelve percent of urban households have no toilet facility, which is much lower than the proportion in rural areas (32 percent).

The most commonly used flooring materials are cement (52 percent) and earth/sand (34 percent). More than three-quarters of urban households and 90 percent of rural households use these two materials for flooring.

The NDHS collected data on the total number of rooms that a household uses for sleeping. This information provides a measure of household room density. Table 2.7 shows that 65 percent of households have one or two persons per sleeping room and one-quarter have three to four persons per sleeping room. On average, there are 2.5 persons per sleeping room.

Household Durable Goods

Besides providing information on the socioeconomic status of households, durable consumer goods have specific benefits for the households. Having access to a radio or television exposes household members to innovative ideas. A refrigerator prolongs the wholesomeness of foods, and transportation allows greater access to many services outside the local area.

Table 2.8 shows the availability of selected durable goods by urban-rural residence. Sixty-two percent of households own a radio, 31 percent have an electric fan, 26 percent have a television, 24 percent have an electric iron, and 24 percent have a bicycle. Few households have telephones (2 percent), private cars (8 percent), or gas cookers (5 percent).

Table 2.8 Household durable goods

Percentage of households possessing various durable consumer goods, by residence, Nigeria 1999

Durable consumer goods	Residence		
	Urban	Rural	Total
Radio	77.6	55.3	62.1
Television	52.7	13.9	25.6
Telephone	5.3	0.2	1.8
Refrigerator	33.6	7.4	15.3
Bicycle	9.8	30.5	24.2
Motorcycle	13.9	13.3	13.5
Private car	14.9	4.5	7.7
Gas cooker	10.2	2.3	4.7
Electric iron	50.1	13.3	24.4
Electric fan	65.0	16.3	31.0
Donkey/horse/camel	0.1	4.7	3.3
Canoe/boat/ship	0.2	4.3	3.1
None (radio through car)	16.4	33.9	28.6
None of the above	13.4	30.2	25.1
Number of households	2,313	5,334	7,647

Ownership of all items inquired about is higher among urban than among rural households, except bicycles, work animals, and boats. For example, the proportion of urban households that own a private car (15 percent) is thrice the proportion of rural households (5 percent). Less than 1 percent of rural households have a telephone, compared with 1 in 20 urban households. Large urban-rural differentials are also observed in ownership of appliances that usually require electricity, such as televisions, refrigerators, irons, and fans.

2.3 Characteristics of Survey Respondents

Background Characteristics

Data concerning characteristics of the respondents are presented in Table 2.9. As expected, there are many more respondents in the younger age groups than at older ages. Seventy percent of women and 60 percent of men are in union (married or living together), while one-quarter of the women and more than one-third of the men have never married. The proportion divorced, widowed, or separated is generally low in Nigeria.

About 70 percent of both male and female respondents reside in rural areas, a decline from the level of 75 percent in the 1990 NDHS. About 30 percent of respondents are from the Northwest and Northeast regions, while about 48 percent are from the Southwest and Southeast regions. The remaining 22 percent reside in the Central region.

Table 2.9 Background characteristics of respondents

Percent distribution of women and men by selected background characteristics, Nigeria 1999

Background characteristic	Weighted percent	Number of women		Weighted percent	Number of men	
		Weighted	Un-weighted		Weighted	Un-weighted
Age						
15-19	21.6	1,775	1,774	19.1	511	513
20-24	18.5	1,521	1,528	11.9	319	315
25-29	18.5	1,516	1,521	13.6	366	361
30-34	13.9	1,137	1,142	13.0	348	348
35-39	12.1	992	983	10.3	275	278
40-44	8.5	696	689	8.9	239	240
45-49	6.9	568	562	7.4	197	197
50-54	-	-	-	7.6	205	209
55-64	-	-	-	8.2	220	219
Marital status						
Never married	26.0	2,130	2,118	36.9	988	988
Married	64.6	5,304	5,316	56.7	1,518	1,512
Living together	5.5	453	439	3.5	93	96
Widowed	1.6	134	132	0.7	18	18
Divorced	1.0	83	86	0.9	24	24
Not living together	1.2	102	108	1.4	38	42
Residence						
Urban	31.0	2,540	2,697	30.7	821	882
Rural	69.0	5,666	5,502	69.3	1,859	1,798
Region						
Northeast	15.7	1,292	1,304	16.3	437	437
Northwest	13.2	1,087	1,162	13.3	356	337
Southeast	23.0	1,886	1,895	22.0	590	602
Southwest	25.4	2,080	2,002	26.0	696	698
Central	22.7	1,861	1,836	22.4	601	606
Education level attained						
No education	40.5	3,324	3,325	24.7	663	652
Primary	22.8	1,868	1,850	26.5	710	708
Secondary	30.5	2,506	2,503	36.8	986	988
Higher	6.2	508	521	12.0	321	332
Religion						
Catholic	14.6	1,201	1,189	13.1	352	355
Protestant	19.0	1,559	1,558	20.3	543	553
Other Christian	20.4	1,672	1,657	19.1	513	521
Muslim	43.7	3,587	3,620	45.2	1,210	1,190
Traditionalist	1.6	132	120	1.9	52	50
Other	0.7	56	55	0.4	11	11
All women	100.0	8,206	8,199	100.0	2,680	2,680

Educational levels are low in Nigeria and women are at a distinct disadvantage compared with men. The proportion of women age 15-49 who have never been to school is 16 percentage points higher than that of men (41 versus 25 percent). The proportion of male respondents who have attended post-secondary schools (12 percent) is double that of female respondents (6 percent).

As regards religion, slightly more than half of the respondents are Christian and slightly less than half are Muslim.

Characteristics of Couples

Since male respondents were selected from households in which women were also interviewed, it is possible to match married men with their wives to form a sample of couples. Table 2.10 presents information on 1,451 couples.

Table 2.10 Differential characteristics between spouses

Percent distribution of couples by differences between spouses in age and level of education, Nigeria 1999

Characteristic	Percent/ Years	Number of couples
Wife older	2.0	30
Husband older by:		
0-4 years	13.9	201
5-9 years	31.7	460
10-14 years	25.9	375
15 years or more	26.5	385
Mean age difference (years)		
First wife	10.0	1,264
Second wife	17.5	187
All wives	10.9	1,451
Education (percent)		
Both husband and wife not educated	35.0	508
Wife educated, husband not	3.7	54
Husband educated, wife not	20.8	301
Both husband and wife educated	40.5	587
Total	100.0	1,451

In Nigeria, it is common for men to marry younger women. In the NDHS, only 2 percent of wives are older than their husbands. The mean age difference between husbands and their wives is 11 years. In polygynous unions, the mean age difference between the husband and his second wife is 18 years.

The data also show that educated men are likely to marry educated women (41 percent), and that with no education marry women with no education (35 percent). It is rare for an educated woman to marry a man who is not educated, although 20 percent of educated husbands have wives who had no schooling.

Educational Differentials

Table 2.11 gives an overview of the relationship between the level of education and other background characteristics of respondents. Of particular importance are possible differences in the educational composition of women from different age groups, urban-rural residence, and regions. Older women and men are generally less educated than younger respondents. For example, 65 percent of women age 45-49 have no formal education, compared with only 26 percent of women age 15-19. The level of education also varies greatly according to residence. Women and men in urban areas are more likely to have obtained higher education than their rural counterparts. The urban-rural difference is more pronounced at the secondary and higher level. Only 3 percent of women and 8 percent of men in rural areas have a higher education, compared with 13 percent of women and 21 percent of men in urban areas.

Table 2.11 Educational attainment by background characteristics

Percent distribution of women and men by highest level of schooling attained, according to selected background characteristics, Nigeria 1999

Background characteristic	Highest level of schooling attained				Total	Number of women/ men
	No education	Primary	Secondary	Higher		
			WOMEN			
Age						
15-19	25.7	22.1	51.3	0.9	100.0	1,775
20-24	32.4	20.2	40.0	7.4	100.0	1,521
25-29	36.0	24.7	30.6	8.6	100.0	1,516
30-34	43.9	22.8	25.3	8.0	100.0	1,137
35-39	52.5	23.2	14.9	9.4	100.0	992
40-44	63.1	23.4	8.2	5.3	100.0	696
45-49	64.9	24.7	5.5	4.9	100.0	568
Residence						
Urban	24.9	21.0	41.5	12.5	100.0	2,540
Rural	47.5	23.5	25.6	3.3	100.0	5,666
Region						
Northeast	76.9	8.9	12.0	2.1	100.0	1,292
Northwest	82.3	8.1	8.3	1.2	100.0	1,087
Southeast	11.0	36.2	46.2	6.7	100.0	1,886
Southwest	19.8	26.7	43.8	9.7	100.0	2,080
Central	43.9	23.0	25.6	7.5	100.0	1,861
All women	40.5	22.8	30.5	6.2	100.0	8,206
			MEN			
Age						
15-19	13.2	20.5	65.4	1.0	100.0	511
20-24	12.6	25.1	53.2	9.1	100.0	319
25-29	15.6	28.7	38.2	17.5	100.0	366
30-34	18.5	28.2	34.9	18.3	100.0	348
35-39	25.3	23.7	31.6	19.4	100.0	275
40-44	36.2	26.4	19.4	18.1	100.0	239
45-49	36.0	34.9	16.0	13.1	100.0	197
50-54	42.9	32.1	15.2	9.8	100.0	205
55+	53.9	27.0	11.4	7.7	100.0	220
Residence						
Urban	13.4	20.8	45.0	20.7	100.0	821
Rural	29.7	29.0	33.2	8.1	100.0	1,859
Region						
Northeast	49.5	18.2	23.7	8.7	100.0	437
Northwest	58.6	21.4	12.6	7.3	100.0	356
Southeast	6.8	37.4	45.2	10.7	100.0	590
Southwest	10.0	25.8	50.0	14.1	100.0	696
Central	21.3	25.7	37.2	15.9	100.0	601
All men	24.7	26.5	36.8	12.0	100.0	2,680

The Northwest region has the highest proportion of uneducated respondents (82 percent of women and 59 percent of men). In the Southeast region, only 11 percent of women and 7 percent of men had no schooling. The proportion of women who have a primary school education in the Southeast region is higher than in the other regions.

Reasons for Leaving School

Knowledge of the reasons for leaving school can provide guidance for policies aimed at enhancing women's status. Women age 15-24 who had attended school but were not currently attending were asked in the NDHS why they stopped. Table 2.12 shows the percent distribution of women age 15-24 years by current enrolment status in school, that is, whether they are attending school and if not, their reasons for leaving school and level of education attained. Almost half (48 percent) of women age 15-24 who have attended school are still continuing their education.

The major reason for leaving school is inability to pay school fees (15 percent). The next most frequently cited reason for stopping schooling is to get married (10 percent). This reason is most common among women who have completed primary school (19 percent). Among those who left higher education institutions, the major reasons for leaving are that they graduated, had enough education needed to earn money, and marriage. The proportion of those leaving school because they did not pass exams is highest amongst those who have completed secondary school (7 percent). It is interesting to note that the least common reason for leaving school is that the school is not accessible.

Table 2.12 Reasons for leaving school

Percent distribution of women age 15-24 who have ever attended school by current enrollment status and reason for leaving school, according to highest level of education attended, Nigeria 1999

Reason stopped attending school	Highest level of education					Total
	Primary incomplete	Primary complete	Secondary incomplete	Secondary complete	Higher	
Still in school	45.1	11.9	71.0	22.4	67.5	48.0
Got pregnant	4.7	2.6	3.8	1.0	0.7	3.0
Got married	12.8	18.6	5.6	11.1	2.4	9.7
Take care of children	1.0	0.8	0.3	0.8	0.0	0.5
Family needed help	2.9	2.8	0.7	2.5	0.0	1.6
Could not pay school fees	18.6	34.4	8.9	10.2	1.5	14.9
Need to earn money	0.0	3.1	1.1	6.9	4.1	2.6
Graduated, enough	1.9	6.0	2.6	24.3	19.3	7.8
Did not pass exams	1.1	4.0	0.6	6.8	0.0	2.3
Did not like school	7.9	7.0	1.8	1.0	0.0	3.2
School not accessible	0.0	0.4	0.3	0.3	0.0	0.2
Other	2.6	3.7	1.2	7.5	0.0	2.9
Don't know/missing	1.4	4.6	2.2	5.3	4.5	3.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	211	488	1,126	393	129	2,347

Access to Mass Media

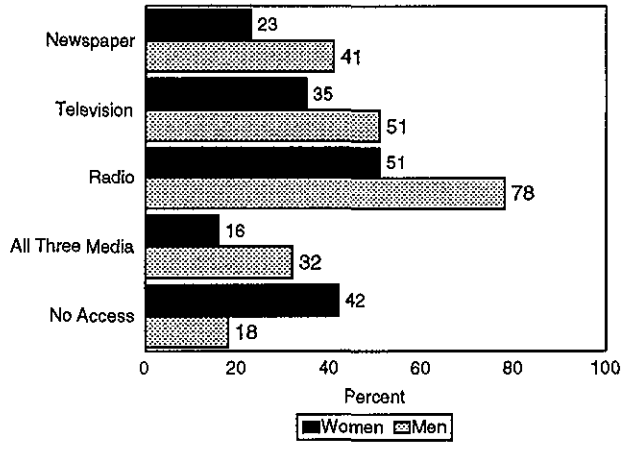
NDHS respondents were asked if they usually read newspapers, listen to radio, or watch television at least once a week. This information is important because it provides an indication of the level of exposure to the mass media, which are often used to disseminate information on family planning and public health. Table 2.13 and Figure 2.6 show the percentage of female and male respondents exposed to different types

Table 2.13 Access to mass media

Percentage of women and men who usually read a newspaper weekly, watch television weekly, and listen to the radio daily, by selected background characteristics, Nigeria 1999

Background characteristic	No mass media	Reads a newspaper weekly	Watches television weekly	Listens to the radio daily	All three media	Number of women/ men
			WOMEN			
Age						
15-19	39.3	27.3	39.4	51.3	17.9	1,775
20-24	37.4	28.9	39.1	54.1	18.1	1,521
25-29	40.1	25.5	36.1	53.7	17.5	1,516
30-34	42.5	21.2	33.4	53.1	16.5	1,137
35-39	45.8	19.0	31.9	49.4	14.3	992
40-44	49.4	13.2	28.5	43.7	10.3	696
45-49	51.5	11.1	24.3	45.3	8.3	568
Residence						
Urban	18.7	39.6	66.5	72.2	32.8	2,540
Rural	52.5	15.7	20.9	41.9	8.4	5,666
Region						
Northeast	65.1	8.3	14.5	31.5	5.3	1,292
Northwest	57.9	5.6	10.4	40.4	3.0	1,087
Southeast	40.3	26.2	36.3	47.5	15.1	1,886
Southwest	19.7	38.3	58.4	73.2	29.6	2,080
Central	43.4	23.4	36.3	50.5	16.4	1,861
Education						
No education	66.8	0.2	10.3	31.1	0.1	3,324
Primary	41.1	12.0	33.7	52.1	6.7	1,868
Secondary	17.6	49.5	58.9	70.1	33.1	2,506
Higher	3.7	83.3	84.4	87.1	68.4	508
All women	42.0	23.1	35.0	51.2	15.9	8,206
			MEN			
Age						
15-19	18.4	35.0	56.9	73.9	27.7	511
20-24	16.5	45.1	59.9	78.8	35.6	319
25-29	12.3	47.8	53.2	81.1	34.7	366
30-34	14.3	50.4	53.3	83.1	40.3	348
35-39	17.8	44.6	47.4	80.3	34.0	275
40-44	20.1	39.4	47.4	76.5	31.5	239
45-49	19.7	36.6	43.1	80.3	27.2	197
50-54	18.3	37.1	43.5	77.9	30.3	205
55+	25.7	29.9	34.7	71.6	22.4	220
Residence						
Urban	6.3	63.1	82.9	89.2	57.5	821
Rural	22.6	31.5	36.3	73.2	20.6	1,859
Region						
Northeast	30.5	24.8	35.0	66.0	17.5	437
Northwest	32.5	13.3	22.3	65.8	8.7	356
Southeast	18.5	38.0	48.2	75.8	27.4	590
Southwest	6.1	66.9	75.9	90.5	58.6	696
Central	11.9	42.9	51.8	82.3	29.8	601
Education						
No education	40.2	2.5	18.1	57.0	1.4	663
Primary	17.2	30.4	41.1	79.4	19.5	710
Secondary	7.8	59.6	68.2	85.9	46.4	986
Higher	1.9	88.1	84.6	95.1	78.0	321
All men	17.6	41.2	50.6	78.1	31.9	2,680

Figure 2.6
Percentage of Women and Men with Access to Mass Media, Nigeria 1999



NDHS 1999

of mass media by age, residence, region, and level of education. In all, the proportion of men who have access to all three types of mass media is twice that of women (32 versus 16 percent). The table further shows that radio is the more commonly accessed medium, with 51 percent of women and 78 percent of men listening at least once a day. The next most widely used medium is television. Only 23 percent of women and 41 percent of men read a newspaper at least once a week. The proportion of women who have no access to any mass media is more than twice that of men (42 percent compared with 18 percent).

Generally, exposure to mass media decreases with age and is higher in urban than in rural areas. Printed material and television are less commonly accessed by people in rural areas, perhaps in part because of their lower socioeconomic status. Exposure to all three media is substantially lower in the northern regions than in the other three regions. Less-educated respondents are also less likely to read newspapers, watch television, and listen to the radio than their better- educated peers.

Women's Employment Status

The NDHS collected information from women about their current employment status. The results are presented in Table 2.14. About half of women are not currently employed and about a third are employed on a full-time basis. The proportion not currently employed declines with age, while the proportions of those employed on a full-time and part-time basis increase with age.

A slightly higher level of unemployment is observed among women in rural areas than in urban areas (54 versus 47 percent). The highest percentage of employed women is in the Southwest (67 percent) and the Southeast (56 percent). Unemployment is highest among women with no education (62 percent).

Table 2.14 Employment

Percent distribution of women by employment status and continuity of employment, according to selected background characteristics, Nigeria 1999

Background characteristic	Not currently employed		Currently employed				Missing	Total	Number of women
	Did not work in last 12 months	Worked in last 12 months	All year 5+ days	All year <5 days	Season-ally	Occasion-ally			
Age									
15-19	79.1	1.2	9.1	3.2	3.5	3.4	0.5	100.0	1,775
20-24	62.2	1.5	24.5	3.7	6.1	1.6	0.4	100.0	1,521
25-29	44.6	1.5	37.9	6.6	6.4	2.2	0.7	100.0	1,516
30-34	35.9	1.2	44.8	6.5	9.0	2.1	0.5	100.0	1,137
35-39	33.1	1.3	46.3	6.3	10.1	2.8	0.2	100.0	992
40-44	30.7	1.2	48.5	6.2	10.2	3.1	0.1	100.0	696
45-49	26.2	1.8	48.2	9.2	11.2	3.2	0.2	100.0	568
Residence									
Urban	45.4	1.2	42.5	2.9	4.7	2.6	0.5	100.0	2,540
Rural	52.5	1.4	28.4	6.5	8.2	2.5	0.4	100.0	5,666
Region									
Northeast	78.0	1.0	12.7	2.6	3.4	1.8	0.5	100.0	1,292
Northwest	78.4	1.1	10.4	3.6	4.1	2.4	0.0	100.0	1,087
Southeast	41.3	1.9	30.8	10.7	10.7	3.9	0.6	100.0	1,886
Southwest	29.9	2.0	55.3	4.1	5.6	2.6	0.5	100.0	2,080
Central	46.5	0.6	36.4	4.5	9.9	1.8	0.4	100.0	1,861
Education									
No education	60.8	1.2	24.1	4.3	7.0	2.3	0.4	100.0	3,324
Primary	32.8	1.7	42.4	9.9	9.9	2.9	0.1	100.0	1,868
Secondary	52.7	1.4	32.6	4.4	5.8	2.8	0.7	100.0	2,506
Higher	34.3	1.4	54.6	1.5	6.1	1.6	0.4	100.0	508
All women	50.3	1.4	32.7	5.4	7.2	2.6	0.4	100.0	8,206

Women's Employers and Remuneration

Table 2.15 shows the percent distribution of employed women by type of employer and form of earnings (remuneration), according to background characteristics. About 70 percent of women who work are self-employed, while 17 percent are employed by relatives and 13 percent are employed by non-relatives. In all cases, most (86 percent) employed women work for cash. Women in rural areas are twice as likely as those in urban areas to work for non-cash payments.

The Northwest region has the highest proportion of self-employed women (78 percent), followed by the Southeast region (74 percent). The proportion of women who are employed by non-relatives increases with education.

Table 2.15 Employer and form of earnings

Percent distribution of currently employed women by employer and type of earnings (cash, in kind, no payment), according to background characteristics, Nigeria 1999

Background characteristic	Self-employed		Employed by a nonrelative		Employed by a relative		Missing	Total	Number of women
	Earns cash[1]	Does not earn cash[2]	Earns cash[1]	Does not earn cash[2]	Earns cash[1]	Does not earn cash[2]			
Age									
15-19	37.5	3.6	9.1	4.6	19.8	24.2	1.3	100.0	340
20-24	60.4	5.5	13.8	2.1	7.5	9.5	1.2	100.0	546
25-29	67.9	3.6	11.3	1.4	10.4	4.0	1.4	100.0	806
30-34	66.9	4.7	13.7	0.2	9.2	4.6	0.6	100.0	710
35-39	65.4	4.8	14.1	0.4	8.6	6.1	0.4	100.0	649
40-44	68.5	5.3	9.7	0.2	10.2	4.9	1.2	100.0	473
45-49	72.9	4.8	9.2	0.2	7.1	5.0	0.7	100.0	408
Residence									
Urban	64.5	2.8	20.2	1.4	6.6	3.5	1.0	100.0	1,342
Rural	64.1	5.5	7.7	1.0	11.7	9.1	1.0	100.0	2,590
Region									
Northeast	62.6	2.5	9.3	0.0	11.5	11.6	2.6	100.0	264
Northwest	76.6	1.6	6.5	0.0	11.5	2.1	1.5	100.0	223
Southeast	66.5	7.3	11.9	0.8	5.4	7.0	1.2	100.0	1,060
Southwest	66.5	2.3	13.0	1.7	12.0	3.9	0.7	100.0	1,406
Central	56.1	6.3	12.4	1.2	11.3	12.1	0.6	100.0	978
Education									
No education	67.8	5.6	2.2	0.2	13.7	9.5	0.9	100.0	1,250
Primary	73.2	5.0	3.9	1.7	9.1	6.3	0.8	100.0	1,223
Secondary	60.8	4.3	16.9	1.6	8.2	7.1	1.0	100.0	1,133
Higher	28.4	0.4	62.3	1.1	4.3	1.9	1.5	100.0	325
All women	64.2	4.6	11.9	1.1	9.9	7.2	1.0	100.0	3,931

[1] Includes both women who receive only cash and those who receive cash and in-kind payment.
[2] Includes both women who receive in-kind payment and those who receive no payment.

Women's and Men's Occupations

Tables 2.16.1 and 2.16.2 present information on the current occupation of employed women and men, respectively. Slightly more than one-fifth of working women are employed in agriculture. Of these, most work either on their own or on family-owned land. Many of those not employed in agriculture work in sales and services (56 percent). Almost 10 percent of employed women are in professional, technical, or managerial occupations, while 11 percent work in skilled and unskilled manual services. Generally, women are more likely to be engaged in non-agricultural than in agricultural employment (79 percent versus 21 percent).

Women from the Southeast region are the most likely to be employed in agriculture (29 percent), while women from the Northwest region are the least likely (4 percent). As expected, women with higher education are less likely to be employed in agriculture (2 percent) and are more likely to be engaged in professional, technical, or managerial employment (63 percent). About three-fifths of women who have completed primary and secondary education are engaged in sales and services.

Table 2.16.1 Occupation: women

Percent distribution of currently employed women by type of work performed (agricultural and nonagricultural) and type of agricultural land worked or type of nonagricultural employment, according to background characteristics, Nigeria 1999

Background characteristic	Agricultural work				Nonagricultural work					Missing	Total	Number of women
	Own land	Family land	Rented land	Other land	Prof./ Tech./ Manag.	Sales and services	Manual labour: Skilled	Manual labour: Unskilled	Other			
Age												
15-19	3.4	17.8	2.1	1.2	4.3	57.6	9.8	0.0	1.2	2.7	100.0	340
20-24	3.1	11.9	1.9	1.9	8.8	53.2	16.2	0.5	0.9	1.6	100.0	546
25-29	3.5	8.8	2.1	1.5	11.8	55.1	14.9	0.2	0.6	1.5	100.0	806
30-34	4.5	8.9	2.5	1.4	11.6	59.4	8.4	0.1	2.0	1.1	100.0	710
35-39	4.4	10.7	4.4	1.6	13.6	56.2	8.0	0.0	0.5	0.6	100.0	649
40-44	7.4	11.7	4.4	3.0	7.1	56.4	9.2	0.0	0.4	0.4	100.0	473
45-49	8.0	13.6	4.5	4.0	6.4	55.9	6.4	0.0	0.5	0.8	100.0	408
Residence												
Urban	1.6	2.7	0.5	0.9	18.1	61.1	13.4	0.1	0.7	0.9	100.0	1,342
Rural	6.3	15.6	4.3	2.5	5.6	53.7	9.4	0.1	1.0	1.4	100.0	2,590
Region												
Northeast	2.6	11.8	0.0	1.1	9.6	54.2	15.6	0.0	1.8	3.4	100.0	264
Northwest	0.4	2.6	0.0	0.7	6.9	70.3	12.0	1.3	2.4	3.4	100.0	223
Southeast	8.8	12.8	4.7	2.5	8.6	53.9	7.4	0.1	0.3	1.0	100.0	1,060
Southwest	1.9	7.0	4.5	2.1	10.7	61.5	10.7	0.1	0.9	0.5	100.0	1,406
Central	5.9	17.2	0.7	1.8	10.8	48.4	12.9	0.1	0.9	1.3	100.0	978
Education												
No education	7.5	17.7	4.8	2.6	0.4	55.5	8.6	0.1	1.2	1.5	100.0	1,250
Primary	4.9	11.6	3.4	2.4	1.3	62.9	12.1	0.1	0.7	0.6	100.0	1,223
Secondary	2.6	6.4	1.6	1.2	14.3	59.6	11.9	0.2	0.7	1.4	100.0	1,133
Higher	0.7	0.7	0.0	1.0	63.4	21.9	10.1	0.0	1.1	1.2	100.0	325
All women	4.7	11.2	3.0	2.0	9.9	56.2	10.8	0.1	0.9	1.2	100.0	3,931

Note: *Prof./Tech./Manag.* includes professional, technical, clerical, and managerial occupations.

About three-quarters (76 percent) of the men are currently working. Surprisingly, there is a higher level of unemployment among those who have completed secondary school (44 percent) than among those with no education (6 percent). One-third of all men are working in agricultural occupations, 14 percent are in sales and services, 14 percent are in manual work, and 12 percent are in professional, technical, or managerial employment.

Table 2.16.2 Occupation: men

Percent distribution of type of work performed (agricultural and nonagricultural) and type of agricultural land worked or type of nonagricultural employment, according to background characteristics, Nigeria 1999

Background characteristic	Not currently employed	Agricultural work				Nonagricultural work					Missing	Total	Number of men
		Own land	Family land	Rented land	Other land	Prof./ Tech./ Manag.	Sales and services	Manual labour		Other			
								Skilled	Unskilled				
Age													
15-19	72.3	1.7	13.6	0.9	1.4	1.0	3.8	4.1	0.4	0.5	0.4	100.0	511
20-24	44.4	6.7	12.0	2.6	1.9	2.2	12.2	13.9	2.0	1.8	0.3	100.0	319
25-29	19.2	15.3	11.1	3.7	3.6	11.6	16.4	17.2	0.5	1.0	0.3	100.0	366
30-34	2.4	16.4	11.7	4.8	3.5	20.4	16.5	21.3	0.3	1.8	0.9	100.0	348
35-39	4.1	19.1	9.8	4.7	3.1	25.7	14.1	15.8	1.5	1.4	0.8	100.0	275
40-44	0.8	29.3	6.6	6.9	3.6	20.6	15.0	14.8	0.9	1.0	0.4	100.0	239
45-49	2.1	25.9	6.6	3.0	3.6	16.6	21.9	19.2	0.0	1.0	0.0	100.0	197
50-54	3.0	20.7	10.3	8.0	7.9	13.3	19.1	15.7	0.0	0.5	1.5	100.0	205
55+	6.7	34.0	7.3	4.0	7.8	12.8	17.1	7.6	0.0	1.9	0.8	100.0	220
Residence													
Urban	31.2	3.7	2.3	1.8	1.5	18.9	18.2	19.7	0.6	1.7	0.6	100.0	821
Rural	20.0	21.7	14.2	4.8	4.5	9.6	11.8	11.1	0.7	1.0	0.6	100.0	1,859
Region													
Northeast	12.9	26.4	14.0	2.7	3.5	11.2	15.9	10.8	0.7	1.6	0.2	100.0	437
Northwest	6.9	40.6	21.8	0.9	2.4	7.9	9.8	7.3	0.9	0.6	0.9	100.0	356
Southeast	29.6	9.8	3.7	4.7	3.3	12.3	18.7	14.2	0.9	1.7	1.1	100.0	590
Southwest	32.5	4.3	9.3	6.9	3.1	13.2	12.5	16.8	0.7	0.3	0.4	100.0	696
Central	24.4	14.4	9.5	2.1	5.1	15.2	11.4	15.6	0.2	1.8	0.3	100.0	601
Education													
No education	5.5	40.0	18.2	5.4	7.1	2.3	8.8	11.2	0.5	0.7	0.3	100.0	663
Primary	12.6	14.9	15.1	5.3	4.1	7.4	16.7	21.8	0.6	0.7	0.7	100.0	710
Secondary	44.2	5.6	5.1	2.8	1.3	9.7	16.2	12.0	1.1	1.6	0.5	100.0	986
Higher	20.7	2.4	1.5	0.7	1.9	52.8	10.5	6.5	0.0	1.9	1.0	100.0	321
All men	23.4	16.2	10.5	3.8	3.6	12.4	13.8	13.7	0.7	1.2	0.6	100.0	2,680

Note: *Prof./Tech./Manag.* includes professional, technical, clerical, and managerial occupations.

Decision on Use of Earnings

Information on who decides how to use the cash earned by employed women can be used as a measure of the status of women. Table 2.17 shows that 70 percent of women who receive cash earnings decide for themselves how to spend their money, 12 percent decide jointly with their husband or partner, while 11 percent report that their husband or partner alone decides how their earnings will be used.

Table 2.17 Decision on use of earnings and contribution of earnings to household expenditures

Percent distribution of women receiving cash earnings by person who decides how earnings are used, according to selected background characteristics, Nigeria 1999

Background characteristic	Person who decides how earnings are used: Self only	Partner	Jointly with partner	Someone else	Jointly with someone else	Missing	Total	Number of women
Age								
15-19	65.3	4.6	4.1	14.6	7.3	4.1	100.0	226
20-24	74.2	9.6	8.8	2.7	2.1	2.5	100.0	447
25-29	67.9	12.7	15.2	0.5	0.8	3.0	100.0	724
30-34	69.8	12.7	12.9	0.0	0.9	3.7	100.0	638
35-39	68.6	13.7	13.4	0.4	0.4	3.6	100.0	574
40-44	74.2	10.6	10.4	0.0	0.2	4.6	100.0	420
45-49	70.9	9.3	15.2	0.0	0.9	3.7	100.0	365
Residence								
Urban	74.6	8.3	11.6	1.4	1.4	2.7	100.0	1,228
Rural	67.6	13.0	12.7	1.6	1.2	4.0	100.0	2,166
Region								
Northeast	79.3	3.7	9.7	0.9	0.4	5.8	100.0	220
Northwest	79.9	8.3	5.2	1.3	0.0	5.3	100.0	211
Southeast	59.4	15.5	17.7	1.4	2.0	3.9	100.0	894
Southwest	73.7	8.4	12.4	1.2	1.2	3.1	100.0	1,288
Central	71.1	14.2	8.5	2.3	1.2	2.6	100.0	781
Education								
No education	76.1	11.0	7.4	1.2	0.6	3.7	100.0	1,050
Primary	69.3	11.7	12.8	1.3	1.0	3.8	100.0	1,056
Secondary	67.3	10.6	14.5	2.3	2.5	2.8	100.0	977
Higher	61.3	12.8	20.0	1.1	0.6	4.2	100.0	311
Marital status								
Not married	84.6	0.8	0.5	7.1	4.9	2.2	100.0	654
Currently married	66.7	13.8	15.1	0.2	0.4	3.8	100.0	2,740
Total	70.1	11.3	12.3	1.5	1.3	3.5	100.0	3,394

Older, urban women with less than a secondary education and those not currently married are more likely to report that they make their own decisions on how to spend the money they earn. The greatest proportion of women who make their own decisions on spending their earnings is found in the Northwest region (80 percent) and the least in the Southeast region (59 percent). There is an inverse relationship between educational level and decision on use of women's cash income; the higher the level of education, the lower the proportion of women who make their own decision on how to spend their income. The most educated women have the highest proportion who decide on spending jointly with their husband or partner (20 percent) or allow their husband or partner to decide for them (13 percent). Married women have a considerably higher proportion who jointly decide with their husband or partner (15 percent) or allow their husband to decide for them (14 percent) on what to do with the cash they earn.

Child Care While Working

Table 2.18 shows the percent distribution of employed women by whether or not they have a child under six years of age and for those who do, the percent distribution by type of childminder. Slightly more than half of employed women have a child under six years of age living with them. Four in 10 working mothers report that they care for their children under six themselves. Other caretakers include other relatives (13 percent), other female children (13 percent), and schools (5 percent). In urban areas, women frequently employ the services of their neighbours (6 percent) and servants or hired help (4 percent).

Relatives other than the respondent's own children are an important source of child care for women who have a higher education (20 percent). These mothers are also more likely to place the child in school. More than half of women employed as occasional workers care for their children themselves (59 percent), while women who work full time engage the services of other relatives (13 percent).

Table 2.18 Child care while working

Percent distribution of currently employed women by whether they have a child under six years of age at home, and the percent distribution of employed mothers who have a child under six by person who cares for child while mother is at work, according to selected background characteristics, Nigeria 1999

Background characteristic	No child under six at home	One or more children under six at home	Child's caretaker while mother is at work: Respondent	Husband/ partner	Other relative	Neighbor/ Friend	Hired help	Child is in school	Other female child	Other male child	Not worked since birth[1]	Other	Missing	Total	Number of employed women
Residence															
Urban	49.2	50.8	42.1	1.7	11.4	6.0	3.8	10.3	7.9	1.6	0.9	2.2	12.1	100.0	1,342
Rural	45.2	54.8	40.5	2.4	14.2	4.3	2.3	3.2	15.0	4.2	1.6	2.6	9.8	100.0	2,590
Region															
Northeast	32.0	68.0	61.8	2.8	4.8	1.0	4.0	3.4	10.1	1.1	0.0	0.0	11.0	100.0	264
Northwest	39.4	60.6	59.7	3.5	4.7	1.3	2.1	0.0	14.1	1.5	0.8	0.0	12.3	100.0	223
Southeast	51.1	48.9	17.8	3.5	19.1	4.8	5.4	6.4	22.1	8.3	3.7	4.2	4.7	100.0	1,060
Southwest	46.4	53.6	47.9	1.1	9.9	6.8	0.9	8.3	5.7	1.3	0.5	2.6	14.9	100.0	1,406
Central	47.4	52.6	42.1	1.9	17.8	4.2	2.6	2.6	13.9	2.6	0.7	2.1	9.6	100.0	978
Education															
No education	47.4	52.6	52.6	1.9	6.0	4.5	0.3	0.8	13.9	3.4	0.8	2.0	13.8	100.0	1,250
Primary	44.8	55.2	33.4	2.5	16.3	6.3	1.1	3.7	17.4	5.1	1.5	3.6	9.1	100.0	1,223
Secondary	44.8	55.2	43.1	2.2	16.4	3.4	4.6	7.1	8.5	1.9	1.8	1.7	9.4	100.0	1,133
Higher	56.1	43.9	14.2	1.5	19.8	5.6	14.4	28.4	3.0	0.6	1.4	3.0	7.9	100.0	325
Work status															
For family member	47.4	52.6	34.3	0.3	8.8	6.8	2.4	3.0	18.6	4.2	0.9	2.6	18.1	100.0	673
For someone else	60.9	39.1	16.4	3.1	23.4	4.2	9.3	24.7	3.8	2.1	1.5	2.7	8.8	100.0	516
Self-employed	43.6	56.4	46.1	2.5	13.1	4.5	2.0	3.6	12.6	3.3	1.3	2.4	8.7	100.0	2,718
Missing	50.8	49.2	8.5	0.0	0.0	0.0	8.3	0.0	0.0	0.0	17.1	6.6	59.4	100.0	25
Occupation															
Agricultural	45.5	54.5	26.1	1.8	14.5	6.6	1.1	2.9	24.4	7.6	1.4	4.8	8.8	100.0	822
Nonagricultural	46.5	53.5	45.0	2.3	13.0	4.4	3.2	6.3	9.5	2.2	1.4	1.8	10.7	100.0	3,028
Employment status															
All year, full week	45.8	54.2	43.3	1.8	12.7	4.9	3.1	6.2	10.1	3.2	1.0	2.3	11.3	100.0	2,678
All year, part week	45.9	54.1	31.8	2.5	17.1	4.5	1.7	4.5	22.9	3.6	2.2	1.8	7.3	100.0	437
Seasonal	45.8	54.2	33.2	3.4	15.5	5.1	1.9	4.1	18.9	4.2	2.0	3.8	7.9	100.0	585
Occasional	57.7	42.3	58.5	3.4	6.6	3.4	3.3	1.9	5.5	2.3	2.3	2.4	10.4	100.0	209
Total	46.6	53.4	41.0	2.2	13.3	4.8	2.8	5.5	12.7	3.3	1.3	2.5	10.6	100.0	3,931

Note: Total includes 82 women not stated as to occupation and 22 whose seasonality of employment is not stated.
[1] Respondent is currently employed but has not worked since last birth.

CHAPTER 3

FERTILITY

3.1 Introduction

Retrospective reproductive histories of women age 15-49 years were used to measure the fertility rates presented in this chapter. Each woman was asked to provide information on the number of sons and daughters to whom she had given birth who were living with her, the number living elsewhere, and the number who had died. A summation of the total number of children dead and alive, at home and living elsewhere, and now deceased was used to determine the total number of children each woman had at the time of the interview. Each woman was then asked for a history of all her live births, including information such as name, month and year of birth, sex, and survival status. For children who had died, information on age at death was recorded. The age of each living child and whether or not the child resides with the mother were also determined.

The above information is analysed in the following sections to provide fertility levels and trends; fertility differentials by residence, region, and education; information on the length of the interval between births; age at first birth; and the extent of childbearing among adolescents. A brief discussion of the quality of the NDHS fertility data appears in Appendix C.

3.2 Current Fertility Levels

One of the most important indicators measured in the 1999 NDHS is the level of fertility currently prevailing in Nigeria. Table 3.1 presents the reported age-specific fertility rates for the five-year period preceding the survey per 1,000 women.[1] The sum of the age-specific fertility rates (known as the total fertility rate) is a useful means of summarising the level of fertility. It can be interpreted as the number of children a woman would have by the end of her childbearing years if she were to pass through those years bearing children at the currently observed age-specific rates. The general fertility rate represents the annual number of births in a population per 1,000 women age 15-44. The crude birth rate is the annual number of births in a population per 1,000 people. Both these measures are calculated using the birth history data and the age and sex distribution of the household population. All rates are computed for the five-year period preceding the survey, which is roughly equivalent to the calendar years 1994-98.

The total fertility rate indicates that if fertility rates were to remain constant at the level prevailing during the 1994-98 period, a Nigerian woman would bear 5.2 children in her lifetime. The age-specific rates indicate a pattern of late childbearing, with a peak at age group 25-29 and the rate at age group 30-34 being slightly higher than that of the 20-24 age group. The crude birth rate for the 1994-98 period was 38 per 1,000 persons, and the general fertility rate for the same period was 176 per 1,000 women.

[1] Numerators of the age-specific fertility rates are calculated by summing the number of live births that occurred in the period 1-59 months preceding the survey (determined by the date of interview and the date of birth of the child) and classifying them by the age (in five-year groups) of the mother at the time of birth (determined by the mother's date of birth). The denominators of the rates are the number of woman-years lived in each of the specified five-year age groups during the 1-59 months preceding the survey.

An assessment of the fertility data in the 1999 NDHS indicates that there was probably some omission of births in the three-year period immediately prior to the survey. Presumably, interviewers omitted recording some of these births to reduce their workload, since the lengthy health section applied to all births occurring since January 1996. Similar errors have not only been suspected in the 1990 NDHS (FOS, 1992:27), but also in DHS surveys in several other countries (IRD, 1990). The assessment suggests an underreporting of births in the 1999 survey on the order of 14 to 15 percent (see Appendix C). Thus, the true total fertility rate for the five years before the survey is probably closer to 5.9 or 6.0 than to the reported rate of 5.2.

Despite the possibility that the level of fertility may have been underreported, there is no reason to believe that underreporting would substantially alter the findings on differences in fertility across all subpopulations. For example, it is clear that fertility is higher in rural than in urban areas. With a total fertility rate of 5.4, rural women are bearing almost one child more on average than urban women who have a total fertility rate of 4.5. In all age groups, fertility rates are higher in rural than in urban areas, although the difference is relatively larger among teenagers age 15-19. For example, the age-specific fertility rate for women age 15-19 is 75 in urban areas, compared with 126 in rural areas. Age-specific fertility rates among women age 35-44 are almost one and a half times higher in rural areas than in urban areas.

3.3 Fertility Differentials

Table 3.2 and Figure 3.1 show differentials in fertility by residence, region, and educational level. Fertility in the Northeast and Northwest is substantially—approximately two children—higher than in the other three regions. The northern regions also have the highest percentage of women who were pregnant at the time of the survey.

Table 3.1 Current fertility

Age-specific and cumulative fertility rates and the crude birth rate for the five years preceding the survey, by urban-rural residence, Nigeria 1999

	Residence		
Age group	Urban	Rural	Total
15-19	75	126	111
20-24	192	233	220
25-29	231	243	239
30-34	211	233	226
35-39	114	150	138
40-44	53	78	71
45-49	23	24	24
TFR women 15-49	4.50	5.44	5.15
TFR women 15-44	4.38	5.32	5.03
General fertility rate	154	186	176
Crude birth rate	35.6	38.5	37.7

Note: Rates for age group 45-49 may be slightly biased due to truncation. Total fertility rate expressed per woman. General fertility rate (births divided by number of women 15-49), expressed per 1,000 women. Crude birth rate expressed per 1,000 population.

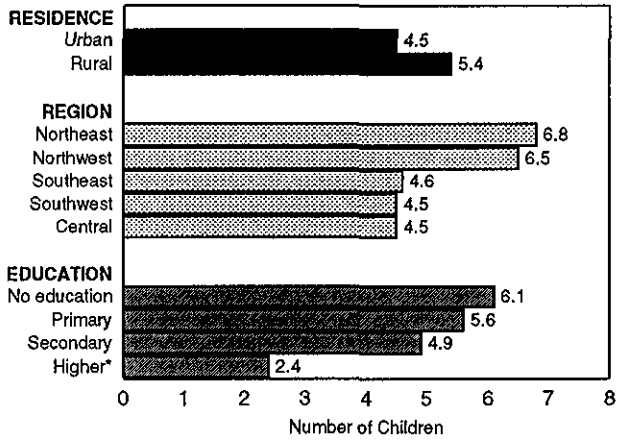
Table 3.2 Fertility by background characteristics

Total fertility rate for the five years preceding the survey, percentage currently pregnant and mean number of children ever born to women age 40-49, by selected background characteristics, Nigeria 1999

Background characteristic	Total fertility rate[1]	Percentage currently pregnant	Mean number of children ever born to women age 40-49
Residence			
Urban	4.50	8.54	5.65
Rural	5.44	10.88	6.32
Region			
Northeast	6.79	13.51	6.37
Northwest	6.45	13.27	5.64
Southeast	4.64	7.93	6.92
Southwest	4.50	8.54	5.79
Central	4.49	10.08	5.81
Education			
No education	6.13	11.99	6.06
Primary	5.55	10.72	6.76
Secondary	4.91	7.59	5.70
Higher	(2.43)	8.78	4.49
Total	5.15	10.16	6.12

Note: Figures in parentheses are based on 500-999 women.
[1] Women age 15-49 years

Figure 3.1
Total Fertility Rates by Selected Background Characteristics, Nigeria 1999



* Unreliable due to small number of women

NDHS 1999

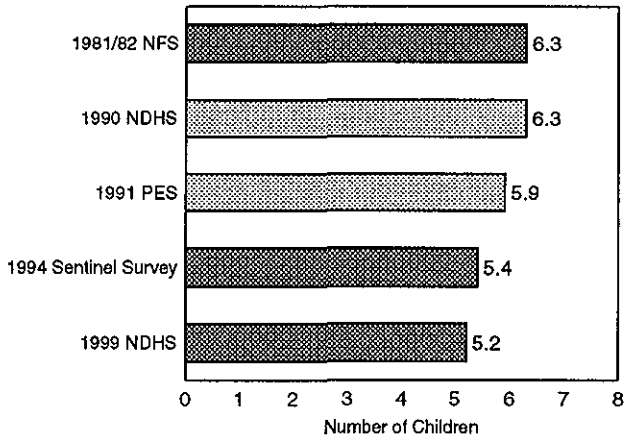
The level of fertility is negatively associated with educational attainment. Women with no education are bearing children at a rate of more than six children over their lifetime, while women with a primary education have half a child less on average. The differential becomes more apparent at higher educational levels. There is a difference of more than one child between women with a secondary education and those with no education, while the difference between women with a higher education and those with a primary education is more than three children.

The table also shows the mean number of children ever born to women age 40-49, which is a measure of completed fertility. This measure can be used to assess differentials in fertility trends over time for population subgroups. The data show a decline in fertility in urban areas, in most regions, and among most education subgroups. An overall comparison of past and present fertility suggests a recent decline of about one child per woman, from 6.1 to 5.2 children.

3.4 Fertility Trends

One way to examine fertility trends is to compare the results of the 1999 NDHS with those of other surveys. Figure 3.2 shows the 1999 NDHS results along with those from the 1981-82 Nigeria Fertility Survey (NFS), the 1990 NDHS, the 1991 Post Enumeration Survey (PES), and the baseline report of the 1994 Sentinel Survey. There appears to have been a decline in the total fertility rate in Nigeria from 6.3 in 1981-82 to 5.2 in 1999. The data suggest that on average a Nigerian woman has one child less in 1999 than she would have had in 1981-82.

Figure 3.2
Trends in Total Fertility Rates



Note: Rates refer to the 5-year period preceding the survey except the 1994 survey, which is based on the 3-year period preceding the survey.
Source: FOS 1992:25; NPC 1994:40; NPC 1998:226

However, the suspicion that recent births were underreported in the 1999 NDHS makes interpretation of trends in fertility more difficult. For example, Table 3.3 shows total fertility rates for the five-year periods prior to the 1990 and 1999 NDHS surveys by region.[2] As mentioned before, at the national level, there has evidently been a decline of about one child over the nine-year period. However, the substantial decline in fertility for the Central region (by 2.6 children) is implausibly steep, especially given the observed level of use of contraception (see Chapter 4). This implausible decline suggests very substantial underreporting of births in the Central region. It also seems unlikely that fertility in the Northeast region has increased by almost one child over the same time period.

Table 3.3 Fertility trends by region

Total fertility rates for the five-year period prior to the 1990 NDHS and the 1999 NDHS by region

Region	1990 NDHS	1999 NDHS	Percent change
Northeast	5.9	6.8	+0.9
Northwest	7.0	6.5	-0.5
Southeast	5.8	4.6	-1.2
Southwest	5.9	4.5	-1.4
Central	7.1	4.5	-2.6
Nigeria	6.3	5.2	-1.1

[2] For this analysis, the data from the 1990 survey are re-classified into the same five geographic regions used for the 1999 survey. The reclassification of the 21 states and F.C.T. Abuja that existed at the time of the 1990 survey is as follows:

Northeast: Bauchi, Borno, Kano
Northwest: Kaduna, Katsina, Sokoto
Southeast: Anambra, Akwa Ibom, Cross River, Imo, Rivers
Southwest: Bendel, Lagos, Ogun, Ondo, Oyo
Central: Benue, F.C.T. Abuja, Gongola, Kwara, Niger, Plateau

Fertility trends can also be estimated on the basis of NDHS data alone. Table 3.4 shows age-specific fertility rates for five-year periods preceding the 1999 NDHS. As expected, the data show an extremely steep decline in rates for the most recent periods (5-9 to 0-4). How much of this decline is due to a true decline in childbearing and how much is due to omission of births is impossible to say. However, if, as mentioned above, the true fertility rate for the most recent period is about 5.9 or 6.0, then there most probably has been a moderate decline in fertility over the recent 5-10 years.

Table 3.4 Age-specific fertility rates

Age-specific fertility rates for five-year periods preceding the survey, Nigeria 1999

Age group	Number of years preceding the survey			
	0-4	5-9	10-14	15-19
15-19	111	139	133	159
20-24	220	262	261	257
25-29	239	279	280	301
30-34	226	262	246	[305]
35-39	138	198	[185]	-
40-44	71	[122]	-	-
45-49	[24]	-	-	-

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

3.5 Children Ever Born

The distribution of all women and currently married women by age and number of children ever born and living is presented in Table 3.5. The table also shows the mean number of children ever born to women in each five-year age group, an indicator of the momentum of childbearing.

Table 3.5 Children ever born and living

Percent distribution of all women and of currently married women by number of children ever born and mean number of children ever born (CEB) and mean number of living children, according to five-year age groups, Nigeria 1999

Age group	Number of children ever born											Total	Number of women	Mean number of CEB	Mean number of living children
	0	1	2	3	4	5	6	7	8	9	10+				
ALL WOMEN															
15-19	81.6	12.9	4.6	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1,775	0.25	0.22
20-24	44.3	23.2	16.4	10.9	3.7	1.0	0.3	0.2	0.0	0.0	0.0	100.0	1,521	1.12	0.98
25-29	18.4	13.9	19.4	19.4	13.4	10.1	3.3	1.5	0.3	0.1	0.1	100.0	1,516	2.51	2.18
30-34	8.7	7.1	10.9	16.0	17.7	15.2	10.8	6.8	4.5	1.4	0.9	100.0	1,137	3.94	3.40
35-39	3.5	3.5	7.4	8.9	17.3	16.4	12.4	11.1	8.9	4.2	6.4	100.0	992	5.24	4.47
40-44	4.2	2.0	4.3	8.2	11.1	13.3	12.9	14.1	12.9	7.1	9.9	100.0	696	5.95	5.10
45-49	3.0	2.7	5.7	7.7	9.4	10.6	12.7	11.9	12.3	8.5	15.6	100.0	568	6.33	5.15
Total	31.4	11.4	10.8	10.3	9.3	8.0	5.6	4.6	3.7	1.9	2.8	100.0	8,206	2.85	2.43
CURRENTLY MARRIED WOMEN															
15-19	38.3	41.8	16.9	2.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	100.0	472	0.85	0.74
20-24	15.2	34.3	25.1	17.1	5.7	1.6	0.6	0.4	0.0	0.0	0.0	100.0	934	1.73	1.52
25-29	7.2	14.9	21.9	22.1	15.8	11.8	3.9	1.8	0.4	0.2	0.2	100.0	1,272	2.89	2.52
30-34	4.1	6.8	11.3	17.4	18.3	16.4	11.5	7.1	4.8	1.6	0.8	100.0	1,032	4.16	3.60
35-39	2.2	3.2	7.1	9.2	17.7	16.9	12.5	11.2	9.1	4.3	6.7	100.0	925	5.35	4.59
40-44	2.9	2.2	4.4	7.6	10.9	13.2	13.0	13.8	14.1	7.3	10.5	100.0	637	6.09	5.22
45-49	2.7	2.5	4.6	8.3	8.9	10.4	12.9	12.9	12.6	8.5	15.7	100.0	484	6.42	5.25
Total	8.8	14.5	14.3	14.0	12.5	10.9	7.5	6.2	5.0	2.5	3.7	100.0	5,757	3.81	3.27

The data show that 18 percent of all women age 15-19 years have given birth to at least one child, which is an indication of early childbearing. The high level of fertility in Nigeria is apparent in the rapid rise in the number of children born by age group of women. On average, women have given birth to one child by their early 20s, four children by their early 30s, and six children by their early 40s. In fact, one-third of women in their 40s have given birth to eight or more children. Figures for currently married women do not differ greatly from those for all women at older ages; however, at younger ages, the percentage of currently married women who have had children is much higher than the percentage among all women.

The percentage of women age 45-49 who have never had children provides an indicator of *primary infertility*—the proportion of women who are unable to bear children. Voluntary childlessness is rare in Nigeria, and it is likely that married women with no births are unable to bear children. The data in Table 3.5 suggest that primary infertility is low, less than 3 percent. It should be noted that this estimate does not include women who may have had one or more children but who are unable to have more *(secondary infertility)*.

3.6 Birth Intervals

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 a previous birth are at increased risk of dying at an early age. Table 3.6 shows the percent distribution of births in the five years before the survey by interval since previous birth, according to background characteristics.

The data show that birth intervals are generally intermediate in length in Nigeria. More than one-quarter (26 percent) of non-first births occur less than 24 months after the previous birth, which is usually considered to place the child at higher risk of illness and death. More than one-third of births take place 24-35 months after the previous birth, with 38 percent occurring at least 3 years after the previous birth. The median birth interval is 31 months for Nigerian women, seven months longer than the minimum of 24 months considered safe for mother and child. This is almost identical to the median birth interval of 30 months reported in the 1990 NDHS (FOS, 1992:31).

As expected, younger women have shorter birth intervals than older women, presumably because they are more fecund and want to build their families. The median birth interval for women age 15-19 is 27 months, compared with 36 months for women over age 40. However, birth order, sex of previous birth, and place of residence do not seem to have much influence on birth intervals. A shorter median interval also prevails for children whose preceding sibling has died, compared with those whose prior sibling is alive. Among the factors that could be responsible for the shorter birth intervals are earlier resumption of intercourse, shortened or no breastfeeding, and nonuse of contraception.

Birth interval length varies according to region. Women in the Southwest and Central regions have a median birth interval of 34 months, which is five months longer than that for women in the other three regions. Birth intervals do not show much variation by level of mother's education.

Table 3.6 Birth intervals

Percent distribution of births in the five years preceding the survey by number of months since previous birth and median length of birth interval, according to selected demographic and socioeconomic characteristics, Nigeria 1999

Characteristic	Number of months since previous birth					Total	Number of births	Median number of months since previous birth
	7-17	18-23	24-35	36-47	48+			
Age of mother								
15-19	12.1	19.3	49.3	12.8	6.5	100.0	112	26.6
20-29	12.1	17.3	40.4	17.3	12.9	100.0	2,110	29.0
30-39	10.9	13.6	32.3	21.5	21.7	100.0	2,223	33.5
40 +	11.9	11.8	25.5	22.4	28.4	100.0	492	36.3
Birth order								
2-3	9.5	15.1	38.0	19.5	17.8	100.0	2,061	31.1
4-6	12.1	15.6	33.8	19.0	19.5	100.0	1,928	31.0
7 +	14.7	14.2	33.5	20.9	16.8	100.0	948	31.2
Sex of prior birth								
Male	11.3	14.8	36.6	19.2	18.1	100.0	2,564	31.0
Female	11.8	15.5	34.3	20.0	18.4	100.0	2,374	31.3
Survival of prior birth								
Dead	28.3	20.4	28.3	12.0	11.0	100.0	708	24.5
Living	8.7	14.3	36.7	20.8	19.5	100.0	4,230	32.5
Residence								
Urban	10.5	13.5	34.9	19.8	21.3	100.0	1,322	32.7
Rural	11.9	15.7	35.7	19.5	17.2	100.0	3,616	30.6
Region								
Northeast	15.1	15.5	35.9	18.1	15.5	100.0	1,113	29.4
Northwest	13.5	17.4	35.6	17.4	16.0	100.0	882	28.9
Southeast	10.9	18.4	37.5	18.3	14.9	100.0	937	29.3
Southwest	8.2	11.7	34.9	21.2	24.0	100.0	1,009	34.2
Central	9.7	13.2	33.7	22.7	20.8	100.0	995	33.8
Education								
No education	13.2	15.5	33.6	19.3	18.4	100.0	2,560	31.3
Primary	10.2	15.3	37.2	20.0	17.3	100.0	1,238	30.8
Secondary	9.3	14.3	38.2	20.4	17.8	100.0	960	31.0
Higher	8.7	13.9	35.6	16.5	25.3	100.0	180	32.5
Total	11.5	15.1	35.5	19.6	18.3	100.0	4,938	31.1

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

3.7 Age at First Birth

The age at which childbearing starts is an important demographic indicator that usually reflects the age at first marriage, even though some births occur outside marital union. It also reflects the level of contraceptive use and the magnitude of adolescent fertility. These have major health and social implications for the society. Table 3.7 presents the distribution of women by age at first birth according to current age.

Childbearing begins early in Nigeria, with about half of women 25 years and above becoming mothers before reaching the age of 20. The median age at first birth is 20. The data also show that there has been no significant change in the median age at first birth between older and younger women.

Table 3.7 Age at first birth

Percent distribution of women 15-49 by age at first birth, according to current age, Nigeria 1999

Current age	Women with no births	Age at first birth						Total	Number of women	Median age at first birth
		<15	15-17	18-19	20-21	22-24	25+			
15-19	81.6	6.5	9.5	2.4	NA	NA	NA	100.0	1,775	a
20-24	44.3	8.5	19.2	15.1	9.1	3.7	NA	100.0	1,521	a
25-29	18.4	11.2	18.6	16.7	15.1	14.3	5.8	100.0	1,516	20.4
30-34	8.7	14.6	19.0	15.2	14.6	16.7	11.3	100.0	1,137	20.2
35-39	3.5	12.9	20.1	17.8	14.4	12.4	18.9	100.0	992	19.9
40-44	4.2	14.7	24.3	15.5	14.3	12.5	14.6	100.0	696	19.4
45-49	3.0	10.7	22.4	14.5	16.3	13.7	19.3	100.0	568	20.2

NA = Not applicable
[a] The medians for cohorts 15-19 and 20-24 could not be determined because half of the women had not had a birth before reaching the lowest age of the age group.

Differentials in median age at first birth are shown in Table 3.8. The most noticeable differentials occur with respect to region, with women in the northern regions starting to bear children earlier than those in the Central, Southeast, and Southwest regions. Educated women, particularly those with a higher education, start bearing children later than those with a primary and secondary education.

Table 3.8 Median age at first birth by background characteristics

Median age at first birth among women 25-49, by current age and selected background characteristics, Nigeria 1999

Background characteristic	Current age					Women age 25-49
	25-29	30-34	35-39	40-44	45-49	
Residence						
Urban	21.8	21.6	20.3	19.9	20.5	21.0
Rural	19.9	19.6	19.7	19.2	20.1	19.7
Region						
Northeast	18.1	18.4	17.8	19.1	19.9	18.2
Northwest	18.4	18.4	19.0	18.5	18.4	18.6
Southeast	22.7	20.7	20.9	19.3	20.1	21.0
Southwest	22.0	21.6	20.8	20.3	20.7	21.1
Central	20.2	19.8	19.6	18.6	20.1	19.8
Education						
No education	18.4	18.5	18.5	18.7	19.7	18.7
Primary	19.9	19.7	19.7	19.0	20.5	19.8
Secondary	22.9	22.2	22.1	20.8	21.6	22.4
Higher	a	25.4	24.2	23.7	23.9	a
Total	20.4	20.2	19.9	19.4	20.2	20.1

Note: The medians for cohorts 15-19 and 20-24 could not be determined because half of the women had not had a birth before reaching the lowest age of the age group.
[a] The medians could not be determined because half of the women had not had a birth before reaching the lowest age of the age group.

3.8 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 3.9 shows the percentage of women age 15-19 who are mothers or pregnant with their first child, by background characteristics. Eighteen percent of teenage women in Nigeria are mothers, while another 4 percent are pregnant with their first child. In other words, 22 percent have begun childbearing. There has been a sharp decline in this percentage, from 28 percent of teenagers in 1990 to 22 percent in 1999 (FOS, 1992:34), suggesting a reduction in the incidence of teenage pregnancy over the years.

Table 3.9 Teenage pregnancy and motherhood

Percentage of women 15-19 who are mothers or pregnant with their first child, by selected background characteristics, Nigeria 1999

Background characteristic	Percentage who are: Mothers	Pregnant with first child	Percentage who have begun child-bearing	Number of women
Age				
15	7.9	2.8	10.8	412
16	7.8	1.7	9.4	328
17	20.3	6.1	26.4	328
18	27.8	2.7	30.5	414
19	29.8	4.5	34.3	294
Residence				
Urban	9.5	2.5	12.1	532
Rural	22.3	3.9	26.1	1,243
Region				
Northeast	43.3	8.1	51.3	269
Northwest	47.1	7.6	54.7	200
Southeast	7.3	1.0	8.3	482
Southwest	6.1	1.9	7.9	449
Central	14.5	3.1	17.6	374
Education				
No education	50.1	7.6	57.7	456
Primary	16.2	4.4	20.6	392
Secondary	3.9	1.1	5.0	911
Higher	*	*	*	16
Total	18.4	3.5	21.9	1,775

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

As expected, the proportion of women who have begun childbearing rises rapidly with age, from 11 percent of 15-year-old women to 34 percent of 19-year-old women (see Table 3.9). The table also shows significant residential, educational and regional differentials in teenage childbearing. The level of teenage pregnancy and motherhood in rural areas (26 percent) is more than twice the level in urban areas (12 percent). More than 50 percent of teenagers in the Northeast and Northwest regions have begun childbearing, compared with only 8 percent in the Southwest and the Southeast and 18 percent in the Central region.

Education is strongly related to early childbearing. Girls with no education are far more likely to have begun childbearing than those with primary and especially those with some secondary education. Fifty-eight percent of teenage women with no education have begun childbearing, compared with only 21 percent of those with a primary education and 5 percent of those with some secondary education.

CHAPTER 4

FERTILITY REGULATION

4.1 Knowledge of Contraceptive Methods

Knowledge of contraceptive methods is an important variable in any discussion of fertility regulation and in the evaluation of family planning programmes. The practice of contraception depends on knowledge of methods and the places where they can be obtained. Information on knowledge of contraceptive methods was assessed through a series of questions combining spontaneous recall and prompting procedures. Women and men were first asked to name the ways or methods by which a couple could delay or avoid pregnancy. Interviewers then asked about specific methods not mentioned spontaneously by the respondent. In all, information was sought about eight modern methods—the pill, the intrauterine device (IUD), injectables, implants, barrier methods (diaphragm, foam, and jelly), condom, and female and male sterilisation—as well as two traditional methods—periodic abstinence (safe period or rhythm method), and withdrawal. Other methods mentioned by the respondent, such as herbs or breastfeeding, were also recorded. The ability to name or recognise the name of a family planning method is a nominal test of respondents' knowledge and not a measure of how much they might know about the method.

Table 4.1 presents information on women's and men's knowledge of contraceptive methods. Two-thirds (65 percent) of women age 15-49 and 82 percent of men age 15-59 know of at least one contraceptive method. The proportions of currently married respondents who have heard of a contraceptive method

Table 4.1 Knowledge of contraceptive methods

Percentage of all women and men, of currently married women and men, and of sexually active unmarried women and men, and women with no sexual experience who know specific contraceptive methods, Nigeria 1999

	Women				Men		
Contraceptive method	All women	Currently married women	Sexually active unmarried women	No sexual experience	All men	Currently married men	Sexually active unmarried men
Any method	65.4	64.4	91.1	53.5	82.3	83.4	98.2
Any modern method	63.1	61.9	89.1	52.5	78.7	77.9	97.8
Pill	53.4	55.1	77.7	34.9	57.4	60.7	74.4
IUD	34.2	37.6	48.3	14.6	23.8	27.7	35.2
Injectables	49.2	51.8	67.8	28.2	51.0	56.2	61.8
Diaphragm/Foam/Jelly	14.3	15.1	23.6	6.5	17.1	18.0	26.9
Condom	48.1	44.6	84.9	43.8	70.1	66.8	95.6
Female sterilisation	27.9	29.3	34.4	18.1	36.0	40.8	37.5
Male sterilisation	10.8	11.4	17.0	5.5	18.4	20.0	24.6
Implants	11.4	12.2	17.3	5.1	10.3	12.3	14.4
Any traditional method	40.2	40.4	66.8	24.9	61.7	68.7	82.4
Periodic abstinence	31.6	30.9	58.1	20.7	47.3	54.1	62.7
Withdrawal	26.1	26.6	45.0	13.3	50.0	54.9	75.1
Traditional charms	3.7	4.6	2.0	1.6	5.9	8.1	1.4
Traditional medications	0.9	1.0	1.0	0.3	5.5	6.9	9.2
Other methods	5.2	5.4	8.8	2.0	2.4	2.6	2.7
Number of respondents	8,206	5,757	367	1,324	2,680	1,612	228
Mean number of methods	3.2	3.3	4.9	1.9	4.0	4.3	5.2

are almost the same as among all women and men, being only slightly lower for women and slightly higher for men. However, knowledge of contraceptive methods is considerably higher among sexually active unmarried women and men than among married and total respondents. For example, 98 percent of sexually active unmarried men have heard of a contraceptive method.

Knowledge of modern methods is higher than traditional methods for all groups. Among married women, the methods most frequently recognised are the pill (55 percent) and injectables (52 percent), followed by condoms (45 percent), IUD (38 percent), periodic abstinence (31 percent), female sterilisation (29 percent), and withdrawal (27 percent). Other methods such as male sterilisation, implants, diaphragms, foam, and jelly are less known (less than 20 percent). Among sexually active unmarried women and among men, the most commonly reported method is the condom, followed by the pill and injectables. In general, men are more likely than women to have heard of the male-oriented methods such as condoms, male sterilisation, and withdrawal.

Contraceptive knowledge varies considerably, as shown in Table 4.2. The proportions of women and men who know of any method increases with age and peaks at 30-34 years for women and 45-49 years among men. The same pattern is observed for women interviewed in the 1990 Nigeria Demographic and Health Survey.

Table 4.2 Knowledge of contraceptive methods by background characteristics

Percentage of currently married women and men who know at least one method of contraception, by selected background characteristics, Nigeria 1999

	Women			Men		
Background characteristic	Knows any method	Knows modern method	Number of women	Knows any method	Knows modern method	Number of men
Age						
15-19	37.5	36.3	472	50.3	50.3	12
20-24	60.8	58.8	934	71.3	63.0	46
25-29	68.2	66.0	1,272	79.3	76.9	202
30-34	70.9	68.3	1,032	85.9	83.0	284
35-39	68.0	66.1	925	86.4	81.2	248
40-44	64.4	61.0	637	85.5	80.7	222
45-49	66.5	61.7	484	89.0	81.4	191
50-54	NA	NA	NA	80.6	74.5	196
55-64	NA	NA	NA	80.0	70.0	210
Residence						
Urban	83.3	82.0	1,670	93.0	90.1	460
Rural	56.7	53.7	4,087	79.5	73.0	1,152
Region						
Northeast	35.4	34.6	1,137	61.4	57.2	307
Northwest	42.2	39.1	986	72.0	65.2	285
Southeast	81.6	79.0	946	93.4	88.4	303
Southwest	87.2	83.7	1,367	93.8	90.4	387
Central	70.0	67.7	1,321	92.1	83.9	330
Education						
No education	43.6	40.5	3,032	65.9	55.7	545
Primary	80.2	77.5	1,298	86.6	80.9	476
Secondary	92.9	91.9	1,123	95.7	94.6	373
Higher	99.0	97.8	303	98.7	98.2	217
Total	64.4	61.9	5,757	83.4	77.9	1,612

NA = Not applicable

Urban residents are much more likely than rural residents to have heard of contraceptive methods. For example, 83 percent of married urban women have heard of a method, compared with only 57 percent of rural women. Knowledge is also considerably higher among southerners than among those living in the north; the proportion of married women who know of at least one method is more than twice as high in the Southeast and Southwest regions than in the Northeast and Northwest regions. As expected, educated women and men are much more likely to know about family planning methods than those with no education. Virtually all respondents with a higher education have heard of at least one method, compared with only 44 percent of uneducated women.

Because both women and men in the same households were interviewed in the 1999 NDHS, it is possible to link married men with their wives and analyse data for married couples. Table 4.3 shows data comparing contraceptive knowledge of wives and husbands for the 1,451 couples that could be linked. The data show a rather low level of joint knowledge of methods. Even for the best-known methods like the pill, condoms, and injectables, in only about one-third of couples do both the husband and wife know the method. When only one partner knows a method, it is more likely to be the husband than the wife who knows it, especially if it is a male-oriented method. The only method that wives are more likely than their husbands to know about is the IUD.

Table 4.3 Couples' knowledge of contraceptive methods

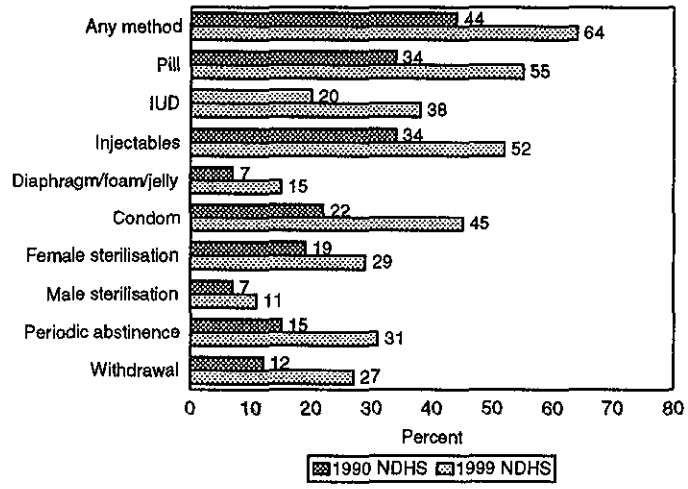
Percent distribution of couples by knowledge of specific contraceptive methods, Nigeria 1999

Background characteristic	*Both* know method	Husband knows *method*, wife doesn't	Wife knows *method*, husband doesn't	*Neither* knows method	Total
Any method	55.6	25.4	5.4	13.6	100.0
Any modern method	51.6	23.9	7.3	17.2	100.0
Pill	36.9	20.2	15.5	27.4	100.0
IUD	14.8	10.0	20.3	54.9	100.0
Injectables	33.5	21.4	15.9	29.2	100.0
Diaphragm/Foam/Jelly	4.4	12.5	8.8	74.3	100.0
Condom	36.3	26.3	5.7	31.7	100.0
Female sterilisation	15.4	25.0	13.1	46.4	100.0
Male sterilisation	4.0	14.3	7.2	74.5	100.0
Implants	2.6	8.1	7.7	81.5	100.0
Any traditional method	28.1	33.4	5.6	32.9	100.0
Periodic abstinence	21.6	27.6	6.4	44.4	100.0
Withdrawal	18.4	33.7	6.6	41.4	100.0

Note: Table is based on 1,451 couples.

Knowledge of contraceptive methods has increased dramatically in Nigeria over the past nine years. In 1990, only 44 percent of married women knew any method of contraception; by 1999, this proportion had grown to 64 percent (Figure 4.1). Knowledge of the pill, IUD, injectables, and condom all increased by about 18 to 23 percentage points.

Figure 4.1
Trends in Contraceptive Knowledge among Married Women 15-49, 1990 and 1999



Source: FOS 1992:37

NDHS 1999

4.2 Ever Use of Family Planning Methods

Ever use of contraception is defined as the use of a contraceptive method at any time during a woman's reproductive years. In collecting this information, respondents were asked whether they ever used any of the methods that they indicated they know. Results showed that use lags considerably behind knowledge.

Among all women, about a quarter (27 percent) have ever used a method and less than a fifth (17 percent) have used a modern method (Table 4.4.1). Ever use is slightly higher among married women than among all women (29 vs. 27 percent). Ever use of contraceptive methods among sexually active unmarried women (66 percent) is more than double that among those who are currently married.

The percentage of married women who ever used a contraceptive method is highest among the 30-34 age group (36 percent) and lowest among the 15-19 age group (7 percent). For the latter finding, the outcome is not unexpected since women in that age group are young and may want to start families. The most commonly used method is periodic abstinence (10 percent), even though more women know about the pill, IUD, condoms and injectables. The next most widely used methods among married women are the pill (9 percent), injectables (6 percent), and condoms (6 percent). Periodic abstinence is the most commonly ever-used method among married women in most age groups, although younger women also have used the pill and condoms, while older women have used the IUD and sometimes injectables.

The level of ever use has increased significantly since 1990. In 1990, only 14 percent of married women reported having ever used a contraceptive method; by 1999, this proportion had doubled to 29 percent.

Table 4.4.1 Ever use of contraception: women

Percentage of all women, of currently married women, and of sexually active unmarried women who have ever used a contraceptive method, by method and age, Nigeria 1999

Age	Any method	Modern method								Traditional method						Number of women
		Any modern method	Pill	IUD	Inject-ables	Diaphragm/ Foam/ Jelly	Condom	Female sterili-sation	Im-plant	Any tradi-tional method	Periodic absti-nence	With-drawal	Tradi-tional charms	Tradi-tional medica-tions	Other methods	
ALL WOMEN																
15-19	9.2	5.9	2.8	0.1	0.5	0.0	3.5	0.0	0.0	5.0	3.4	1.5	0.0	0.1	0.8	1,775
20-24	26.4	17.1	7.5	0.8	2.0	0.1	10.4	0.0	0.0	14.7	10.4	5.5	0.3	0.1	1.9	1,521
25-29	31.5	20.4	10.5	2.0	4.6	0.6	9.7	0.0	0.0	17.4	11.7	6.5	0.4	0.2	2.2	1,516
30-34	37.3	25.7	13.4	5.4	8.9	1.0	8.8	0.2	0.5	19.9	13.3	7.6	0.7	0.4	1.6	1,137
35-39	35.6	24.6	12.2	7.3	7.9	0.8	6.6	0.8	0.3	18.0	11.3	7.1	0.8	0.3	2.4	992
40-44	31.7	20.8	9.5	7.8	7.7	0.3	3.3	0.1	0.4	16.0	9.7	3.5	1.6	0.4	2.9	696
45-49	30.9	17.7	6.6	7.3	6.6	0.9	2.3	0.9	0.2	18.5	12.1	4.6	1.3	0.2	2.5	568
Total	27.0	17.8	8.5	3.3	4.6	0.4	6.9	0.2	0.2	14.6	9.7	5.1	0.6	0.2	1.9	8,206
CURRENTLY MARRIED WOMEN																
15-19	7.2	4.8	3.4	0.0	0.9	0.0	1.4	0.0	0.0	3.8	2.6	1.2	0.0	0.0	0.4	472
20-24	20.5	12.1	5.9	0.6	2.0	0.1	6.1	0.0	0.0	11.8	8.0	3.9	0.4	0.1	1.8	934
25-29	29.0	18.1	10.0	1.9	4.4	0.6	7.2	0.0	0.0	16.3	10.5	6.3	0.5	0.2	2.0	1,272
30-34	36.0	23.7	12.7	5.1	8.8	0.7	7.2	0.2	0.4	19.8	12.8	7.7	0.8	0.3	1.8	1,032
35-39	35.3	24.3	12.0	7.0	8.0	0.8	6.2	0.9	0.2	18.1	11.5	7.1	0.9	0.2	2.0	925
40-44	32.0	21.1	9.3	8.1	7.7	0.3	3.4	0.2	0.5	16.2	10.1	3.8	1.3	0.3	2.7	637
45-49	32.4	19.4	7.3	7.9	6.7	1.1	2.5	0.8	0.2	19.3	13.0	5.2	1.3	0.2	2.1	484
Total	28.7	18.5	9.3	4.1	5.7	0.5	5.6	0.3	0.2	15.7	10.2	5.5	0.7	0.2	1.9	5,757
UNMARRIED SEXUALLY ACTIVE WOMEN																
15-19	53.0	29.6	13.2	0.0	3.1	0.0	21.6	0.0	0.0	34.0	19.8	11.1	0.0	0.0	12.1	103
20-24	74.1	54.4	23.3	3.9	5.8	0.0	36.3	0.0	0.0	40.4	31.2	19.0	0.8	0.0	3.5	135
25+	69.0	59.1	25.9	11.4	10.4	4.0	38.5	0.0	0.0	28.6	21.7	11.3	0.0	1.2	3.8	130
Total	66.4	49.1	21.4	5.5	6.7	1.4	33.0	0.0	0.0	34.4	24.6	14.1	0.3	0.4	6.0	367

Table 4.4.2 Ever use of contraception: men

Percentage of all men, of currently married men, and of sexually active unmarried men who have ever used a contraceptive method, by method and age, Nigeria 1999

Age	Any method	Modern method: Any modern method	Pill	IUD	Injectables	Diaphragm/ Foam/ Jelly	Condom	Female sterilisation	Male sterilisation	Implant	Traditional method: Any traditional method	Periodic abstinence	Withdrawal	Traditional charms	Traditional medications	Other methods	Number of men
ALL MEN																	
15-19	13.9	10.9	1.7	0.0	0.2	0.0	10.1	0.0	0.0	0.2	6.0	2.9	4.0	0.0	0.0	0.6	511
20-24	36.4	30.1	2.5	0.3	0.6	1.2	29.4	0.0	0.0	0.0	19.1	12.1	11.1	0.0	0.0	1.1	319
25-29	44.7	35.6	6.1	0.3	4.5	0.8	32.0	0.3	0.3	0.0	25.8	17.4	15.8	0.6	0.3	0.6	366
30-34	50.1	31.1	5.9	0.7	5.1	0.0	26.7	0.0	0.0	0.0	34.1	26.4	19.2	0.6	0.5	0.6	348
35-39	45.1	29.1	7.9	2.4	5.5	0.2	24.3	0.4	0.0	0.2	33.8	27.7	16.5	0.6	0.4	1.9	275
40-44	47.6	26.1	9.0	0.7	9.1	0.4	18.5	1.3	0.0	0.0	35.2	27.1	18.1	1.3	0.9	0.4	239
45-49	48.0	23.0	8.2	1.0	5.2	1.5	17.9	1.0	0.5	0.0	39.4	33.1	17.2	1.5	0.5	1.0	197
50-54	52.6	28.9	6.9	2.7	6.5	1.8	20.5	2.4	0.3	0.0	40.9	37.4	16.4	0.0	1.7	0.8	205
55+	46.3	16.3	7.1	2.9	2.6	0.5	11.3	0.9	0.5	0.0	38.9	33.8	9.0	2.7	4.6	0.9	220
Total	39.8	25.1	5.6	1.0	3.9	0.6	21.2	0.5	0.1	0.1	27.2	21.1	13.3	0.7	0.8	0.8	2,680
CURRENTLY MARRIED MEN																	
15-19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12
20-24	(26.7)	(18.1)	(4.6)	(0.0)	(0.0)	(0.0)	(15.6)	(0.0)	(0.0)	(0.0)	(19.9)	(15.3)	(11.3)	(0.0)	(0.0)	(0.0)	46
25-29	35.6	25.4	7.6	0.0	3.5	0.4	20.2	0.5	0.5	0.0	23.8	17.8	14.2	0.6	0.5	0.5	202
30-34	47.3	27.2	6.2	0.8	4.6	0.0	22.2	0.0	0.0	0.0	35.6	28.0	19.4	0.4	0.6	0.4	284
35-39	42.3	25.7	7.6	2.7	5.6	0.3	20.5	0.4	0.0	0.3	32.4	26.7	15.2	0.7	0.4	2.1	248
40-44	48.3	26.0	8.8	0.8	9.5	0.5	18.3	1.4	0.0	0.0	36.2	27.9	19.0	1.4	0.9	0.4	222
45-49	47.9	22.6	8.0	1.0	4.9	1.6	17.9	1.1	0.6	0.0	39.6	33.1	17.2	1.6	0.0	1.0	191
50-54	53.0	29.8	7.3	2.9	6.8	1.9	21.0	2.5	0.3	0.0	41.2	37.4	17.1	0.0	1.8	0.9	196
55+	46.1	15.7	7.0	3.0	2.7	0.5	10.4	0.9	0.5	0.0	39.4	34.4	8.4	2.3	3.9	1.0	210
Total	45.1	24.5	7.3	1.5	5.2	0.6	18.7	0.9	0.2	0.1	34.8	28.7	15.8	0.9	1.1	0.9	1,612
UNMARRIED SEXUALLY ACTIVE MEN																	
15-19	(61.4)	(52.4)	(11.0)	(0.0)	(2.6)	(0.0)	(50.3)	(0.0)	(0.0)	(0.0)	(30.1)	(16.4)	(22.7)	(0.0)	(0.0)	(2.6)	43
20-24	77.7	67.3	6.4	1.2	2.3	5.0	67.3	0.0	0.0	0.0	44.9	25.1	31.1	0.0	0.0	1.6	77
25+	84.4	74.9	7.8	0.0	13.1	0.0	73.2	0.0	0.0	0.0	44.0	28.9	31.2	0.0	0.9	0.0	107
Total	77.8	68.0	7.9	0.4	7.4	1.7	66.8	0.0	0.0	0.0	41.6	25.2	29.6	0.0	0.4	1.0	228

Note: Figures in parentheses are based on 25-49 cases. An asterisk indicates a figure is based on fewer than 25 cases and has been suppressed.

As is the case for women, married men are somewhat more likely than all men to have used a contraceptive method (45 vs, 40 percent), whereas sexually active unmarried men are by far the most likely to have used a method (78 percent). As shown in Table 4.4.2, periodic abstinence is also the most commonly used method among married men (29 percent) as well as women. This method is followed by condoms (19 percent), withdrawal (16 percent), and then the pill (7 percent).

4.3 Current Use of Family Planning Methods

Current use of family planning methods refers to the use of contraceptive methods at the time of the survey. Analysis of current use of family planning methods is conventionally based on women who are currently married, since they are the most likely to be regularly exposed to the risk of pregnancy.

Only 15 percent of married women are currently using any method, while only 9 percent are using a modern method (Table 4.5.1). Although the percentage is low even for the sub-Saharan region, there has been an improvement since 1990, when only 6 percent of married women were reported to be using any method and only 4 percent were reported to be using a modern method (FOS, 1992: 42—see Figure 4.2).

The most commonly used method is periodic abstinence (rhythm method), which is used by 5 percent of married women. This method is followed by pills, injectables, and the IUD, which are used by 2 percent of married women each.

Contraceptive use is highest among married women in their 30s and early 40s (about 20 percent) and lowest among the 15-19 age group (4 percent). This finding is expected since younger women are more likely than older women to want another child soon. While periodic abstinence is the most widely used method for all age groups, younger women are the next most likely to use either injectables or the pill, while older women are more likely to use IUDs.

One-third of married men report that they are currently using a family planning method (Table 4.5.2). As among married women, married men report periodic abstinence as the major method (used by 15 percent). However, the next most commonly used method among men is condoms (6 percent). That use of periodic abstinence as reported by married men is considerably higher than as reported by married women has been found in other DHS surveys, and one theory is that men may mistake periodic abstinence for long-term abstinence.

Table 4.5.1 Current use of contraception: women

Percentage of all women, of currently married women, and of sexually active unmarried women who are currently using a contraceptive method, by method and age, Nigeria 1999

Age	Any method	Modern method								Traditional method				Not currently using	Total	Number of women
		Any modern method	Pill	IUD	Inject-ables	Diaphragm/ Foam/ Jelly	Condom	Female sterili-sation	Implant	Any tradi-tional method	Periodic absti-nence	With-drawal	Other methods			
ALL WOMEN																
15-19	6.6	3.2	1.3	0.0	0.1	0.0	1.8	0.0	0.0	2.9	2.2	0.7	0.5	93.4	100.0	1,775
20-24	16.0	7.9	3.1	0.4	0.4	0.1	3.9	0.0	0.0	7.0	5.2	1.8	1.1	84.0	100.0	1,521
25-29	17.2	8.8	2.8	1.1	2.0	0.2	2.7	0.0	0.0	7.3	5.7	1.5	1.2	82.8	100.0	1,516
30-34	20.8	13.6	4.0	1.9	4.5	0.3	2.6	0.2	0.1	6.6	5.0	1.6	0.6	79.2	100.0	1,137
35-39	20.5	13.3	3.5	4.2	3.4	0.2	1.1	0.8	0.1	6.6	5.3	1.4	0.6	79.5	100.0	992
40-44	19.8	11.7	1.9	4.5	3.6	0.0	1.2	0.1	0.3	5.6	4.8	0.8	2.5	80.2	100.0	696
45-49	14.9	8.7	1.7	3.5	1.8	0.2	0.7	0.9	0.0	5.2	4.7	0.5	0.9	85.1	100.0	568
Total	15.7	8.9	2.6	1.7	1.9	0.1	2.3	0.2	0.0	5.8	4.6	1.2	1.0	84.3	100.0	8,206
CURRENTLY MARRIED WOMEN																
15-19	4.2	1.2	1.0	0.0	0.0	0.0	0.2	0.0	0.0	2.5	2.0	0.5	0.4	95.8	100.0	472
20-24	8.2	2.6	1.1	0.1	0.2	0.1	1.0	0.0	0.0	4.7	3.5	1.2	0.9	91.8	100.0	934
25-29	13.9	6.7	2.2	0.9	1.9	0.2	1.6	0.0	0.0	6.1	4.6	1.5	1.1	86.1	100.0	1,272
30-34	20.1	12.7	4.0	1.8	4.5	0.2	1.9	0.2	0.1	6.7	5.0	1.6	0.7	79.9	100.0	1,032
35-39	20.7	13.3	3.6	3.7	3.6	0.2	1.2	0.9	0.1	7.1	5.7	1.5	0.3	79.3	100.0	925
40-44	20.5	12.1	2.1	4.8	3.6	0.0	1.2	0.2	0.3	5.9	5.1	0.8	2.4	79.5	100.0	637
45-49	16.5	9.4	1.9	4.1	1.8	0.2	0.6	0.8	0.0	6.2	5.5	0.6	0.9	83.5	100.0	484
Total	15.3	8.6	2.4	2.0	2.4	0.2	1.2	0.3	0.1	5.8	4.6	1.2	0.9	84.7	100.0	5,757
SEXUALLY ACTIVE UNMARRIED WOMEN																
15-19	46.6	23.0	6.9	0.0	1.0	0.0	15.1	0.0	0.0	17.5	12.2	5.3	6.1	53.4	100.0	103
20-24	68.3	40.4	17.7	3.1	2.3	0.0	17.3	0.0	0.0	25.1	19.2	5.9	2.8	31.7	100.0	135
25+	58.0	40.2	12.2	8.2	4.4	0.8	14.6	0.0	0.0	14.2	11.7	2.5	3.6	42.0	100.0	130
Total	58.6	35.4	12.7	4.0	2.7	0.3	15.7	0.0	0.0	19.1	14.6	4.5	4.0	41.4	100.0	367

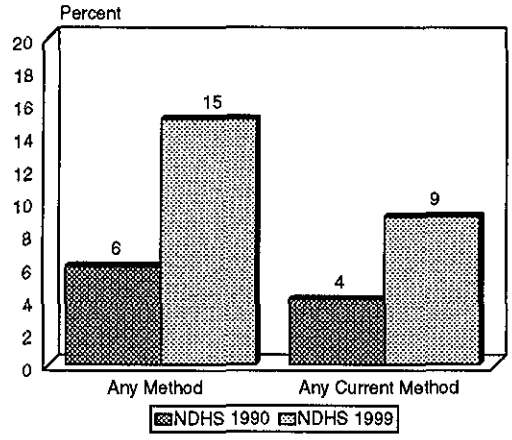
Table 4.5.2 Current use of contraception: men

Percentage of all men, of currently married men, and of sexually active unmarried men who are currently using a contraceptive method, by method and age, Nigeria 1999

		Modern method							Traditional method						
Age	Any method	Any modern method	Pill	IUD	Inject-ables	Diaphragm/ Foam/ Jelly	Condom	Female sterili-sation	Any tradi-tional method	Periodic absti-nence	With-drawal	Other methods	Not currently using	Total	Number of men
						ALL MEN									
15-19	9.2	6.4	1.1	0.0	0.0	0.0	5.3	0.0	2.4	1.6	0.8	0.4	90.8	100.0	511
20-24	21.2	14.9	1.3	0.0	0.4	0.3	12.9	0.0	5.6	4.1	1.5	0.7	78.8	100.0	319
25-29	27.5	19.8	2.8	0.0	2.5	0.0	14.5	0.0	7.8	6.5	1.3	0.0	72.5	100.0	366
30-34	33.6	17.1	3.3	0.3	2.1	0.0	11.4	0.0	15.9	12.7	3.2	0.6	66.4	100.0	348
35-39	32.0	16.3	5.4	1.1	2.0	0.0	7.8	0.0	15.4	12.1	3.2	0.3	68.0	100.0	275
40-44	33.9	16.3	5.2	0.0	4.8	0.0	5.9	0.4	16.7	13.8	2.9	0.8	66.1	100.0	239
45-49	35.3	13.5	4.0	0.5	2.1	0.0	6.3	0.5	21.2	18.6	2.6	0.6	64.7	100.0	197
50-54	39.6	19.1	3.4	1.9	4.1	0.5	7.9	1.4	19.5	18.0	1.5	0.9	60.4	100.0	205
55+	30.8	8.6	3.1	1.7	0.9	0.0	2.0	0.9	19.1	19.1	0.0	2.1	69.2	100.0	220
Total	26.9	14.2	3.0	0.5	1.8	0.1	8.6	0.2	11.9	10.1	1.8	0.7	73.1	100.0	2,680
						CURRENTLY MARRIED MEN									
15-19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12
20-24	(6.2)	(2.0)	(0.0)	(0.0)	(0.0)	(0.0)	(2.0)	(0.0)	(4.3)	(4.3)	(0.0)	(0.0)	(93.8)	100.0	46
25-29	24.4	14.5	3.6	0.0	2.6	0.0	8.3	0.0	9.9	8.4	1.5	0.0	75.6	100.0	202
30-34	31.6	14.2	3.7	0.4	1.7	0.0	8.3	0.0	17.0	13.0	4.0	0.4	68.4	100.0	284
35-39	29.8	14.3	4.9	1.2	2.0	0.0	6.2	0.0	15.2	11.6	3.6	0.3	70.2	100.0	248
40-44	35.2	16.3	5.1	0.0	4.9	0.0	5.9	0.4	18.0	14.8	3.2	0.9	64.8	100.0	222
45-49	35.9	13.9	4.2	0.5	2.2	0.0	6.5	0.5	21.4	18.7	2.7	0.6	64.1	100.0	191
50-54	41.3	20.0	3.6	2.0	4.2	0.5	8.2	1.4	20.4	18.8	1.6	1.0	58.7	100.0	196
55+	31.4	8.5	3.3	1.7	1.0	0.0	1.6	0.9	20.1	20.1	0.0	2.9	68.6	100.0	210
Total	31.8	14.1	3.9	0.8	2.5	0.1	6.4	0.4	16.9	14.5	2.4	1.7	68.2	100.0	1,612
						SEXUALLY ACTIVE UNMARRIED MEN									
15-19	(39.4)	(27.7)	(5.9)	(0.0)	(0.0)	(0.0)	(21.9)	(0.0)	(9.0)	(9.0)	(0.0)	(2.6)	(60.6)	100.0	43
20-24	50.3	38.6	4.2	0.0	1.6	1.1	31.7	0.0	11.7	6.9	4.8	0.0	49.7	100.0	77
25+	57.4	47.4	4.0	0.0	5.9	0.0	37.4	0.0	10.0	9.1	1.0	0.0	42.6	100.0	107
Total	51.6	40.7	4.4	0.0	3.3	0.4	32.5	0.0	10.4	8.3	2.1	0.5	48.4	100.0	228

Note: Figures in parentheses are based on 25-49 cases. An asterisk indicates a figure is based on fewer than 25 cases and has been suppressed.

Figure 4.2
Current Use of Contraceptive Methods among Currently Married Women, 1990 and 1999



NDHS 1999

Contraceptive use is far from uniform across all sub-groups of the population. Tables 4.6.1 and 4.6.2 show differentials in contraceptive use among married women and men, respectively. Among married women, use is almost twice as high in urban than in rural areas (23 versus 12 percent—see Figure 4.3).

The proportion of married women using any method is about eight times higher in the two southern regions than in the two northern regions (24 to 26 percent versus 3 percent); it is intermediate in the Central region (18 percent). Women in the south are much more likely than those in the north to use traditional methods.

The proportion of women using contraceptives also varies with educational level. The higher the level of education, the higher the proportion of women using a method. Contraceptive use rises from 6 percent for women with no education to 45 percent for women with a higher education. A similar pattern is observed with specific methods, whether modern or traditional. As expected, contraceptive use increases with the number of living children, from 3 percent of married women with no children to 21 percent of women with four or more children.

Differentials in use among married men are similar to those for married women (Table 4.6.2). Use is higher among urban men, those in the south, men with more education, and those with more children.

Table 4.6.1 Current use of contraception by background characteristics: women

Percent distribution of currently married women by contraceptive method currently used, according to selected background characteristics, Nigeria 1999

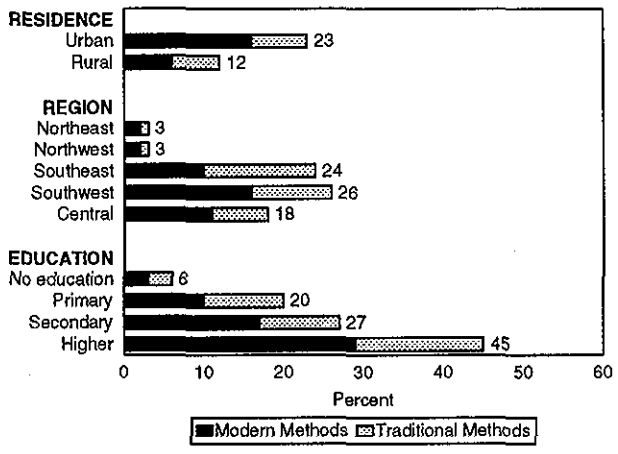
		Modern method								Traditional method						
Background characteristic	Any method	Any modern method	Pill	IUD	Inject-ables	Diaphragm/ Foam/ Jelly	Condom	Female sterili-sation	Implant	Any tradi-tional method	Periodic absti-nence	With-drawal	Other methods	Not currently using	Total	Number of women
Residence																
Urban	23.4	15.7	5.5	4.0	3.0	0.4	2.5	0.2	0.2	6.4	4.6	1.9	1.2	76.6	100.0	1,670
Rural	12.0	5.6	1.2	1.2	2.1	0.1	0.7	0.3	0.0	5.6	4.6	1.0	0.8	88.0	100.0	4,087
Region																
Northeast	3.1	2.2	1.4	0.1	0.7	0.0	0.1	0.0	0.0	0.7	0.5	0.3	0.1	96.9	100.0	1,137
Northwest	3.2	2.5	1.1	0.2	0.9	0.0	0.1	0.1	0.0	0.2	0.1	0.1	0.6	96.8	100.0	986
Southeast	23.5	9.1	1.9	1.5	3.1	0.2	1.9	0.5	0.0	12.9	9.4	3.4	1.5	76.5	100.0	946
Southwest	26.2	15.5	4.2	5.2	2.6	0.3	2.9	0.2	0.2	9.1	7.1	1.9	1.6	73.8	100.0	1,367
Central	17.8	10.9	2.9	2.1	4.2	0.2	1.0	0.5	0.1	6.0	5.4	0.6	0.9	82.2	100.0	1,321
Education																
No education	6.0	3.1	0.7	0.7	1.1	0.0	0.3	0.2	0.0	2.3	2.1	0.2	0.6	94.0	100.0	3,032
Primary	19.9	10.1	3.3	2.5	2.6	0.1	1.5	0.2	0.0	8.5	6.6	1.9	1.3	80.1	100.0	1,298
Secondary	27.1	16.2	5.0	3.1	4.7	0.4	2.6	0.3	0.2	9.6	7.3	2.3	1.3	72.9	100.0	1,123
Higher	44.8	28.0	6.6	8.7	5.8	1.0	4.6	0.7	0.7	15.9	10.6	5.3	1.0	55.2	100.0	303
No. of living children																
0	3.3	1.3	0.7	0.0	0.1	0.0	0.5	0.0	0.0	1.9	1.2	0.8	0.0	96.7	100.0	585
1	8.0	3.5	1.5	0.2	0.4	0.3	1.1	0.0	0.0	3.9	2.9	1.0	0.6	92.0	100.0	944
2	14.3	7.8	2.8	1.2	1.1	0.0	2.3	0.2	0.2	5.9	4.9	0.9	0.6	85.7	100.0	931
3	18.0	8.7	2.8	2.5	1.9	0.1	1.2	0.1	0.1	7.8	5.8	2.0	1.5	82.0	100.0	886
4+	20.5	12.5	3.0	3.3	4.4	0.2	1.1	0.5	0.0	6.8	5.5	1.3	1.2	79.5	100.0	2,412
Total	15.3	8.6	2.4	2.0	2.4	0.2	1.2	0.3	0.1	5.8	4.6	1.2	0.9	84.7	100.0	5,757

Table 4.6.2 Current use of contraception by background characteristics: men

Percent distribution of currently married men by contraceptive method currently used, according to selected background characteristics, Nigeria 1999

Background characteristic	Any method	Modern method							Traditional method						Not currently using	Total	Number of men
		Any modern method	Pill	IUD	Inject-ables	Diaphragm/ Foam/ Jelly	Condom	Female sterili-sation	Any tradi-tional method	Periodic absti-nence	With-drawal	Tradi-tional charms	Tradi-tional medi-cations	Other methods			
Residence																	
Urban	39.3	24.4	8.4	1.3	2.7	0.2	11.5	0.2	14.6	11.8	2.8	0.2	0.2	0.0	60.7	100.0	460
Rural	28.9	10.0	2.1	0.6	2.4	0.0	4.4	0.5	17.9	15.6	2.2	0.3	0.4	0.2	71.1	100.0	1,152
Region																	
Northeast	7.2	5.2	2.9	0.0	0.6	0.0	1.7	0.0	1.9	1.3	0.7	0.0	0.0	0.0	92.8	100.0	307
Northwest	3.0	1.5	0.3	0.0	0.9	0.0	0.3	0.0	0.0	0.0	0.0	1.1	0.4	0.0	97.0	100.0	285
Southeast	53.3	14.3	2.6	1.0	4.0	0.0	4.9	1.8	38.6	34.7	4.0	0.0	0.0	0.3	46.7	100.0	303
Southwest	53.3	24.9	4.3	1.7	2.6	0.2	16.0	0.0	26.7	22.0	4.7	0.4	1.0	0.3	46.7	100.0	387
Central	34.9	20.5	8.7	0.9	4.3	0.0	6.3	0.3	14.2	12.2	1.9	0.0	0.3	0.0	65.1	100.0	330
Education																	
No education	12.0	2.3	1.2	0.2	0.4	0.0	0.5	0.0	8.8	8.6	0.2	0.3	0.6	0.0	88.0	100.0	545
Primary	38.2	13.5	3.9	0.8	2.1	0.0	5.7	1.0	23.4	21.1	2.4	0.4	0.4	0.4	61.8	100.0	476
Secondary	40.2	21.6	5.3	0.8	3.2	0.0	12.1	0.2	18.0	14.1	4.0	0.3	0.2	0.0	59.8	100.0	373
Higher	53.4	32.4	8.4	2.2	7.5	0.4	13.4	0.5	21.0	15.8	5.2	0.0	0.0	0.0	46.6	100.0	217
No. of living children																	
0	14.3	9.4	0.8	0.0	0.8	0.0	7.8	0.0	4.9	4.9	0.0	0.0	0.0	0.0	85.7	100.0	145
1	26.0	10.9	3.2	0.6	0.6	0.0	6.4	0.0	15.1	10.8	4.3	0.0	0.0	0.0	74.0	100.0	181
2	31.4	13.2	3.2	1.0	1.5	0.0	7.4	0.0	18.2	13.5	4.7	0.0	0.0	0.0	68.6	100.0	198
3	34.3	16.5	4.1	0.0	3.5	0.0	8.9	0.0	16.9	14.3	2.7	0.4	0.5	0.0	65.7	100.0	223
4+	35.5	15.2	4.7	1.1	3.2	0.1	5.4	0.8	19.0	17.2	1.8	0.5	0.6	0.2	64.5	100.0	865
Total	31.8	14.1	3.9	0.8	2.5	0.1	6.4	0.4	16.9	14.5	2.4	0.3	0.4	0.1	68.2	100.0	1,612

Figure 4.3
Use of Family Planning Among Married Women, by Background Characteristics, Nigeria 1999



NDHS 1999

4.4 Number of Children at First Use of Family Planning Methods

The NDHS included a question for all women who had ever used a method as to how many living children they had when they first used a method. Table 4.7 shows the distribution of ever-married women by the number of living children they had when they first used a method, according to five-year age group. These data enable the examination of both periodic and cohort changes in the timing of the initiation of contraceptive use during the family building process.

Table 4.7 Number of children at first use of contraception

Percent distribution of ever-married women by number of living children at the time of first use of contraception, according to current age, Nigeria 1999

Current age	Never used contra-ception	Number of living children at time of first use of contraception						Total	Number of women
		0	1	2	3	4+	Missing		
15-19	93.0	3.7	1.9	0.6	0.2	0.0	0.6	100.0	489
20-24	79.1	9.9	6.7	2.6	0.9	0.1	0.6	100.0	966
25-29	70.8	8.8	10.3	4.8	2.5	2.7	0.2	100.0	1,319
30-34	63.5	6.5	11.0	6.9	5.6	6.1	0.4	100.0	1,079
35-39	64.2	5.5	7.6	5.5	4.5	12.1	0.6	100.0	974
40-44	68.0	4.5	5.2	3.5	3.5	14.8	0.6	100.0	687
45-49	68.8	4.5	8.6	2.6	1.4	13.5	0.7	100.0	562
Total	71.0	6.7	8.0	4.2	2.9	6.5	0.5	100.0	6,076

Overall, 19 percent of women initiated contraceptive use when they had fewer than three living children, with 7 percent initiating use before having the first child, 8 percent after having the first child, and 4 percent after having the second child. Younger cohorts of women have a tendency to initiate family planning use at lower parities than older cohorts. For example, while less than 16 percent of

women age 40 and older initiated family planning use before having three children, the proportion rises with younger cohorts, reaching 24 percent among women age 25-34 years. This pattern probably reflects the fact that young women are more likely to use family planning to space births, while older women are more likely to use family planning to limit births. The trend toward initiating family planning use at lower parities can also be seen by comparing data from the 1990 and 1999 NDHS surveys. For example, in 1990, only 8 percent of women reported initiating contraceptive use when they had fewer than three children, compared with 19 percent in 1999.

4.5 Knowledge of the Fertile Period

Table 4.8 presents the distribution of all women and those who have ever used periodic abstinence in relation to their reported knowledge of the fertile period in the menstrual cycle.

Table 4.8 Knowledge of fertile period

Percent distribution of users of periodic abstinence and of all women by knowledge of the fertile period during the ovulatory cycle, Nigeria 1999

Perceived fertile period	Users of periodic abstinence	All women
During menstrual period	0.3	0.6
Right after period has ended	29.4	19.2
Halfway between periods	27.3	13.6
Just before period begins	3.0	2.1
At any time	13.5	18.7
Other	0.6	0.4
Don't know	25.2	44.6
Missing	0.7	0.8
Total	100.0	100.0
Number	375	8,206

The most common response given by the women was "don't know" (45 percent). Only 14 percent of women correctly identified the middle of the menstrual cycle as the time a woman is most likely to get pregnant. When compared with the results from the 1990 NDHS (20 percent), the 1999 data show a decline.

Knowledge of the fertile period is somewhat better among women who say they are using periodic abstinence as a method of family planning. However, even among these women, only 27 percent gave the correct answer ("halfway between periods" or "the middle of the cycle"), while 25 percent said they didn't know when a woman is most likely to get pregnant, and 14 percent said a woman can get pregnant any time.

4.6 Contraceptive Effect of Breastfeeding

Breastfeeding is an important variable because of its effect on fecundity, spacing of births, and conception. It has been proved scientifically that exclusive breastfeeding does prolong the period of postpartum infecundity. And for many years, women themselves in various cultures have recognised that prolonged breastfeeding lengthens the period of postpartum infecundity and birth intervals. Thus, breastfeeding, if exclusively practised immediately after birth, can be an effective method of family planning.

Table 4.9 presents the distribution of women by knowledge of the effects of breastfeeding on the risk of pregnancy by background characteristics. Half (51 percent) of the women believe that breastfeeding has no influence on the risk of pregnancy. However, 29 percent indicate that breastfeeding influences the risk of conception, with 5 percent saying that it increases the risk of pregnancy, 13 percent saying that it decreases the risk of pregnancy, and 10 percent saying it depends. Twenty percent of women do not know whether breastfeeding increases or decreases the risk of pregnancy.

Knowledge of the contraceptive effect of breastfeeding is higher in the Southeast (25 percent) and Southwest regions (18 percent) than in the other regions. The higher the level of education, the more likely a woman will know that breastfeeding can decrease the risk of pregnancy.

Table 4.9 Perceived contraceptive effect of breastfeeding

Percent distribution of currently married women by perceived risk of pregnancy associated with breastfeeding and percentage of currently married women who previously relied and who currently rely on breastfeeding to avoid pregnancy and percentage who meet lactational amenorrhoeic method (LAM) criteria, according to selected background characteristics, Nigeria 1999

Background characteristic	Perceived risk of pregnancy associated with breastfeeding							Reliance on breastfeeding to avoid pregnancy		Meet LAM criteria	Number of women
	Un-changed	In-creased	De-creased	Depends	Don't know	Missing	Total	Previ-ously	Cur-rently		
Age											
15-19	45.7	4.4	6.3	5.3	38.2	0.2	100.0	2.4	1.8	7.9	472
20-24	53.7	5.8	10.3	8.0	21.7	0.5	100.0	6.5	3.3	6.1	934
25-29	50.7	5.2	12.7	11.2	19.5	0.8	100.0	8.0	4.0	5.1	1,272
30-34	53.7	4.5	14.1	10.3	17.1	0.2	100.0	9.3	5.8	3.5	1,032
35-39	48.7	5.3	16.0	12.1	17.6	0.3	100.0	10.1	3.7	3.9	925
40-44	48.1	4.4	16.4	11.1	19.0	1.0	100.0	10.1	3.9	1.8	637
45-49	50.0	5.8	15.2	11.5	16.6	1.0	100.0	9.6	1.7	0.4	484
Residence											
Urban	49.1	5.1	15.9	10.4	18.8	0.7	100.0	9.3	4.0	3.5	1,670
Rural	51.3	5.1	12.0	10.1	21.0	0.5	100.0	7.8	3.7	4.6	4,087
Region											
Northeast	50.8	3.7	6.4	10.8	27.4	0.9	100.0	4.1	2.8	6.2	1,137
Northwest	62.6	5.0	9.9	4.7	17.5	0.2	100.0	6.9	3.9	5.1	986
Southeast	41.1	5.6	25.2	10.3	17.2	0.6	100.0	18.0	6.6	2.7	946
Southwest	46.8	7.5	18.0	12.3	14.7	0.7	100.0	8.3	4.0	3.4	1,367
Central	52.3	3.5	7.8	11.5	24.5	0.4	100.0	5.7	2.4	4.1	1,321
Education											
No education	53.7	4.3	8.7	8.9	23.7	0.7	100.0	5.5	2.9	4.5	3,032
Primary	47.6	5.3	15.8	11.8	19.1	0.5	100.0	11.4	5.2	4.2	1,298
Secondary	47.3	7.0	18.3	11.4	15.7	0.4	100.0	11.2	4.9	4.7	1,123
Higher	45.3	5.0	27.1	12.0	10.0	0.6	100.0	10.9	2.7	0.9	303
Total	50.6	5.1	13.2	10.2	20.4	0.6	100.0	8.2	3.8	4.3	5,757

The last few columns in Table 4.9 show that 8 percent of women say they have used breastfeeding as a means to delay a pregnancy and 4 percent say they are currently doing so. Using data from other questions in the NDHS on duration since last birth and current breastfeeding status, 4 percent of respondents can be said to meet the criteria for using lactational amenorrhoea; that is, they are currently breastfeeding a child who is less than six months of age and they are not supplementing the breast milk with any other food or liquid. Curiously, although women in the Southeast region are by far the most likely to say they have used breastfeeding as a contraceptive and that they are currently doing so, they are the least likely to fit the criteria for effective use.

4.7 Sources of Family Planning Methods

Information on sources of modern contraceptives is useful for family planning programme managers and implementors. In the 1999 NDHS, women who reported using a modern method of contraception at the time of the survey were asked where they most recently obtained the method. Table 4.10 and Figure 4.4 show that equal proportions of users obtain their methods from public sector (government) sources (43 percent) and private medical sources (43 percent). The main sources of contraceptives in the public sector are government hospitals (23 percent), health centres (12 percent), and public family planning clinics (7 percent). Among the private medical sources, pharmacies and patent medical stores account for the largest proportion (32 percent). Other private sources, such as shops and friends and relatives, account for 8 percent of current users.

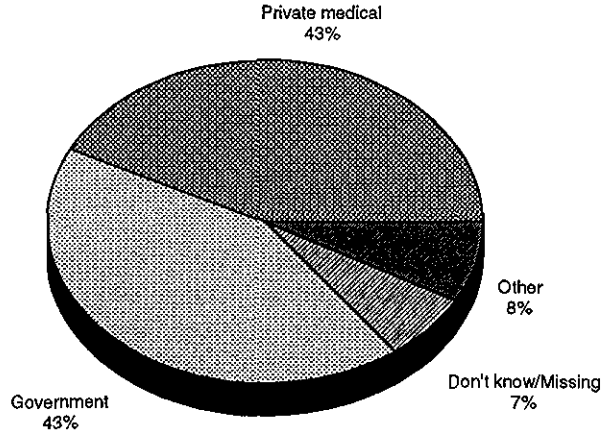
Table 4.10 Source of supply for modern contraceptive methods

Percent distribution of current users of modern contraceptive methods by most recent source of supply, according to specific methods, Nigeria 1999

Source of supply	Pill	IUD	Inject-ables	Condom	All modern methods[1]
Public sector	29.1	74.4	68.6	12.9	42.9
Government hospital	16.0	48.3	28.0	3.8	23.0
Government health centre	4.7	19.1	26.0	5.9	12.2
Family planning clinic	6.8	6.3	12.1	2.5	6.5
Mobile clinic	0.0	0.0	0.6	0.6	0.3
Community health worker	1.0	0.7	1.2	0.0	0.7
Other public	0.5	0.0	0.6	0.0	0.3
Private medical sector	53.1	19.5	27.0	62.7	42.9
Private hospital/clinic	4.3	17.4	14.4	5.6	10.0
Pharmacy/patent med. store	47.4	1.5	9.3	56.5	31.5
Private doctor	0.0	0.6	2.5	0.6	0.8
Private mobile clinic	0.5	0.0	0.0	0.0	0.2
Private community health worker	0.0	0.0	0.7	0.0	0.2
Other private medical	0.9	0.0	0.0	0.0	0.3
Other private	11.8	1.6	1.9	15.4	8.4
Shop	2.3	0.0	0.7	4.8	2.1
Church	0.4	0.0	0.6	0.0	0.4
Friends/relatives	5.6	0.0	0.7	9.4	4.2
Nongovernment organization	0.0	0.8	0.0	0.0	0.2
Other	3.5	0.8	0.0	1.1	1.5
Don't know/missing	6.0	4.5	2.5	9.1	5.8
Total	100.0	100.0	100.0	100.0	100.0
Number of women	216	137	159	186	728

Note: Totals include 10 users of diaphragm/foam/jelly, 16 users of female sterilisation, and 4 users of implants.

Figure 4.4
Source of Family Planning Methods among Current Users of Modern Methods, Nigeria 1999



NDHS 1999

Overall, public sector sources supply three-quarters of IUD users and more than two-thirds of injectable users. Users of pills and condoms, however, on the other hand, are more likely to go to private medical sources, especially pharmacies.

4.8 Intention to Use Family Planning Among Non-Users

An important indicator of the changing demand for family planning is the extent to which non-users of contraception plan to use family planning in the future. Women and men who were not using contraception at the time of the survey were asked about their intention to use family planning in the future. The results are presented in Table 4.11.

Among both women and men, 23 percent of currently married non-users say they intend to use family planning in the future, with slightly more than half saying they intend to use in the next 12 months. Sixty percent of married women and 57 percent of married men say they do not intend to use family planning, while 15 percent of women and men are unsure as to whether they will use or not. Among women, the intent to use in the next 12 months increases somewhat with the number of living children.

Table 4.11 Future use of contraception

Percent distribution of currently married women and men who are not using a contraceptive method by intention to use a method in the future, according to number of living children (women), Nigeria 1999

	Number of living children[1]						
Future use of contraception	0	1	2	3	4+	Total women	Total men
Intend to use in next 12 months	2.9	10.8	14.4	14.8	16.3	13.7	11.8
Intend to use later	10.2	11.8	10.2	8.3	5.7	8.3	10.1
Unsure as to timing	0.6	0.8	0.9	0.3	0.8	0.7	0.9
Unsure as to intention	19.8	17.5	16.4	15.7	12.9	15.3	14.8
Do not intend to use	65.5	57.6	56.7	59.1	62.2	60.3	56.8
Don't know/Missing	0.9	1.5	1.4	1.8	2.3	1.8	5.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women/men	395	880	802	747	2,051	4,875	1,098

[1] Includes current pregnancy

4.9 Reasons For Nonuse

To better inform programmes aimed at contraceptive education and encouragement of use, the NDHS included questions about why respondents do not intend to use family planning in the future. The main reasons for not using family planning given by currently married nonusers who do not intend to use a contraceptive method in the future are presented in Table 4.12.

The important reasons given by women are a desire for more children, opposition to family planning, lack of knowledge about methods, and religious prohibitions about using. Younger women are more likely to say that they want more children, while a larger proportion of older women say they do not intend to use because they are menopausal or they have had a hysterectomy.

Table 4.12 Reasons for not intending to use contraception

Percent distribution of currently married women and men who are not using a contraceptive method and who do not intend to use in the future, by main reason for not intending to use, according to age (women), Nigeria 1999

Reason for not intending to use contraception	Age		Total women	Total men
	<30	30-49		
Not married	0.1	0.1	0.1	0.2
Infrequent sex	0.5	3.7	2.2	1.8
Menopausal, hysterectomy	0.1	9.2	5.1	4.8
Subfecund, infecund	0.7	2.4	1.7	2.5
Wants more children	34.1	22.8	27.9	37.5
Respondent opposed	15.1	16.4	15.8	13.1
Spouse opposed	8.3	5.9	7.0	0.2
Others opposed	0.1	0.2	0.1	0.3
Religious prohibition	11.5	10.4	10.9	21.8
Knows no method	15.6	14.3	14.8	9.0
Knows no source	3.0	2.8	2.9	2.6
Health concerns	1.3	1.5	1.4	0.4
Fear side effects	4.5	3.8	4.1	1.9
Lack of access	0.1	0.1	0.1	0.2
Costs too much	0.0	0.1	0.1	0.0
Inconvenient to use	0.1	0.5	0.3	0.0
Interferes with body processes	0.5	1.6	1.1	0.2
Up to woman to use	0.0	0.0	0.0	0.2
Other	2.2	2.9	2.6	2.4
Don't know	1.6	1.1	1.3	0.7
Missing	0.7	0.1	0.4	0.2
Total	100.0	100.0	100.0	100.0
Number of women/men	1,333	1,604	2,937	624

The men that were interviewed gave such reasons as wanting more children (38 percent), religious restrictions (22 percent), and opposition to use (13 percent). It is also interesting to note reasons that are not commonly cited. For example, very few respondents say they do not intend to use because of health concerns or fear of side effects. Similarly, lack of access and excessive costs do not seem to be barriers to use.

4.10 Preferred Method of Contraception for Future Use

Future demand for specific methods was assessed by asking nonusers who said they intended to use family planning in the future which method they preferred to use. Table 4.13 presents information on the preferred method of currently married women who are not using a contraceptive method but who intend to use one in the future.

The largest share of these women (27 percent) say they intend to use injectables, while 19 percent say they would prefer to use the pill, and 10 percent say they intend to use periodic abstinence. Women who intend to use family planning in the next 12 months have method preferences similar to women who intend to use later.

Table 4.13 Preferred method of contraception for future use

Percent distribution of currently married women who are not using a contraceptive method but who intend to use in the future by preferred method, Nigeria 1999

Preferred method	Timing of intended use: In next 12 months	Timing of intended use: After 12 months	Total
Pill	17.9	22.0	19.2
IUD	9.4	7.6	8.6
Injectables	27.2	28.3	27.2
Diaphragm/foam/jelly	0.3	0.0	0.2
Condom	6.7	3.8	5.8
Female sterilisation	1.8	3.7	2.5
Implants	0.9	1.0	0.9
Periodic abstinence	10.2	10.2	10.4
Withdrawal	3.2	2.7	2.9
Folk method	5.0	4.5	5.1
Other	1.1	0.5	0.8
Don't know	0.7	0.0	0.4
Missing	15.5	15.6	15.9
Total	100.0	100.0	100.0
Number of women	667	404	1,105

Note: Total includes 34 women unsure of the timing.

4.11 Exposure to Family Planning Messages in Electronic Media

Television and radio are major sources of information about family planning. To assess the effectiveness of such media and the dissemination of family planning information, women and men interviewed in the 1999 NDHS were asked if they had heard a family planning message on the radio or television in the few months prior to the interview.

Table 4.14 shows that more men than women are exposed to radio and television messages. For example, 35 percent of women say they heard a family planning message on the radio, compared with 61 percent of men. Similarly, the proportions of women and men who have seen a television message are 23 and 40 percent, respectively. Consequently, more than 60 percent of women do not receive family planning messages through either media.

Urban residents are much more likely than rural residents to be exposed to family planning messages on radio and television. Similarly, women and men living in the Southeast, Southwest, and Central regions are more likely to receive a message than those in the Northeast and Northwest regions. As expected, a greater proportion of those with more education say they have heard a family planning message.

Table 4.14 Exposure to family planning messages on radio and television

Percent distribution of women and men by whether or not they have heard a radio or television message about family planning in the few months prior to the interview, according to selected background characteristics, Nigeria 1999

Background characteristic	Heard family planning message on radio/television					Total	Number of women/ men
	Both	Radio only	Tele-vision only	Neither	Missing		
WOMEN							
Age							
15-19	14.9	11.0	3.3	70.3	0.6	100.0	1,775
20-24	20.6	16.3	2.5	59.7	0.9	100.0	1,521
25-29	24.5	15.0	2.2	57.7	0.6	100.0	1,516
30-34	25.1	16.1	1.9	56.4	0.4	100.0	1,137
35-39	22.5	17.4	1.1	58.8	0.1	100.0	992
40-44	16.7	12.7	2.2	67.6	0.8	100.0	696
45-49	17.8	15.9	1.0	65.0	0.4	100.0	568
Residence							
Urban	40.9	11.8	4.8	42.0	0.5	100.0	2,540
Rural	11.2	16.0	1.1	71.1	0.6	100.0	5,666
Region							
Northeast	3.9	8.8	0.5	86.3	0.4	100.0	1,292
Northwest	7.4	16.8	0.2	74.4	1.2	100.0	1,087
Southeast	20.4	16.3	1.3	61.2	0.8	100.0	1,886
Southwest	39.4	17.2	4.8	38.0	0.5	100.0	2,080
Central	18.2	13.0	2.6	66.0	0.1	100.0	1,861
Education							
No education	4.9	12.4	0.6	81.4	0.6	100.0	3,324
Primary	18.6	17.8	2.2	61.0	0.4	100.0	1,868
Secondary	34.0	16.2	3.6	45.5	0.7	100.0	2,506
Higher	61.3	10.9	6.1	21.5	0.2	100.0	508
Total	20.4	14.7	2.2	62.1	0.6	100.0	8,206
MEN							
Age							
15-19	32.0	15.2	4.5	47.4	0.9	100.0	511
20-24	43.7	21.4	4.2	29.3	1.4	100.0	319
25-29	40.2	25.6	2.6	30.7	0.9	100.0	366
30-34	40.9	27.3	0.3	29.9	1.6	100.0	348
35-39	43.4	20.3	1.9	34.0	0.4	100.0	275
40-44	39.7	24.5	1.5	33.9	0.4	100.0	239
45-49	33.5	23.5	0.5	40.9	1.6	100.0	197
50-54	35.4	25.5	1.0	37.5	0.6	100.0	205
55+	31.9	30.0	1.0	36.7	0.4	100.0	220
Residence							
Urban	63.3	11.9	3.6	19.9	1.3	100.0	821
Rural	26.7	27.8	1.7	43.1	0.8	100.0	1,859
Region							
Northeast	25.3	22.2	1.2	50.2	1.1	100.0	437
Northwest	15.6	19.5	0.6	63.7	0.6	100.0	356
Southeast	39.1	23.6	1.5	33.4	2.4	100.0	590
Southwest	56.0	18.0	4.4	21.5	0.1	100.0	696
Central	38.2	30.4	2.3	28.6	0.6	100.0	601
Education							
No education	13.3	24.9	0.2	61.0	0.7	100.0	663
Primary	33.1	28.8	1.7	35.4	0.9	100.0	710
Secondary	47.3	20.3	3.9	27.3	1.3	100.0	986
Higher	70.2	13.9	2.8	12.6	0.6	100.0	321
Total	37.9	22.9	2.3	36.0	1.0	100.0	2,680

4.12 Acceptability of Media Messages on Family Planning

To determine the level of acceptance of the dissemination of family planning through electronic media, men and women were asked during the 1999 NDHS whether it was acceptable to disseminate information on family planning methods on television and radio.

Table 4.15 shows that a majority of women and men find family planning messages to be acceptable. Men are slightly more likely than women to say that such messages are either acceptable or unacceptable and are less likely to be unsure of their views.

There is higher acceptability of dissemination through electronic media among urban than among rural respondents. The proportion of respondents who accept family planning messages through electronic media is highest in the Southwest region and lowest in the Northwest region. Respondents with higher levels of education are generally more accepting of family planning messages through electronic media than their less-educated counterparts.

4.13 Exposure to Family Planning Messages through the Print Media

Female respondents were asked if they had received any message about family planning through the print media (newspaper, magazine article, poster, leaflet, brochure) in the few months prior to the interview. Table 4.16 shows that only 17 percent of women reported seeing any message about family planning in a print media source, with 13 percent seeing a poster, 10 percent seeing a newspaper or magazine, and 5 percent seeing a leaflet or brochure.

Women in urban areas are more likely to have seen a message in print than women in rural areas (27 versus 12 percent). When data are analysed regionally, exposure to messages in print is higher among women in the south than among those in the north. The proportion of women exposed to family planning messages in any print medium increases directly with education, from 4 percent among those with no education to 63 percent of those with higher than secondary education.

Table 4.15 Acceptability of media messages on family planning

Percent distribution of women and men by acceptability of messages about family planning on radio or television, by selected background characteristics, Nigeria 1999

Background characteristic	Acceptability of message				Total	Number of women/ men
	Not accept-able	Accept-able	Unsure	Missing		
			WOMEN			
Age						
15-19	19.5	50.3	29.7	0.6	100.0	1,775
20-24	19.4	57.2	23.1	0.3	100.0	1,521
25-29	19.9	58.3	21.2	0.6	100.0	1,516
30-34	18.4	57.9	23.3	0.4	100.0	1,137
35-39	21.1	55.6	22.8	0.5	100.0	992
40-44	23.6	52.6	23.0	0.7	100.0	696
45-49	24.1	49.3	25.7	0.9	100.0	568
Residence						
Urban	15.6	70.0	13.8	0.5	100.0	2,540
Rural	22.4	48.1	29.0	0.5	100.0	5,666
Region						
Northeast	33.8	27.0	37.3	1.9	100.0	1,292
Northwest	38.1	20.9	40.8	0.3	100.0	1,087
Southeast	13.0	68.8	18.0	0.2	100.0	1,886
Southwest	14.7	74.2	10.6	0.5	100.0	2,080
Central	14.0	58.3	27.6	0.2	100.0	1,861
Education						
No education	30.0	29.4	39.7	0.9	100.0	3,324
Primary	17.2	63.0	19.6	0.2	100.0	1,868
Secondary	12.5	75.1	12.1	0.4	100.0	2,506
Higher	6.0	91.6	2.2	0.2	100.0	508
Total	20.3	54.9	24.3	0.5	100.0	8,206
			MEN			
Age						
15-19	18.1	59.3	22.1	0.4	100.0	511
20-24	20.5	67.1	11.4	1.0	100.0	319
25-29	24.0	62.9	12.1	0.9	100.0	366
30-34	20.0	69.2	10.5	0.3	100.0	348
35-39	27.0	62.5	9.1	1.4	100.0	275
40-44	27.6	58.6	13.5	0.4	100.0	239
45-49	26.3	58.2	13.9	1.6	100.0	197
50-54	26.7	59.0	13.6	0.6	100.0	205
55-59	31.1	54.5	13.5	0.9	100.0	220
Residence						
Urban	15.2	72.3	11.4	1.1	100.0	821
Rural	27.2	57.1	15.0	0.7	100.0	1,859
Region						
Northeast	33.6	38.6	26.5	1.3	100.0	437
Northwest	55.4	26.6	17.6	0.4	100.0	356
Southeast	20.8	63.4	14.3	1.5	100.0	590
Southwest	11.4	85.0	3.4	0.1	100.0	696
Central	14.0	71.1	14.2	0.7	100.0	601
Education						
No education	42.0	34.1	23.3	0.6	100.0	663
Primary	22.9	63.2	12.7	1.2	100.0	710
Secondary	15.0	72.3	11.7	0.9	100.0	986
Higher	12.9	83.3	3.7	0.0	100.0	321
Total	23.5	61.8	13.9	0.8	100.0	2,680

Table 4.16 Family planning messages in print

Percentage of all women who have received a message about family planning from the print media in the few months prior to the interview, by type of print media and selected background characteristics, Nigeria 1999

Background characteristic	Any print media	News-paper/ magazine	Poster	Leaflet/ brochure	Number of women
Age					
15-19	11.9	7.2	8.8	2.6	1,775
20-24	18.6	11.6	13.8	5.1	1,521
25-29	20.7	12.3	16.2	5.0	1,516
30-34	21.4	13.0	17.7	6.9	1,137
35-39	16.8	10.1	13.7	4.7	992
40-44	11.8	6.2	9.4	4.0	696
45-49	12.1	4.8	10.7	3.8	568
Residence					
Urban	27.4	18.9	20.6	7.9	2,540
Rural	11.9	5.9	9.7	3.0	5,666
Region					
Northeast	3.3	1.7	2.3	1.0	1,292
Northwest	5.3	2.1	4.6	0.5	1,087
Southeast	20.6	12.2	15.5	6.8	1,886
Southwest	25.7	16.6	19.9	7.7	2,080
Central	18.6	10.2	15.6	3.5	1,861
Education					
No education	3.8	0.5	3.6	0.4	3,324
Primary	13.2	4.2	11.1	2.3	1,868
Secondary	26.9	17.8	20.0	7.8	2,506
Higher	62.5	53.4	48.4	24.0	508
Total	16.7	9.9	13.1	4.5	8,206

4.14 Contact of Nonusers with Family Planning Providers

Family planning providers in government and nongovernmental organisations are expected to visit women and men of reproductive age who are nonusers to discuss options and to motivate them to adopt a method of family planning by discussing the advantages or benefits of using family planning methods. To assess the frequency of the visits, respondents were asked whether they were visited by a family planning provider or discussed family planning with health facility staff in the 12 months prior to interview.

Table 4.17 shows that less than 4 percent of nonusers reported that they were visited by a family planning service provider at home, while 8 percent attended a health facility in the 12 months preceding the survey and discussed family planning with a staff member. There are few differentials in these levels except that women in the Southwest region and those with a higher education are more likely to have discussed family planning during a visit to a health facility. Although this pattern of contact with family planning providers could be evidence that facility staff use routine health visits as opportunities to discuss family planning with clients, it could also be that these women specifically visited a health facility to obtain family planning services.

Table 4.17 Contact of non-users with family planning providers disseminating family planning information

Percent distribution of women who do not use contraception by whether they were visited by a family planning service provider or spoke with a health facility (HF) staff member about family planning methods (FP) during the 12 months prior to interview, according to selected background characteristics, Nigeria 1999

Background characteristic	Visited by FP provider			Not visited by a FP provider			Missing	Neither visited by FP provider nor discussed FP at HF[2]	Total	Number of women
	Attended HF and discussed FP[1]	Attended HF but did not discuss FP[1]	Did not attend health facility	Attended HF and discussed FP[1]	Attended HF but did not discuss FP[1]	Did not attend health facility				
Age										
15-19	0.2	0.2	1.1	1.6	10.5	86.3	0.2	96.7	100.0	1,659
20-24	1.3	1.2	1.7	7.1	16.1	72.2	0.4	88.3	100.0	1,277
25-29	2.1	0.3	1.8	9.7	15.7	69.9	0.5	85.6	100.0	1,255
30-34	2.5	0.6	2.1	9.0	14.3	71.2	0.2	85.6	100.0	900
35-39	2.3	0.7	2.0	7.8	12.9	74.1	0.3	87.0	100.0	788
40-44	1.3	0.2	1.7	5.4	12.6	78.0	0.7	90.6	100.0	559
45-49	0.9	0.6	2.3	2.6	13.6	79.8	0.2	93.4	100.0	484
Residence										
Urban	2.0	0.7	1.7	9.2	15.9	70.0	0.4	86.0	100.0	1,993
Rural	1.2	0.5	1.7	4.8	12.7	78.8	0.3	91.4	100.0	4,928
Region										
Northeast	0.4	0.1	0.4	2.6	15.8	80.2	0.5	96.0	100.0	1,253
Northwest	1.0	1.6	1.2	3.2	13.3	79.6	0.3	92.9	100.0	1,048
Southeast	1.2	0.3	2.1	6.0	13.7	76.1	0.6	89.8	100.0	1,489
Southwest	2.8	0.7	3.1	10.3	12.7	70.2	0.2	83.0	100.0	1,591
Central	1.4	0.3	1.3	6.8	12.9	77.0	0.2	90.0	100.0	1,540
Education										
No education	0.7	0.4	1.1	3.1	11.6	82.7	0.4	94.3	100.0	3,123
Primary	1.7	0.5	2.3	8.5	15.3	71.5	0.3	86.8	100.0	1,551
Secondary	1.9	0.7	2.2	8.2	14.9	71.8	0.3	86.7	100.0	1,973
Higher	5.4	1.1	2.0	11.9	17.6	61.3	0.8	78.9	100.0	275
Total	1.4	0.6	1.7	6.1	13.6	76.2	0.3	89.9	100.0	6,922

[1] Spoke with health facility staff about family planning methods
[2] Was not visited by a family planning worker and either did not attend a health facility in preceding 12 months or attended facility but did not speak with a staff member about family planning methods

The level of missed opportunities to motivate nonusers to adopt family planning methods was very high. Nine in ten respondents did not have any contact with family planning providers. This proportion of nonusers is very significant. To reach these women, a more vigorous outreach programme is needed.

4.15 Couples' Communication and Attitudes Towards Family Planning Use

While husband-wife communication about family planning and agreement to use contraception is not necessary for adoption of certain methods, its absence may be a serious impediment to use. Interspousal communication is therefore an important intermediate step along the path to eventual adoption and sustained use of contraception. Lack of discussion may reflect a lack of personal interest, hostility to the subject, or a customary reticence in talking about sex-related matters. To gain insight about spousal communication on family planning, currently married respondents in the 1999 NDHS were asked how often they had talked to their spouses about family planning in the year prior to the survey. Data for currently married women are shown in Table 4.18.

Table 4.18 Discussion of family planning with husband

Percent distribution of currently married women who know a contraceptive method by the number of times family planning was discussed with their husband in the past year, according to current age, Nigeria 1999

Age	Number of times family planning was discussed with husband			Missing	Total	Number of women
	Never	Once or twice	More often			
15-19	70.7	20.8	6.4	2.1	100.0	177
20-24	58.5	29.4	10.9	1.2	100.0	568
25-29	53.0	27.3	19.1	0.6	100.0	868
30-34	43.7	30.8	24.8	0.7	100.0	730
35-39	47.1	29.4	23.1	0.3	100.0	621
40-44	51.3	28.3	20.2	0.3	100.0	410
45-49	59.3	29.1	11.3	0.3	100.0	318
Total	52.2	28.6	18.5	0.7	100.0	3,692

More than half of women say that they have not talked to their husbands about family planning at all in the past year, while 29 percent have discussed it once or twice and 19 percent have discussed it more often. Teenaged women are the least likely to have discussed family planning with their husbands.

When couples have a positive attitude towards family planning, use of effective contraceptive methods will be facilitated. Attitudinal data were collected by asking women and men if they approved of couples' using family planning. Married respondents were asked whether they thought their spouses approved of family planning. This information is useful in the formulation of family planning policies since it shows the extent to which further education or publicity is needed to increase acceptance of family planning. If there is widespread disapproval of family planing, this might act as a barrier to the adoption of contraceptives.

Table 4.19 shows the percent distribution of currently married, nonsterilised women who know of a contraceptive method by their attitude towards family planning and their husband's attitude. The data show that 57 percent of married women who know of contraceptive methods approve of family planning, while 21 percent say they disapprove and 20 percent are unsure of their attitudes. Moreover, 44 percent of married women say their husbands approve. Overall, 40 percent of women report that both they and their husbands approve of family planing, while 5 percent say they both disapprove. In the case where there is disagreement between couples, the table shows that it is more common for the wife to report that she approves and her husband disapproves (7 percent) than the husband approves and she disapproves (2 percent).

Approval of family planning is higher among urban than among rural residents and higher among respondents in their 30s than among those that are older or younger. It is also higher among women in the Southeast, Southwest, and Central regions than in the Northeast and Northwest regions. Finally, a higher proportion of married women with more than secondary schooling approve of family planning.

Table 4.19 Attitudes of couples toward family planning

Percent distribution of currently married, nonsterilised women who know of a contraceptive method by wife's attitude toward family planning and wife's perception of her husband's attitude toward family planning, according to selected background characteristics, Nigeria 1999

Background characteristic	Both approve	Woman approves: Husband dis-approves	Woman approves: Husband's attitude unknown	Woman disapproves: Husband approves	Woman disapproves: Husband's attitude unknown	Both dis-approve	Respon-dent unsure	Missing	Total	Wife approves	Husband approves	Number of women
Age												
15-19	18.1	2.8	11.6	3.3	17.6	7.4	36.5	2.8	100.0	32.5	22.9	177
20-24	34.0	8.1	10.6	1.3	16.0	4.8	22.7	2.4	100.0	53.1	37.6	568
25-29	41.6	6.4	9.0	1.8	13.4	4.9	20.1	2.7	100.0	57.3	45.6	868
30-34	49.1	8.0	6.8	1.3	12.3	4.1	16.1	2.3	100.0	64.2	52.7	730
35-39	44.1	6.8	11.1	1.3	16.0	3.0	15.8	2.0	100.0	61.9	47.2	621
40-44	39.3	7.0	10.4	2.7	15.1	4.3	18.4	2.8	100.0	56.7	44.7	410
45-49	35.2	6.9	10.1	2.3	16.6	5.2	22.2	1.5	100.0	52.9	38.9	318
Residence												
Urban	48.3	6.8	10.0	2.0	13.4	3.4	14.5	1.6	100.0	65.3	52.2	1,389
Rural	35.7	7.0	9.3	1.7	15.5	5.1	23.0	2.8	100.0	52.2	39.5	2,303
Region												
Northeast	15.7	5.2	2.9	2.8	28.4	12.1	29.7	3.2	100.0	23.8	20.3	402
Northwest	17.3	2.6	6.3	2.5	21.6	4.3	41.4	3.9	100.0	26.2	22.8	415
Southeast	43.0	9.7	13.4	1.9	11.8	3.1	15.1	2.1	100.0	66.6	47.2	766
Southwest	51.6	7.4	10.4	1.7	13.3	3.3	10.1	2.2	100.0	69.7	55.0	1,189
Central	45.0	6.9	9.6	1.0	9.8	3.9	22.1	1.7	100.0	61.5	48.1	919
Education												
No education	21.9	4.5	9.0	1.8	20.2	7.5	32.1	2.9	100.0	35.6	25.4	1,315
Primary	41.7	8.9	10.5	1.9	14.5	3.8	16.3	2.5	100.0	61.1	46.3	1,039
Secondary	53.4	7.9	10.6	1.1	10.6	2.5	11.8	1.9	100.0	72.4	56.6	1,040
Higher	72.0	7.9	4.9	3.5	5.6	0.0	5.1	1.1	100.0	85.1	77.4	298
Total	40.4	7.0	9.5	1.8	14.7	4.5	19.8	2.4	100.0	57.1	44.3	3,692

Table 4.20 shows the percent distribution of couples by approval of family planning according to the age difference between spouses and level of education. Overall, in 27 percent of couples, both the wife and husband reported that they approve of family planning, while for 14 percent, both partners disapprove. When one spouse disapproves, it is equally likely to be the wife or the husband who disapproves; in 9 percent of couples, the wife approves and the husband does not, while in another 9 percent, the husband approves and the wife does not.

It appears that the likelihood that both husband and wife disapprove of family planning increases with the number of years the husband is older than his wife. Furthermore, when both spouses are educated, they are more likely to approve of family planning. When there is a discrepancy in education between spouses, couples in which the wife has more education than her husband are more likely to jointly approve of family planning than couples in which the husband has more education than his wife.

Table 4.20 Attitudes of couples toward family planning

Percent distribution of couples by approval of family planning, according to age difference between spouses and level of education, Nigeria 1999

Age/education difference between spouses	Approval of family planning					Total	Percent of couples in agreement	Number of couples
	Both approve	Both dis-approve	Wife approves, husband disapproves	Husband approves, wife dis-approves	Missing			
Age								
Husband younger	(16.7)	(7.1)	(3.5)	(3.9)	(68.8)	100.0	(23.8)	30
Husband 0-4 years older	38.8	10.4	14.5	5.9	30.4	100.0	49.1	201
Husband 5-9 years older	32.9	11.0	8.1	8.5	39.5	100.0	44.0	460
Husband 10-14 years older	22.8	16.0	6.6	10.8	43.8	100.0	38.8	375
Husband 15 years + older	17.5	16.1	9.2	8.0	49.2	100.0	33.6	385
Education								
Husband/wife no education	5.3	21.3	5.7	6.0	61.7	100.0	26.5	508
Wife educated, husband not	23.6	9.3	13.6	10.5	43.1	100.0	32.9	54
Husband educated, wife not	15.2	17.3	8.3	9.7	49.5	100.0	32.5	301
Husband and wife educated	51.4	5.2	11.3	9.8	22.2	100.0	56.6	587
Total	26.7	13.5	8.8	8.5	42.5	100.0	40.2	1,451

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

Because both men and women interviewed in the NDHS were asked whether they approved of family planning and, if married, whether they thought their spouse approved of family planning, it is possible to examine the extent to which husbands and wives report accurately on their spouse's attitude. Table 4.21 shows the percent distribution of couples by husband's and wife's attitude toward family planning, according to their spouse's perception of their attitude.

The data indicate that when husbands and wives report that their spouse approves of family planning, they are more often right than wrong. For example, in 73 percent of cases in which wives reported that their husband approved of family planning, the husbands also said they approved. Similarly, in 61 percent of the couples in which the husband said his wife approved of family planning, she also said she approved. However, when husbands and wives report that their spouse disapproves of family planning, in one-quarter to one-third of cases, the opposite is true; that is, the spouse actually approves of family planning. Caution should be used in drawing the conclusion from these data that there is a considerable lack of communication between spouses about attitudes towards family planning. It is likely that at least some respondents report more favourable attitudes towards family planning than they in fact hold, perhaps in an attempt to please the interviewer or to appear more sophisticated.

Table 4.21 Spouse's perception of spouse's approval of family planning

Percent distribution of couples by husband's and wife's actual attitude towards family planning, according to their spouse's perception of their attitude, Nigeria 1999

Perception	Spouse's actual attitude			Total	Number of couples
	Approves	Disap-approves	Unsure		
Wife's perception of husband's attitude					
Approves	73.1	21.7	5.2	100.0	447
Disapproves	33.7	49.2	17.1	100.0	443
Don't know	34.2	50.0	15.7	100.0	560
All wives	46.1	41.0	12.9	100.0	1,451
Husband's perception of wife's attitude					
Approves	61.0	18.7	20.3	100.0	568
Disapproves	23.6	32.1	44.3	100.0	472
Don't know	24.9	31.8	43.3	100.0	411
All husbands	38.6	26.8	34.6	100.0	1,451

CHAPTER 5

OTHER PROXIMATE DETERMINANTS OF FERTILITY

5.1 Introduction

Fertility differentials among population subgroups and changes in fertility over time can be traced to one or more of the *proximate determinants* of fertility, i.e., the variables that influence exposure to the risk of conception and childbearing. These factors together determine the pace or frequency of reproduction, which in turn affects the level of fertility. One of the most important proximate determinants of fertility is contraceptive use, which was discussed in the previous chapter; this chapter pertains to other determinants.

5.2 Current Marital Status

For this analysis, marriage refers to both formal and informal unions. Formal marriage refers to those in which a civil or legal ceremony has been performed. Informal union (cohabitation) refers to a situation in which a man and a woman live together without having performed any civil or religious ceremony.

Table 5.1 shows the percent distribution of respondents by current marital status, according to age. About one-quarter of Nigerian women of childbearing age have never married, while 70 percent are either formally married or living together, and 4 percent are widowed, divorced, or separated. The proportion of

Table 5.1 Current marital status

Percent distribution of women and men by current marital status, according to age, Nigeria 1999

Age	Marital status						Total	Number of women/ men
	Never married	Married	Living together	Widowed	Divorced	Not living together		
				WOMEN				
15-19	72.5	24.4	2.2	0.1	0.6	0.2	100.0	1,775
20-24	36.5	57.6	3.8	0.3	1.0	0.8	100.0	1,521
25-29	13.0	78.0	5.9	0.4	0.7	2.0	100.0	1,516
30-34	5.1	84.7	6.0	1.4	1.5	1.2	100.0	1,137
35-39	1.9	84.9	8.3	1.7	1.5	1.7	100.0	992
40-44	1.3	82.7	8.9	4.6	0.7	1.8	100.0	696
45-49	1.1	75.6	9.6	9.8	1.5	2.5	100.0	568
All ages	26.0	64.6	5.5	1.6	1.0	1.2	100.0	8,206
				MEN				
15-19	97.0	2.2	0.2	0.0	0.2	0.5	100.0	511
20-24	82.8	14.2	0.3	0.3	0.9	1.5	100.0	319
25-29	42.0	52.0	3.2	0.3	0.3	2.2	100.0	366
30-34	15.2	78.0	3.6	0.3	1.8	1.1	100.0	348
35-39	5.2	85.5	4.6	0.0	1.7	3.0	100.0	275
40-44	2.6	86.6	6.5	0.5	2.2	1.7	100.0	239
45-49	0.0	90.3	6.5	2.1	0.5	0.5	100.0	197
50-54	0.4	90.0	5.8	2.8	0.0	1.0	100.0	205
55-64	0.0	89.0	6.4	1.8	0.9	1.8	100.0	220
All ages	36.9	56.7	3.5	0.7	0.9	1.4	100.0	2,680

women who have never married declines sharply as age increases; 73 percent of teenagers age 15-19 have never married, compared with only 1 percent of women age 45-49 years. Thus, virtually all Nigerian women eventually marry. This universality of marriage has been found in earlier surveys, such as the 1990 NDHS and the 1995 Sentinel Survey. It is interesting to note that informal unions increase with age. Only 2 percent of teenaged women live in cohabitational unions, compared with 10 percent of women age 45-49.

Table 5.1 also reveals that the proportion of women currently married increases with age up to 40-44 and declines thereafter. The proportion widowed increases with age, reaching a peak of 10 percent at age 45-49 years. The proportions divorced and not living together (separated) show no clear pattern with age. Thus, marital disruption in Nigeria seems to be due more to widowhood than to divorce or separation. The present data do not provide information on time spent in between marriages, but it seems that women quickly remarry after divorce.

The second panel of Table 5.1 shows that 37 percent of men have never been married, while 60 percent are currently married or living together and 3 percent are divorced, widowed, or not living together. At almost every age group, a higher proportion of men than women has never married. For example, at age 15-19 years, 97 percent of men have never married whereas 73 percent of women have never married.

5.3 Polygyny

Previous national surveys have shown that polygyny is widespread in Nigeria. The prevalence of the practice was measured in the 1999 NDHS by asking married women whether their husband or partner has any other wife or partner, and if so, how many. Married men were asked how many wives or partners they have. The accuracy of the information supplied by women depends largely on the extent of knowledge of whether their husbands have other wives (Oyekanmi, 1999).

The proportions of currently married women and men in polygynous unions by age and selected background characteristics are presented in Table 5.2. Slightly more than one-third (36 percent) of all female respondents and one-quarter (26 percent) of all male respondents are in polygynous unions. For women, this level of polygyny represents a slight decline from the 41 percent found in the 1990 NDHS.

Generally, older persons are more likely to be in polygynous unions (Figure 5.1). Interestingly, there are more teenagers (15-19 years) in polygynous unions (30 percent) than those age 20-24 years (27 percent). From age 20-24 to 40-44 years, the proportion of women in polygynous unions increases progressively from 27 to 46 percent. The proportion of men currently in polygynous unions increases from 12 percent among those age 20-24 years to 34 percent among those age 45-49.

Among women, polygynous marriage is more common in rural than in urban areas (38 versus 31 percent), while for men there appears to be no difference (26 percent). Regional variations in polygyny exist and differ considerably for women and men. Among women, polygyny is more common in the Northeast (41 percent), the Northwest (40 percent), and the Central (40 percent) regions and is lowest in the Southeast region (20 percent). Among men, polygyny is most common in the Southwest region (41 percent), followed by the Northwest and Northeast regions, with 25 and 24 percent, respectively. The Southeast region has the lowest proportion of both women and men in polygynous unions.

The figures portray a strong inverse relationship between education and polygyny. For example, the proportion of married women in polygynous unions decreases from 46 percent among women with no education to 17 percent among those with higher education. This pattern is similar to what was observed for women in the 1990 NDHS. Similarly, the proportion of married men in polygynous unions decreases from 32 percent for those with no education to 19 percent for those with a higher education.

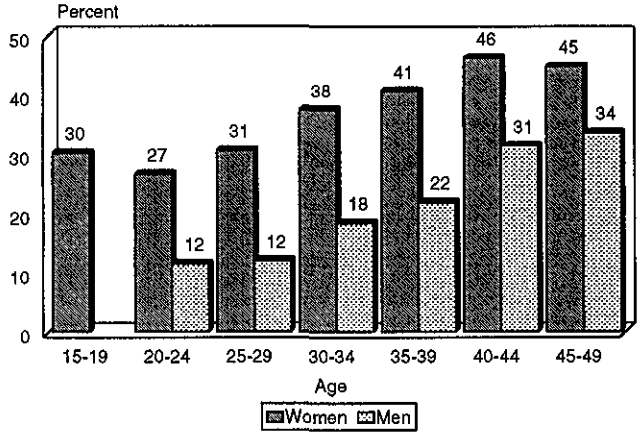
Table 5.2 Polygyny

Percentage of currently married women and men in a polygynous union by age and selected background characteristics, Nigeria 1999

Background characteristic	Current age							All women	All men
	15-19	20-24	25-29	30-34	35-39	40-44	45-49		
Residence									
Urban	39.9	17.2	22.4	31.5	34.2	42.8	48.0	30.9	25.8
Rural	28.2	30.0	33.8	40.6	43.7	47.9	43.6	37.7	26.3
Region									
Northeast	31.6	34.5	34.4	47.4	54.9	49.6	45.9	41.0	24.1
Northwest	31.1	33.3	40.9	45.6	49.1	53.5	34.6	40.3	24.5
Southeast	28.5	10.0	17.7	16.3	23.4	21.9	31.1	20.2	14.5
Southwest	13.5	17.6	27.7	36.6	35.8	47.9	48.8	34.6	41.3
Central	32.7	27.0	33.2	40.3	44.3	55.9	60.4	39.9	22.4
Education									
No education	34.3	38.1	42.3	49.5	52.4	53.3	52.7	46.1	32.3
Primary	22.0	22.5	28.1	36.3	30.4	38.2	33.6	30.3	24.6
Secondary	15.2	9.7	19.0	21.4	25.6	30.9	30.5	19.0	23.4
Higher	*	9.4	10.9	17.9	21.1	20.0	16.0	16.6	18.8
All women	30.2	26.5	30.6	37.5	40.7	46.3	44.9	35.7	NA[a]
All men	*	(11.5)	12.0	18.4	21.8	31.4	33.6	NA	26.2

NA = Not applicable
Note: Figures in parentheses are based on 25-49 cases, while an asterisk indicates a figure is based on fewer than 25 unweighted cases and has been suppressed.
[a] Includes men 50-64

Figure 5.1
Percentage of Currently Married Women and Men in Polygynous Unions by Age



NDHS 1999

Table 5.3 presents the proportions of currently married women by number of co-wives and proportion of currently married men by number of wives, according to selected background characteristics. Of the 36 percent of women in polygynous unions, roughly the same proportion report having one co-wife as report having two or more co-wives. However, among men, most of those in polygynous marriages report having only two wives; only 4 percent of married men have three or more wives.

There are few differences in the number of co-wives and wives by background characteristics, except that the proportion of women with two or more co-wives increases with age. Also, polygynously married women in the Northeast and Northwest regions are more likely than those in the Southwest and Central regions to report having only one co-wife.

Table 5.3 Number of wives

Percent distribution of currently married women by number of co-wives and percent distribution of currently married men by number of wives, according to background characteristics, Nigeria 1999

Background characteristic	Women						Men					
	Number of co-wives			Don't know/ Missing	Total	Number of women	Number of wives			Don't know/ missing	Total	Number of men
	0	1	2+				1	2	3+			
Age												
15-19	69.8	14.3	11.5	4.3	100.0	472	*	*	*	*	100.0	12
20-24	73.5	12.9	11.0	2.6	100.0	934	(88.5)	(9.4)	(0.0)	(2.1)	100.0	46
25-29	69.4	14.8	13.3	2.4	100.0	1,272	88.0	5.7	0.5	5.9	100.0	202
30-34	62.5	15.6	18.9	3.0	100.0	1,032	81.6	11.4	2.6	4.4	100.0	284
35-39	59.3	16.3	21.0	3.5	100.0	925	78.2	14.6	2.0	5.1	100.0	248
40-44	53.7	20.3	23.1	2.8	100.0	637	68.6	18.7	5.7	6.9	100.0	222
45-49	55.1	15.5	25.7	3.6	100.0	484	66.4	22.0	4.8	6.7	100.0	191
50-54	NA	NA	NA	NA	NA	NA	67.7	21.5	4.7	6.1	100.0	196
55+	NA	NA	NA	NA	NA	NA	58.2	26.3	8.7	6.8	100.0	210
Residence												
Urban	69.1	12.3	15.7	2.8	100.0	1,670	74.2	10.7	4.0	11.1	100.0	460
Rural	62.3	16.8	17.7	3.1	100.0	4,087	73.7	18.8	3.9	3.7	100.0	1,152
Region												
Northeast	59.0	24.0	14.3	2.6	100.0	1,137	75.9	20.4	3.7	0.0	100.0	307
Northwest	59.7	20.2	17.2	2.9	100.0	986	75.5	22.8	1.4	0.3	100.0	285
Southeast	79.8	8.8	6.5	4.9	100.0	946	85.5	9.7	1.7	3.2	100.0	303
Southwest	65.4	11.7	20.0	2.9	100.0	1,367	58.7	13.4	7.1	20.8	100.0	387
Central	60.1	13.4	24.2	2.3	100.0	1,321	77.6	17.1	4.5	0.8	100.0	330
Education												
No education	53.9	21.3	21.8	3.0	100.0	3,032	67.7	24.3	5.6	2.4	100.0	545
Primary	69.7	11.4	15.9	3.0	100.0	1,298	75.4	14.0	4.0	6.7	100.0	476
Secondary	81.0	7.0	9.2	2.7	100.0	1,123	76.6	11.8	2.7	8.9	100.0	373
Higher	83.4	7.0	5.5	4.0	100.0	303	81.2	10.2	1.5	7.1	100.0	217
Total	64.3	15.5	17.2	3.0	100.0	5,757	73.8	16.5	3.9	5.8	100.0	1,612

NA = Not applicable
Note: Figures in parentheses are based on 25-49 cases, while an asterisk refers to a figure based on fewer than 25 unweighted cases that has been suppressed.

5.5 Age at First Marriage

In Nigeria, most childbearing takes place within marriage, which is why questions on age at first marriage, duration of marriage, and stability of marriage are important. In societies with little pre-marital sexual activity and low contraceptive use, age at first marriage is concomitant with the initiation of sustained exposure of women to conception.

Table 5.4 presents the proportion of women and men ever married by exact ages and median age at first marriage according to current age. The table shows that for women, the median age at first marriage is about 18 years. This age is slightly higher than the median age of 17 years in 1990 and the age of 16.5 from the 1991 census (NDHS, 1992; NPC, 1998). That age at marriage is increasing is also reflected in the data in Table 5.4, which show that the median age at first marriage is higher among women in their 20s than among those in their 30s and 40s. For example, among women age 20-24, the median age at marriage is almost 20.

Men marry considerably later than women. The median age at first marriage is 26, compared with 18 for women. The data show little evidence of any trend towards earlier or later marriage.

Table 5.4 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 1999

WOMEN

Current age	Percentage who were first married by exact age: 15	18	20	22	25	Percentage who have never married	Number of women	Median age at first marriage
15-19	13.8	NA	NA	NA	NA	72.5	1,775	a
20-24	19.8	39.6	52.7	NA	NA	36.5	1,521	19.6
25-29	22.6	45.3	58.0	69.3	81.0	13.0	1,516	18.6
30-34	27.0	52.0	64.9	76.3	86.3	5.1	1,137	17.7
35-39	27.1	52.9	66.6	77.8	86.1	1.9	992	17.6
40-44	30.7	56.1	70.3	84.1	91.9	1.3	696	17.2
45-49	22.5	49.2	64.2	77.9	86.6	1.1	568	18.1
Women 20-49	24.3	47.8	61.2	72.1	80.3	13.1	6,431	18.3
Women 25-49	25.7	50.4	63.8	75.7	85.4	5.9	4,911	17.9

MEN

Current age	Percentage who were first married by exact age: 20	22	25	28	30	Percentage who have never married	Number of men	Median age at first marriage
25-29	15.5	24.8	45.5	NA	NA	42.0	366	a
30-34	16.7	26.7	45.8	63.3	76.7	15.2	348	25.6
35-39	16.0	27.5	45.3	63.8	75.3	5.2	275	25.7
40-44	19.5	31.8	50.9	66.0	74.8	2.6	239	24.8
45-49	15.8	29.3	39.4	60.5	73.0	0.0	197	26.3
50-54	14.8	30.8	46.1	56.4	66.4	0.4	205	25.8
55-64	13.6	24.0	37.8	55.3	63.1	0.0	220	26.9
Men 30-64	16.2	28.2	44.5	61.3	72.2	5.0	1,484	25.9

NA = Not applicable
[a] Omitted because less than 50 percent of respondents in the age group x to $x+5$ have married by age x

Table 5.5 shows the variations in median age at marriage by background characteristics. Urban women marry approximately two years later than rural women; the median age at first marriage for women age 25-49 years is 19 for urban women and 17 for rural women. Regional variations indicate that for women age 25-49 years, the median age at first marriage varies from 15 in the Northeast and Northwest regions to 20 in the Southeast and Southwest regions. These findings confirm those from the 1990 NDHS that also showed about a five-year difference in median age at marriage for women in the north and south (FOS, 1992:61). Median age at marriage increases with higher educational attainment. Among women with no

Table 5.5 Median age at first marriage

Median age at first marriage among women age 20-49 years and men age 30-64, by current age and selected background characteristics, Nigeria 1999

Background characteristic	Current age						Women age 20-49	Women age 25-49	Men age 30-64
	20-24	25-29	30-34	35-39	40-44	45-49			
Residence									
Urban	a	20.6	19.7	18.6	18.2	18.9	19.9	19.4	27.4
Rural	18.6	17.8	16.8	16.9	16.7	17.7	17.5	17.3	25.2
Region									
Northeast	15.5	14.9	15.1	15.1	14.6	15.4	15.1	15.0	24.0
Northwest	15.1	14.9	14.5	14.6	14.4	14.1	14.7	14.6	22.2
Southeast	a	22.2	20.1	20.2	18.5	18.4	a	20.2	28.2
Southwest	a	21.1	20.6	20.0	19.3	19.2	a	20.2	27.8
Central	19.6	18.7	17.9	17.4	17.0	18.2	18.2	17.9	25.8
Education									
No education	15.1	15.2	15.3	15.5	15.8	17.2	15.5	15.6	23.7
Primary	19.3	18.6	18.1	18.5	17.8	18.4	18.5	18.3	26.4
Secondary	a	21.8	20.8	21.1	20.3	20.5	a	21.2	26.2
Higher	a	a	24.2	23.7	23.0	22.7	a	24.5	29.1
All women	19.6	18.6	17.7	17.6	17.2	18.1	18.3	17.9	NA
All men	a	a	25.6	25.7	24.8	26.3	NA	NA	25.9

NA = Not applicable
[a] Omitted because less than 50 percent of the respondents in that age group married before entering the age group

education, the median age at first marriage is about 16 years, while it is close to 25 years among those with schooling beyond secondary.

Men's age at first marriage also varies by place of residence, region and education. For example, median age at first marriage is 27 among urban men and 25 among rural men. As for women, men in the south tend to marry later than those in the north. The median age at first marriage is about 28 in the Southeast and Southwest regions, while it is only 22 in the Northwest region. With respect to education, median age at first marriage increases from 24 for men with no education to 29 for those with more than a secondary education.

5.6 Age at First Sexual Intercourse

In most Nigerian societies, it is a cultural expectation that age at first marriage can be used as a proxy for the onset of exposure of a woman to regular sexual intercourse, while men are generally expected to be exposed to intercourse before marriage. In fact, since some women engage in sexual intercourse before marriage, the age at which they start sexual intercourse marks the beginning of their exposure to the risk of reproduction.

Table 5.6 shows the proportions of women and men who have had sexual intercourse by specified exact ages and the median age at first sexual intercourse by current age. About half of the women reported having had sexual intercourse by age 18; about one-quarter said they had had sex before age 15. In general, men are exposed to sexual intercourse later than women. The median age at first sexual intercourse among men is 20, compared with 18 for women.

These results imply that there has been a steep trend towards later age at sexual debut among women. The 1990 NDHS showed a median age at first intercourse of 16, compared with 18 in 1999. Although it is possible that women are delaying entry into sexual activity, the fact that the median age at first sex appears

Table 5.6 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 1999

Current age	Percentage who had first sexual intercourse by exact age: 15	18	20	22	25	Percentage never having intercourse	Number of women/ men	Median age at first intercourse
				WOMEN				
15-19	16.2	NA	NA	NA	NA	56.9	1,775	a
20-24	20.7	49.4	67.0	NA	NA	15.9	1,521	a
25-29	24.0	49.1	64.3	76.1	82.2	4.0	1,516	18.1
30-34	26.4	53.7	68.5	77.0	83.6	1.1	1,137	17.3
35-39	25.9	51.9	65.3	74.9	79.0	0.5	992	17.7
40-44	28.4	51.7	66.5	74.6	78.3	0.4	696	17.7
45-49	22.2	48.7	65.7	75.6	80.5	0.0	568	18.1
20-49	24.3	50.6	66.2	75.6	80.2	5.0	6,431	17.9
25-49	25.4	51.0	66.0	75.8	81.1	1.7	4,911	17.8
				MEN				
15-19	8.3	NA	NA	NA	NA	73.2	511	a
20-24	11.2	36.3	54.0	NA	NA	35.8	319	19.6
25-29	9.2	33.8	51.0	66.5	81.7	12.0	366	19.8
30-34	7.9	33.0	51.7	65.2	78.6	2.1	348	19.8
35-39	5.5	26.4	52.5	69.0	82.7	0.8	275	19.8
40-44	3.6	20.2	47.4	66.6	79.5	0.5	239	20.2
45-49	5.1	22.0	44.2	63.9	74.6	0.0	197	20.4
50-54	4.5	21.3	38.0	58.9	71.8	0.0	205	20.9
55+	2.8	19.8	34.0	59.2	73.4	0.0	220	20.9
25-64	6.0	26.5	46.7	64.7	78.2	3.0	1,850	20.3

NA = Not applicable
[a] Omitted because less than 50 percent of respondents in the age group x to $x + 5$ have had intercourse by age x

to have also risen by two years among women who are currently in their 30s and 40s makes this hypothesis unlikely. A more likely explanation is that since the questions concerning age at first sex changed between the two surveys, the apparent trend is due to errors in reporting in one of the surveys.

Table 5.7 shows the median age at first sexual intercourse for women and men according to selected background characteristics (Figure 5.2). For rural women, age at first sexual intercourse is lower than for urban women across all age groups. Among women age 20-49 years, the median age at first sexual intercourse for rural women is 17, compared with 19 for urban women. Women in the Northeast and Northwest regions first have sexual intercourse at about age 15. Women in the southern part of the country engage in sexual intercourse about three to four years later than their northern counterparts. There has not been any appreciable change in the pattern over time.

Age at first sexual intercourse increases with education. Women with no education initiate sexual activity at the age of 16 years, compared with age 21 among those with more than a secondary school education.

Among men, there are fewer differences in the age at which sexual activity is initiated. For example, the median age at first sexual intercourse is about the same for urban and rural men. Furthermore, median age at first intercourse does not seem to vary with increasing education among males as it does among females. However, there are differentials by region and they are different from those observed for women.

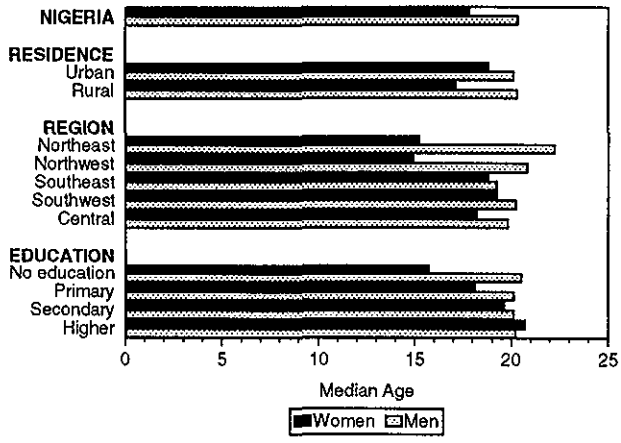
Table 5.7 Median age at first sexual intercourse

Median age at first sexual intercourse among women age 20-49 years and men age 30-64, by current age and selected background characteristics, Nigeria 1999

Background characteristic	Current age						Women age 20-49	Women age 25-49	Men age 30-64
	20-24	25-29	30-34	35-39	40-44	45-49			
Residence									
Urban	19.0	19.3	18.6	18.7	18.5	19.1	18.9	18.8	20.1
Rural	17.4	17.3	16.5	16.7	17.1	17.7	17.2	17.1	20.3
Region									
Northeast	15.8	15.2	15.3	15.1	15.1	15.7	15.3	15.2	22.2
Northwest	15.2	15.1	14.7	15.0	14.5	14.6	15.0	14.9	20.8
Southeast	19.3	18.8	18.4	19.8	19.3	18.4	18.9	18.8	19.2
Southwest	18.9	19.8	19.1	18.9	18.9	19.3	19.1	19.2	20.2
Central	18.6	18.5	18.2	18.2	17.6	18.2	18.3	18.2	19.8
Education									
No education	15.2	15.4	15.4	15.6	16.2	17.4	15.6	15.7	20.5
Primary	17.9	17.8	17.7	18.5	18.3	18.3	18.0	18.1	20.1
Secondary	19.4	19.7	19.2	19.8	19.3	19.9	19.5	19.6	20.1
Higher	a	20.8	20.2	20.4	20.8	22.9	a	20.7	20.2
All women	18.1	18.1	17.3	17.7	17.7	18.1	17.9	17.8	NA
All men	a	19.8	19.8	19.8	20.2	20.4	NA	NA	20.3

NA = Not applicable
[a] Omitted because less than 50 percent of respondents in that age group had intercourse before entering the age group

Figure 5.2
Median Age at First Sexual Intercourse among Women Age 25-49 and Men Age 30-64 by Residence, Region, and Education



NDHS 1999

Contrary to the findings for women, the median age at first sexual intercourse among men is lowest in the Southeast (19 years), Central (20 years), and Southwest (20 years) regions and highest in the Northeast region (22 years).

5.7 Recent Sexual Activity

The frequency of sexual activity directly affects a woman's chance of becoming pregnant. Information on recent sexual activity can be used to further refine measures of exposure to pregnancy. Women and men interviewed in the NDHS were asked how long ago their last sexual activity took place. Those who had sexual intercourse at least once within the four weeks prior to the survey were considered sexually active, while women who had not were further classified depending on whether they had recently given birth—a common reason for abstaining.

Tables 5.8.1 and 5.8.2 show the distribution of women and men by recent sexual activity. Slightly less than half of all women can be considered sexually active, while 12 percent have not resumed sex after a recent birth, 24 percent have had sex but not in the four weeks before the survey, and 16 percent have never had sex.

The percentage of women who are sexually active increases with age to a peak at age group 35-39 (61 percent), after which it drops to 38 percent at age group 45-49. Women who are not in marital unions are far less likely to be sexually active than women in unions; only 15 percent of women who had never married were sexually active in the month prior to the survey, with 62 percent never having had sex at all. The proportion of sexually active women is higher in rural (50 percent) than in urban (45 percent) areas. A greater proportion of women are sexually active in the northern regions (72 percent in the Northwest and 68 percent in the Northeast) than in the southern regions (38 percent in the Southeast and the Southwest). Women in the Central region (44 percent) fall in between. More than one in four women in the southern regions is currently abstaining for reasons other than a recent birth. This proportion is more than twice that of women in the northern regions.

Women with a secondary education are the least likely to be sexually active (37 percent), while those with no education are the most likely (61 percent). Those with no education or with only a primary education are more likely to practice postpartum abstinence than those with a secondary or higher education. As expected, the proportion of women who are sexually active is higher among those using some form of contraceptive method than among nonusers. The highest proportion of sexually active women is among IUD users (71 percent), while the lowest proportion is found among those using periodic abstinence.

Slightly more than half (51 percent) of all men are sexually active, while 29 percent have had sex but are not currently active, and the remaining 20 percent have never had sex (Table 5.8.2). Sexual activity of men increases with age from 10 percent of men age 15-19 years to 71 percent of men age 45-49 years, after which it declines to 61 percent of men age 55 and above. As expected, sexual activity is higher among men in polygynous unions (77 percent) than among those in monogamous unions (69 percent). One in five men who have never married are sexually active, as are 40 percent of men who are widowed, divorced, or separated (formerly married).

Table 5.8.1 Recent sexual activity: women

Percent distribution of women by sexual activity in the four weeks preceding the survey, and among those not sexually active, the duration of abstinence and whether postpartum or not postpartum abstaining, according to selected background characteristics, Nigeria 1999

Background characteristic/ contraceptive method	Sexually active in last 4 weeks	Not sexually active in last four weeks				Missing/ Does not know	Never had inter-course	Total	Number of women
		Postpartum abstaining		Not postpartum abstaining					
		0-1 years	2+ years	0-1 years	2+ years				
Current age									
15-19	24.6	5.6	0.2	10.0	1.1	1.6	56.9	100.0	1,775
20-24	49.2	13.5	0.5	16.7	2.0	2.0	15.9	100.0	1,521
25-29	60.6	13.7	0.8	15.1	2.4	3.4	4.0	100.0	1,516
30-34	58.2	17.7	0.8	15.8	2.9	3.4	1.1	100.0	1,137
35-39	61.2	12.4	1.7	16.4	5.1	2.8	0.5	100.0	992
40-44	55.4	7.6	0.8	23.0	10.2	2.5	0.4	100.0	696
45-49	38.0	3.2	0.5	26.6	27.8	3.8	0.0	100.0	568
Marriage duration (years)									
Never married	14.5	1.6	0.0	17.1	3.4	1.3	62.1	100.0	2,130
0-4	62.7	21.4	0.5	11.4	0.8	2.5	0.8	100.0	1,193
5-9	64.2	17.4	0.7	12.8	1.1	3.8	0.1	100.0	1,260
10-14	65.0	14.5	1.3	13.5	2.6	3.1	0.0	100.0	1,056
15-19	61.2	13.0	1.2	16.6	5.4	2.6	0.0	100.0	963
20-24	56.1	11.1	1.2	19.2	8.2	4.0	0.1	100.0	778
25-29	52.4	6.1	0.9	24.6	14.7	1.3	0.0	100.0	553
30+	39.7	1.1	1.0	24.3	29.0	5.0	0.0	100.0	275
Residence									
Urban	44.6	9.4	0.5	18.0	5.4	2.6	19.5	100.0	2,540
Rural	50.2	11.8	0.8	15.1	4.7	2.6	14.8	100.0	5,666
Region									
Northeast	67.7	8.9	0.5	9.4	1.6	3.3	8.7	100.0	1,292
Northwest	71.9	9.0	0.3	10.3	1.7	1.7	5.0	100.0	1,087
Southeast	38.0	8.5	0.7	18.2	7.6	2.5	24.5	100.0	1,886
Southwest	37.6	12.8	0.6	21.0	6.3	2.4	19.4	100.0	2,080
Central	44.0	14.5	1.2	16.2	4.7	3.1	16.3	100.0	1,861
Education									
No education	61.3	11.9	0.8	13.7	6.1	2.9	3.3	100.0	3,324
Primary	39.5	15.3	1.2	18.4	5.7	3.5	16.4	100.0	1,868
Secondary	36.5	8.6	0.3	16.0	2.6	1.9	34.0	100.0	2,506
Higher	56.4	2.5	0.2	22.2	5.0	1.3	12.4	100.0	508
Current contraceptive method									
No method	45.8	11.8	0.7	14.3	5.3	2.9	19.2	100.0	6,922
Pill	66.9	2.6	0.5	27.2	1.9	0.0	0.9	100.0	216
IUD	71.2	1.4	0.0	21.8	3.2	2.3	0.0	100.0	137
Periodic abstinence	52.6	16.0	1.4	23.6	3.8	1.6	0.9	100.0	375
Other	66.7	4.3	0.2	26.5	1.0	1.1	0.2	100.0	540
Total	48.4	11.1	0.7	16.0	4.9	2.6	16.3	100.0	8,206

Table 5.8.2 Recent sexual activity: men

Percent distribution of men by sexual activity in the four weeks preceding the survey, according to selected background characteristics, Nigeria 1999

Background characteristic	Sexually active in last 4 weeks	Not sexually active in last 4 weeks	Never had inter-course	Total	Number of men
Age					
15-19	10.3	16.5	73.2	100.0	511
20-24	33.5	30.7	35.8	100.0	319
25-29	57.2	30.8	12.0	100.0	366
30-34	67.3	30.5	2.1	100.0	348
35-39	69.0	30.2	0.8	100.0	275
40-44	63.9	35.5	0.5	100.0	239
45-49	70.7	29.3	0.0	100.0	197
50-54	69.9	30.1	0.0	100.0	205
55+	60.7	39.3	0.0	100.0	220
Marital status					
Never married	19.8	25.2	55.0	100.0	988
In polygynous union	76.9	23.1	0.0	100.0	328
In monogamous union	68.7	31.3	0.0	100.0	1,283
Formerly married	39.7	60.3	0.0	100.0	81
Residence					
Urban	47.1	31.5	21.4	100.0	821
Rural	52.5	27.8	19.8	100.0	1,859
Education					
No education	61.8	26.9	11.2	100.0	663
Primary	48.8	35.6	15.7	100.0	710
Secondary	40.3	26.0	33.7	100.0	986
Higher	64.9	27.2	7.9	100.0	321
Total	50.8	28.9	20.3	100.0	2,680

5.8 Postpartum Amenorrhoea, Abstinence, and Insusceptibility

Studies have shown that for a few weeks or months after the birth of a child, a woman does not ovulate and therefore is not susceptible to pregnancy. This period is known as postpartum amenorrhoea, which may be six weeks or longer, depending on whether and how frequently a woman breastfeeds. Thus, besides contraceptive use and cultural norms that may dictate sexual abstinence after childbirth, exposure to pregnancy is influenced by breastfeeding practices. The proportion of women who gave birth in the three years before the survey and who were still amenorrhoeic, abstaining, and insusceptible to the risk of conception are presented in Table 5.9. The data are grouped in intervals of two months to reduce fluctuations in the figures.

As expected, the proportion of women who are amenorrhoeic declines as the number of months since birth increases. For example, 85 percent of women who delivered less than two months before the survey are still amenorrhoeic, compared with less than 10 percent of women who delivered two years before the survey. The median duration of postpartum amenorrhoea is 13 months.

Postpartum abstinence is common in Nigeria. Almost 90 percent of women who delivered two months before the survey are abstaining from sexual relations. The proportion drops quite rapidly to about 8 percent at 24-25 months after birth. Consequently, the median duration of postpartum abstinence is only six months.

Table 5.9 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 1999

Months since birth	Percentage of births for which the mother is:			Number of births
	Amenorrhoeic	Abstaining	Insusceptible	
<2	85.4	88.7	94.0	187
2-3	80.1	71.9	89.6	192
4-5	76.4	54.5	83.7	221
6-7	62.6	49.3	75.0	199
8-9	57.7	41.1	66.7	195
10-11	55.9	43.9	68.9	168
12-13	50.8	32.3	61.3	324
14-15	47.9	27.9	54.7	301
16-17	31.5	22.4	40.2	191
18-19	25.0	22.0	35.7	149
20-21	16.0	18.7	27.8	148
22-23	13.7	9.4	20.9	146
24-25	9.1	7.7	13.5	223
26-27	7.2	8.4	13.3	271
28-29	2.6	3.2	5.1	151
30-31	1.7	5.1	5.9	121
32-33	1.2	3.6	4.8	140
34-35	3.9	5.0	6.8	155
Total	37.8	30.0	45.7	3,481
Median	12.8	6.2	15.5	-
Mean	12.9	10.6	15.6	-
Prevalence/Incidence mean	13.4	10.7	16.2	-

Because of either amenorrhoea or abstinence, 94 percent of women are considered insusceptible to the risk of pregnancy within the first two months after birth (Figure 5.3). This figure drops to 14 percent of women who delivered two years before the survey. The median duration of postpartum insusceptibility to pregnancy is about 16 months.

Because breastfeeding and postpartum abstinence practices vary considerably among different groups of women, Table 5.10 shows the median duration of postpartum amenorrhoea, abstinence, and insusceptibility by background characteristics. As mentioned above, the median duration of postpartum amenorrhoea is 13 months, sexual abstinence is 6 months, and insusceptibility is 16 months. Older women, rural women, women who live in the northern regions, and women with less education generally have shorter durations of amenorrhoea after a birth than other women, presumably because they breastfeed their babies for shorter periods of time.

Postpartum abstinence shows less variation by background characteristics, although it is interesting to note that women in the southern part of the country tend to abstain after a birth for longer periods than women in the northern parts of the country (12-13 months versus 2-4 months). These regional differences in amenorrhoea and abstinence tend to offset each other so that there is little difference in the median durations of postpartum insusceptibility by region. A major differential in the length of insusceptibility to pregnancy is education level; less-educated women remain insusceptible to pregnancy for considerably longer after a birth than women with a higher education (18 versus 7 months).

Figure 5.3
Postpartum Amenorrhoea, Abstinence, and Insusceptibility by Number of Months since Birth

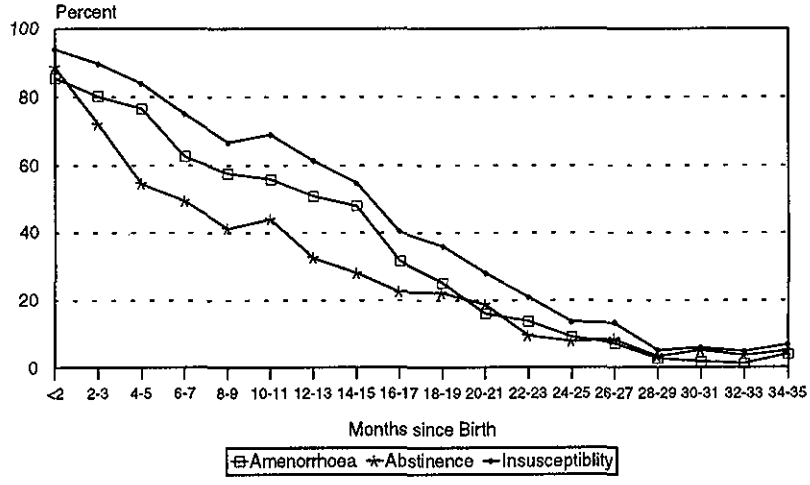


Table 5.10 Median duration of postpartum insusceptibility by background characteristics

Median number of months of postpartum amenorrhoea, postpartum abstinence, and postpartum insusceptibility, by selected background characteristics, Nigeria 1999

Background characteristic	Median duration of postpartum: Amenorrhoea	Abstinence	Insusceptibility	Number of births
Age				
<30	10.3	6.0	14.7	2,073
30+	14.2	6.4	16.3	1,407
Residence				
Urban	10.1	7.1	12.4	967
Rural	14.3	6.0	16.7	2,514
Region				
Northeast	15.9	2.4	16.1	774
Northwest	16.7	3.7	17.2	620
Southeast	7.3	6.1	12.9	631
Southwest	11.4	12.0	13.8	760
Central	13.4	13.2	17.9	695
Education				
No education	16.8	5.2	18.0	1,685
Primary	11.7	10.0	15.6	854
Secondary	8.7	6.6	12.2	807
Higher	2.5	2.9	6.9	135
Total	12.8	6.2	15.5	3,481

Note: Medians are based on current status.

5.9 Termination of Exposure to Pregnancy

Age also affects the risk of pregnancy. With increasing age, the proportion of women at risk of conceiving reduces as infertility sets in. Data on menopause are presented in Table 5.11. For this survey, a woman is considered menopausal if she is not pregnant or amenorrhoeic and either declares herself menopausal or did not have a menstrual period for six or more months before the survey. For all women age 30-49 years, 11 percent have reached menopause. As expected, the proportion of menopausal women rises with age, from 2 percent among women age 30-34 years to 55 percent among those age 48-49 years.

Table 5.11 Menopause

Prevalence of women age 30-49 who are menopausal, Nigeria 1999

Age	Percentage meno-pausal[1]	Number of women
30-34	2.4	1,137
35-39	4.5	992
40-41	14.7	433
42-43	11.7	190
44-45	26.5	313
46-47	29.6	149
48-49	55.3	180
Women 30-49	11.3	3,394

[1] Percentage of all women (numerator) who are not pregnant and not postpartum amenorrhoeic whose last menstrual period occurred six or more months preceding the survey (excludes other women who report that they are menopausal) (denominator).

CHAPTER 6

FERTILITY PREFERENCES

This chapter deals with fertility preferences of both women and men, their desire to have more children, the length of time they want to wait before having another child, their ideal family size and their attitudes towards family planning. This chapter is aimed at assessing the direction of future fertility and the need for family planning in Nigeria.

The measurement of fertility preferences, particularly attitudes towards family planning, has always been difficult due to certain limitations. This difficulty may be partly because inquiries into fertility desires tend to elicit responses from people about issues on which they may not have thought or on which they have no firm conviction.

6.1 Desire for More Children

Table 6.1 shows the percent distribution of currently married women and men by desire for children according to the number of children they already have. Two-thirds of women and 71 percent of men indicate a desire for more children.

Table 6.1 Fertility preferences by number of living children

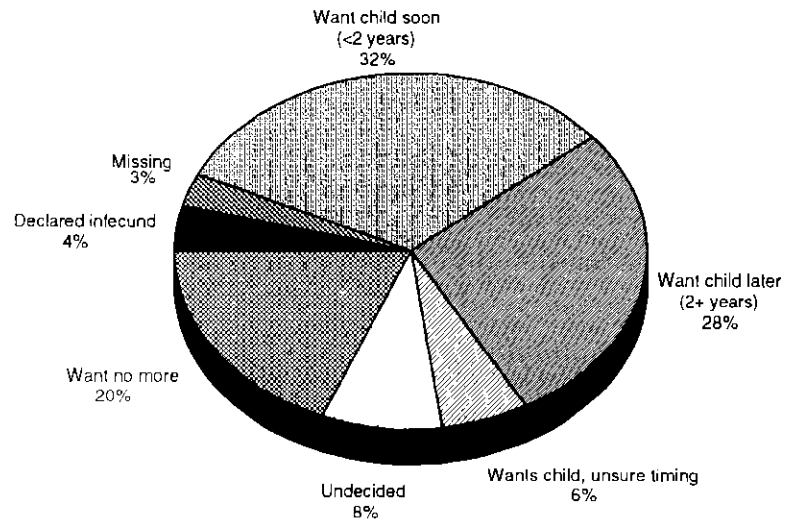
Percent distribution of currently married women and men by desire for more children, according to number of living children, Nigeria 1999

Desire for children	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
WOMEN								
Have another soon[2]	73.0	43.2	36.5	29.8	26.5	22.1	13.3	31.9
Have another later[3]	3.7	37.8	39.8	39.4	28.5	22.6	13.5	28.4
Have another, undecided when	3.8	7.2	7.7	5.7	5.8	5.0	3.3	5.7
Undecided	5.3	4.5	5.8	7.6	9.1	11.7	9.9	7.7
Want no more	2.2	1.0	4.9	10.9	22.6	32.2	52.0	19.3
Sterilised	0.0	0.0	0.2	0.1	0.0	0.3	1.0	0.3
Declared infecund	5.7	2.3	2.1	3.2	4.0	4.1	4.7	3.5
Missing	6.4	4.0	3.0	3.3	3.4	2.1	2.3	3.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	414	956	935	907	839	660	1,046	5,757
MEN								
Have another soon[2]	49.8	50.4	35.4	32.3	37.1	29.3	31.3	36.1
Have another later[3]	29.8	38.9	42.7	35.2	24.5	27.5	18.0	28.4
Have another, undecided when	8.3	6.9	9.8	5.5	3.9	5.6	6.0	6.5
Undecided	5.2	2.2	2.1	9.6	5.8	5.8	6.7	5.7
Want no more	2.1	0.6	6.4	13.6	21.8	27.9	31.1	18.3
Sterilised	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.4
Declared infecund	3.3	1.0	2.2	2.4	5.6	3.9	5.3	3.7
Missing	1.5	0.0	1.5	1.4	1.4	0.0	0.4	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	145	181	198	223	168	157	540	1,612

[1] Includes current pregnancy
[2] Wants next birth within two years
[3] Wants to delay next birth for two or more years

More than one in four women (28 percent) indicate that they want to wait two or more years before having another child (Figure 6.1). These women are potential contraceptive users for child spacing. About one-third of women want another child soon, while 6 percent want more children but are unsure of the timing, and 8 percent are undecided whether they want another child or not. One in five women want no more children.

Figure 6.1
Fertility Preferences of Currently Married Women 15-49, Nigeria 1999



Note: "Want no more" includes sterilised women.

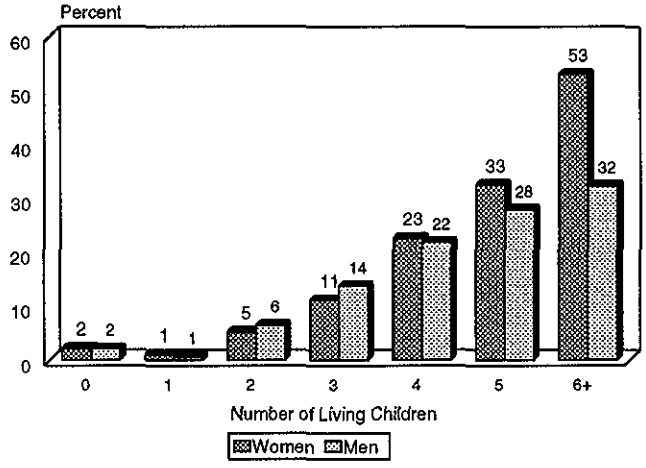
NDHS 1999

As expected, the proportion of women who want to stop childbearing rises with the number of living children (Figure 6.2), ranging from a low of 2 percent for childless women to a high of 52 percent for women with six or more children. Conversely, the desire to have a child soon declines with increasing number of children. While 73 percent of childless women want to have a child within the next two years, only 13 percent of those with six or more children want another soon.

For those who want another child later, the pattern rises and then falls. The desire to have another child later increases markedly from 4 percent for those with no living child to 38 percent for those with one child and 40 percent for those with two children. The percentages drop among women with higher parity to as low as 14 percent among those with six or more children.

Data from the male respondents show that 36 percent want to have another child soon, while 28 percent want to have another child later, and 7 percent of the men want more children but are unsure of the timing. Moreover, 6 percent of men are undecided about whether or not they want another child and 18 percent say they want no more children. As with women, the proportion of men who want no more children generally rises with the number of living children they already have.

Figure 6.2
Desire to Limit Childbearing among Currently Married Women and Men, by Number of Living Children, Nigeria 1999



Note: *Desire to limit childbearing* includes respondents who stated that they did not want any more children and those who have been sterilised.

NDHS 1999

On a general note, about half of women and men want either to space their children (have another later) or to stop childbearing altogether (want no more). This high proportion of "spacers" and "limiters" indicates a considerable interest in controlling fertility and thus a potential demand for family planning services. Desire to limit childbearing among currently married women and men by number of living children is presented in Figure 6.2. The figure shows that women have a stronger desire to limit fertility than men, especially after four children.

Compared with data from the 1990 NDHS, there has been little change in the desire for more children. Perhaps most significant is that the proportion of married women who want no more children increased from 15 percent in 1990 to 19 percent in 1999, while the proportion who want another child later declined somewhat (from 33 to 28 percent). This implies a shift from interest in spacing children to increased desire to limit fertility. The proportion who are undecided about their fertility desire declined from 14 percent in 1990 to 8 percent in 1999.

Table 6.2 presents data on fertility preference by age of currently married women. It shows that the desire to have another child soon decreases as age increases, from 43 percent of women age 15-19 years to 12 percent of those age 45-49 years. The desire to have another child later also generally decreases as age increases, declining from 47 percent of those age 20-24 years to 3 percent of those 45-49. Conversely, the proportion of women who want no more children increases with age, from a low of 1 percent of women age 15-19 years to a high of 59 percent of those age 45-49 years. Similarly, the proportion of women who declare themselves infecund (unable to bear children) increases from1 percent for the youngest age group (15-19 years) to 16 percent for the oldest age group (45-49 years). The general pattern indicates that the greatest need for family planning services among older women is for limiting births, while among younger women, the need is for methods to space births.

Table 6.2 Fertility preferences by age

Percent distribution of currently married women by desire for more children, according to age, Nigeria 1999

Desire for children	Current age							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	
Have another soon[1]	43.2	35.5	38.3	34.2	28.6	21.0	12.3	31.9
Have another later[2]	35.7	46.7	40.0	30.2	15.6	8.0	2.9	28.4
Have another/undecided when	8.0	7.6	6.5	6.0	5.3	2.4	1.6	5.7
Undecided	5.2	5.1	5.8	10.3	11.7	9.7	4.3	7.7
Want no more	0.9	1.2	4.9	14.4	30.9	48.9	59.2	19.3
Sterilised	0.0	0.0	0.0	0.2	0.9	0.2	0.8	0.3
Declared infecund	1.8	0.5	1.2	1.8	4.4	6.2	15.9	3.5
Missing	5.3	3.4	3.3	2.8	2.6	3.8	3.0	3.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	472	934	1,272	1,032	925	637	484	5,757

[1] Wants next birth within two years
[2] Wants to delay next birth for two or more years

Data on the desire for future childbearing among couples is presented in Table 6.3, according to the number of living children. To a large extent, couples have similar desires for having more children. Of the 856 couples for which both wife and husband were interviewed, 57 percent agree on having more children, 10 percent agree on having no more children, and 11 percent disagree about their desires for more children. For 5 percent of couples, either the wife or the husband is infecund (cannot have more children) and for 17 percent of couples, either the wife or the husband is undecided about whether she or he wants more children. The proportion of couples in which the husband wants more children and the wife does not (6 percent) is almost the same as the proportion in which the wife wants more children and the husband does not (5 percent)—a finding that refutes the general notion that men are more pronatalist than women.

Table 6.3 Desire for more children among monogamous couples

Percent distribution of monogamous couples by desire for more children, according to number of living children reported, Nigeria 1999

Number of living children reported	Both want more	Husband more/ wife no more	Wife more/ husband no more	Both want no more	Husband/ wife infecund	One or both undecided/ missing	Total	Number of couples
Same number								
0	76.4	0.0	0.0	0.0	3.9	19.8	100.0	81
1-3	75.7	3.1	2.1	2.7	2.4	14.0	100.0	290
4-6	43.7	9.9	7.0	19.0	2.6	17.8	100.0	157
7-9	7.6	14.8	7.0	45.5	12.8	12.3	100.0	57
10+	*	*	*	*	*	*	100.0	2
Different number								
Husband > wife	48.8	5.6	6.2	8.4	8.9	22.1	100.0	207
Wife > husband	55.1	7.7	12.0	7.4	5.0	12.8	100.0	63
Total	57.2	5.9	4.8	10.0	5.0	17.1	100.0	856

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

Agreement among couples about future childbearing desires is higher among couples with fewer children, while the proportion of couples who disagree on their desired fertility rise with increase in family size. For example, three-quarters of couples with three or less children agree that they want more children. Among couples with seven to nine children, more than half agree on future childbearing preferences, with the majority not wanting any more children.

Table 6.4 presents the percent distribution of currently married women and men who want no more children by number of living children and selected background characteristics. The table indicates that the desire to stop having children is higher among urban women (25 percent) than among rural women (18 percent). The difference between urban and rural women is more pronounced among respondents who have had three or more children.

Table 6.4 Desire to limit childbearing by background characteristics

Percentage of currently married women and men who want no more children by number of living children and selected background characteristics, Nigeria 1999

Background characteristic	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
WOMEN								
Residence								
Urban	1.7	0.3	7.7	17.7	34.7	42.6	60.0	24.5
Rural	2.3	1.2	4.1	7.8	17.1	28.1	50.7	17.5
Region								
Northeast	2.7	1.9	3.7	5.1	5.8	8.6	20.2	6.9
Northwest	3.4	0.5	2.6	4.7	7.5	17.7	26.1	7.4
Southeast	2.0	0.0	4.3	5.6	23.1	38.9	70.0	30.4
Southwest	2.4	1.0	8.7	20.3	42.0	57.3	73.6	31.2
Central	0.0	1.1	5.3	11.9	23.8	28.3	51.9	19.6
Education								
No education	2.9	1.5	5.1	10.4	15.3	23.1	43.1	16.4
Primary	1.7	0.0	1.9	9.6	24.5	38.2	65.6	25.7
Secondary	1.4	0.8	4.5	8.8	31.5	44.0	63.9	17.0
Higher	0.0	0.0	20.1	27.4	58.3	66.5	86.4	34.6
Total	2.2	1.0	5.1	11.0	22.6	32.5	53.0	19.6
MEN								
Residence								
Urban	2.3	2.0	13.2	23.5	35.5	45.1	40.0	25.7
Rural	2.1	0.0	2.5	8.5	16.0	21.6	29.9	16.0
Region								
Northeast	4.9	0.0	6.1	16.0	12.5	17.1	8.4	8.8
Northwest	2.7	0.0	0.0	0.0	8.2	3.6	8.0	3.9
Southeast	0.0	0.0	5.1	20.2	33.3	37.8	59.3	33.7
Southwest	0.0	2.3	12.0	24.8	36.4	44.9	46.1	29.7
Central	0.0	0.0	6.3	0.0	16.3	26.8	26.6	14.4
Education								
No education	2.5	0.0	9.9	2.8	9.2	13.1	16.1	10.4
Primary	2.5	0.0	1.5	13.7	23.9	40.3	48.6	24.6
Secondary	2.7	1.7	3.3	12.0	23.5	27.4	38.2	17.6
Higher	0.0	0.0	19.0	33.6	44.3	48.4	41.0	28.9
Total	2.1	0.6	6.4	13.6	21.8	27.9	32.3	18.8

Note: Women and men who have been sterilised are considered to want no more children.
[1] Includes current pregnancy

The proportion of women who want no more children declines rapidly from the south to the north as shown by the fact that about 30 percent of women in the southern regions want no more children, compared with 20 percent of women in the Central region and only 7 percent of women in the northern regions. The proportion of women who want no more children is highest among those with more than a secondary education (35 percent) and lowest among those with no education (16 percent). However, there is no consistent pattern for those with primary and secondary levels of education.

The data for men show patterns similar to women. The desire to have no more children is higher in the urban than in the rural areas, with the difference more pronounced among men with three or more living children. Regional variations show that the proportion who want no more children is highest for the Southeast region (34 percent), followed by the Southwest region (30 percent), the Central region (14 percent), the Northeast region (9 percent), and the Northwest region (4 percent). For educational differences, the proportion of men who want no more children is highest among those with a higher education (29 percent) and lowest among those with no education (10 percent).

6.2 Need for Family Planning Services

One of the concerns of family planning programs is to estimate the number of women or couples who are in need of services as well as the potential demand for services. The concept of *unmet need* for family planning has evolved to define this indicator. Fecund women who say either they do not want any more children or that they want to wait two or more years before having another child, but are not using contraception, are considered to have an *unmet need* for family planning.[1] Women who are using family planning methods are said to have a *met need* for family planning. Women with unmet and met need constitute the *total demand* for family planning. Table 6.5 presents data on unmet need, met need, and total demand for family planning, according to whether the need is for spacing or limiting births.

The data indicate that almost one in every five married women (18 percent) can be said to have an unmet need for family planning, 13 percent for spacing purposes and 5 percent for limiting births. Unmet need is rather uniform across various groups of women, although it is somewhat higher among women age 20-24, women in the Northwest region, and those with a primary education only. As expected, unmet need for spacing methods is higher among younger women, while unmet need for limiting purposes is higher among older women.

There are large differences in unmet need and total demand for family planning services in the regions. Married women in the Northwest and the Southeast have the greatest unmet need (24 and 21 percent, respectively), while those in the Northeast show the lowest unmet need (12 percent). Almost all the unmet need in Northwest is for spacing purposes. With respect to total demand for family planning, it is considerably higher among women in the south than in the north. Total demand for family planning comprises 44 percent of married women in the Southeast, 42 percent in the Southwest, and 34 percent in Central region, while it is only 28 percent in the Northwest and 15 percent in the Northeast.

Combining unmet need with the proportion of women who are currently using contraception (met need) gives a total demand for family planning of 33 percent of married women. Therefore, if all women who say they want to space or limit their children were to use a contraceptive method, the contraceptive prevalence rate would increase from 15 to 33 percent of married women.

[1] For an exact description of the calculation, see footnote 1, Table 6.4.

Table 6.5 Need for family planning

Percentage of currently married women, unmarried women, and all women with unmet need for family planning and with met need for family planning, and the total demand for family planning, by selected background characteristics (currently married women), Nigeria 1999

Background characteristic	Unmet need for *family planning*[1]			Met need for family planning *(currently using)*[2]			Total demand for *family planning*			Percentage of demand satisfied	Number of women
	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total		
Respondent's age											
15-19	14.0	0.8	14.8	4.2	0.0	4.2	18.2	0.8	19.0	21.9	472
20-24	22.4	0.3	22.7	8.1	0.1	8.2	30.5	0.4	30.9	26.5	934
25-29	15.9	1.2	17.0	12.4	1.6	13.9	28.2	2.7	30.9	45.0	1,272
30-34	13.7	4.2	17.9	14.9	5.2	20.1	28.6	9.4	38.0	52.8	1,032
35-39	9.0	9.1	18.1	8.5	12.2	20.7	17.5	21.3	38.9	53.3	925
40-44	4.8	10.7	15.4	4.2	16.3	20.5	9.0	26.9	35.9	57.0	637
45-49	2.3	9.6	11.9	2.7	13.8	16.5	5.0	23.4	28.4	58.0	484
Residence											
Urban	10.9	5.6	16.6	13.5	9.9	23.4	24.4	15.5	40.0	58.5	1,670
Rural	13.7	4.2	17.9	7.3	4.7	12.0	21.0	8.9	29.9	40.2	4,087
Region											
Northeast	10.2	2.1	12.2	2.3	0.7	3.1	12.5	2.8	15.3	20.0	1,137
Northwest	21.9	2.4	24.4	2.4	0.8	3.2	24.3	3.3	27.6	11.7	986
Southeast	14.0	6.8	20.9	13.1	10.4	23.5	27.1	17.2	44.4	53.0	946
Southwest	9.2	6.6	15.7	14.7	11.5	26.2	23.9	18.1	41.9	62.5	1,367
Central	11.6	4.7	16.3	11.3	6.5	17.8	22.9	11.2	34.1	52.2	1,321
Education											
No education	12.0	3.6	15.6	3.1	2.9	6.0	15.1	6.6	21.7	27.8	3,032
Primary	14.7	7.0	21.7	10.8	9.1	19.9	25.5	16.2	41.6	47.9	1,298
Secondary	15.5	4.1	19.5	19.3	7.8	27.1	34.8	11.9	46.7	58.1	1,123
Higher	5.2	5.5	10.7	24.1	20.7	44.8	29.3	26.2	55.5	80.7	303
Total women currently married	12.9	4.6	17.5	9.1	6.2	15.3	22.0	10.8	32.8	46.7	5,757
Total women not currently married	3.4	0.2	3.6	15.6	0.8	16.4	19.0	1.0	20.0	82.1	2,449
All women	10.1	3.3	13.3	11.0	4.6	15.7	21.1	7.9	29.0	54.0	8,206

[1] Unmet need for *spacing* includes pregnant women whose pregnancy was mistimed, amenorrhoeic women whose last birth was mistimed, and 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 women who are unsure whether they want another child or who want another child but are unsure when to have the birth. Unmet need for *limiting* refers to pregnant women whose pregnancy was unwanted, amenorrhoeic women whose last child was unwanted, and women who are neither pregnant nor amenorrhoeic and who are not using any method of family planning and who want no more children.

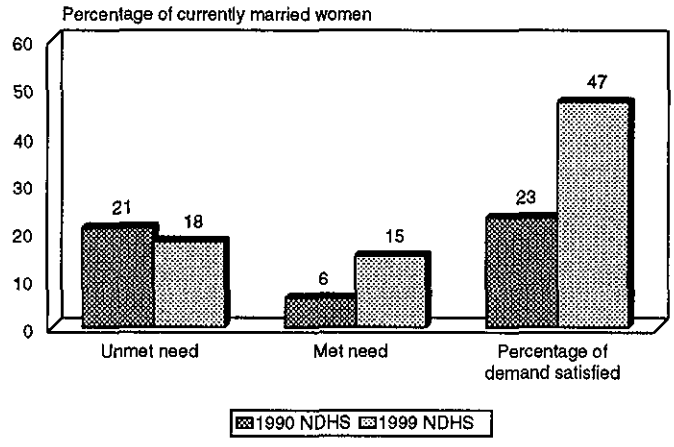
[2] Using for *spacing* is defined as women who are using some method of family planning and say they want to have another child or are undecided whether to have another. Using for *limiting* is defined as women who are using and who want no more children. Note that the specific methods used are not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

Currently, 47 percent of the demand for family planning is being met (see Table 6.5, next-to-last column), which means that about half of the need of those who want family planning is unfulfilled.

There has been a reduction in the level of unmet need since 1990 when 21 percent of married women had an unmet need for family planning (FOS, 1992:72). The reduction is due to the increase in contraceptive use (met need), which rose from 6 to 15 percent of married women. Consequently, the percentage of demand that was satisfied in 1999 (47 percent) is a remarkable improvement over the 23 percent in the 1990 NDHS.

Figure 6.3 shows a comparison of unmet need, met need, and total demand for family planning as well as the demand satisfied among currently married women for 1990 and 1999. This figure indicates the significant improvement in met need, the percentage of demand satisfied, and the consequent decline in unmet need.

Figure 6.3
Trends in Unmet Need, Met Need, and Percentage of Demand for Family Planning that is Satisfied



6.3 Ideal Family Size

Data on ideal family size norms were obtained from responses to two major questions. Respondents who had no children were asked how many children they would like to have if they could choose exactly the number of children to have in their whole life. Those who had living children were asked how many children they would like to have if they could go back to the time when they did not have any children and could choose exactly the number of children to have in their whole life. These questions on ideal family size aim at two things: first, among respondents who have not started childbearing, the data provide an idea of the total number of children they will have in the future (to the extent that they are able to realise their fertility desires), and second, among older, higher parity respondents, these data provide a measure of the level of unwanted fertility. It should be noted that some respondents, especially those for whom fertility control is an unfamiliar concept, may have had difficulty answering this hypothetical question.

The data in Table 6.6 indicate that 18 percent of women and 22 percent of men gave non-numeric responses such as "it is up to God," "any number," or "don't know." Those who gave numeric responses generally want rather large families. More than 40 percent of women want six or more children, while about one-third of women say their ideal number of children is four or five. Less than 3 percent of women want two or fewer children, the level necessary for long-term population stabilisation. Assuming that women who already have many children may find it difficult to admit that they may have ideally wanted fewer, it is useful to examine the ideal family sizes cited by women of lower parities. Yet, even among women with three or fewer children, only a small fraction (less than 4 percent) say they want two or fewer children. It is clear that the two-child norm is still far from being accepted in Nigeria.

Table 6.6 Ideal and actual number of children

Percent distribution of all women and men by ideal number of children and mean ideal number of children for all women and men and for currently married women and men, according to number of living children, Nigeria 1999

Ideal number of children	Number of living children[1]							Total
	0	1	2	3	4	5	6+	
WOMEN								
0	1.6	0.5	0.1	0.2	0.2	0.2	0.3	0.7
1	0.0	1.9	0.1	0.0	0.0	0.0	0.2	0.3
2	2.7	1.2	3.3	0.6	0.4	0.7	0.5	1.6
3	8.5	5.2	3.9	6.3	1.3	2.2	0.8	4.9
4	28.9	20.9	19.8	16.4	18.0	4.0	5.3	18.8
5	16.6	13.0	16.4	15.5	11.1	18.5	5.9	14.1
6+	29.0	38.9	40.2	42.4	48.3	53.4	62.5	41.9
Non-numeric response	12.5	18.3	16.2	18.5	20.8	21.1	24.5	17.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	2,492	1,072	1,006	947	882	697	1,110	8,206
Mean ideal number for:[2]								
All women	5.2	6.1	6.2	6.2	6.6	7.1	7.8	6.2
Number of women	2,180	876	843	772	698	550	838	6,756
Currently married women	6.6	6.2	6.2	6.2	6.5	7.1	7.8	6.7
Number of women	325	780	783	733	662	521	788	4,593
MEN								
0	0.5	0.0	0.0	0.0	0.0	0.7	0.0	0.3
1	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.2
2	3.0	1.5	2.4	0.4	0.0	0.5	0.0	1.6
3	9.1	11.0	5.5	6.4	1.1	3.9	1.5	6.3
4	20.6	17.2	16.3	9.7	12.8	4.9	3.6	14.1
5	18.7	13.3	18.0	11.1	9.6	15.8	3.6	13.7
6+	33.9	35.7	40.5	52.4	47.5	44.9	52.4	41.5
Non-numeric response	13.9	20.8	16.9	20.0	29.0	29.3	38.9	22.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	1,145	197	215	234	174	163	552	2,680
Mean ideal number for:[2]								
All men	6.1	7.0	6.6	8.6	8.8	8.3	12.6	7.8
Number of men	985	156	179	187	123	115	337	2,083
Mean ideal number for:[2]								
Currently married men	8.6	7.2	6.6	8.6	8.9	8.3	12.6	9.3
Number of men	118	140	163	177	119	111	328	1,156
Monogamous men	9.0	7.3	6.6	8.8	8.8	7.8	11.2	8.7
Number of men	101	121	144	150	92	82	192	881
Polygynous men	6.0	7.1	6.3	7.9	9.2	9.9	14.5	11.3
Number of men	16	19	19	28	28	29	136	274

[1] Includes current pregnancy
[2] Means are calculated excluding women and men giving non-numeric responses.

This desire for large families is reflected in the mean ideal family size which is 6.2 children among women and 7.8 among men. The mean ideal number of children increases with the number of living children, from 5.2 children for childless women to 7.8 children for women with six or more children. Similarly, the percentage of women who want to have six or more children, for example, is 29 percent among childless women and rises steadily with parity to 63 percent for those who already have six or more children.

This correlation may be explained in several ways. First, to the extent that they are able to implement their preferences, respondents who want larger families will tend to actually have them. Second, men and women may adjust their preferences upward through rationalisation as the actual number of living children increases. Finally, respondents with larger families, being older on average than those with smaller families, may have larger ideal family sizes because of attitudes they acquired 20 to 30 years ago.

The ideal family size is slightly higher for married women than for all women. The differences are much larger among men, for whom the mean ideal number of children is 9.3 among married men, compared with only 7.8 among all men.

For each level of parity, the mean ideal number of children reported by men is higher than that reported by women. For example, women with six or more living children gave a mean ideal number of children of 7.8 whereas men with six or more living children gave a mean of 12.6 children.

Compared with the figures from the 1990 NDHS in which women reported a mean ideal number of children of 5.8, there has been a rise in the ideal number, although comparisons are made more difficult by the fact that 60 percent of women in the 1990 survey gave non-numeric responses. The 1988 population policy advised a fertility goal of an average of four children per woman. Hence, in both the 1990 and 1999 NDHS, respondents reported an ideal number of children that was about 50 percent higher than the policy target.

Table 6.7 presents the mean ideal number of children by age and selected background characteristics for women and men. Ideal family size increases progressively with age, from 5.6 for women age 15-19 years to 7.0 for women age 45-49 years. Among the male respondents, mean ideal number of children is 6.1 among men age 15-19 years and 9.9 among those age 45-49 years.

Table 6.7 Mean ideal number of children by background characteristics

Mean ideal number of children for all respondents, by age and selected background characteristics, Nigeria 1999

Background characteristic	Current age							All women	All men
	15-19	20-24	25-29	30-34	35-39	40-44	45-49		
Residence									
Urban	4.9	5.0	5.1	5.4	5.8	6.3	6.0	5.3	6.1
Rural	5.9	6.1	6.3	6.9	7.4	7.4	7.4	6.5	8.6
Region									
Northeast	7.3	7.8	7.5	9.0	9.6	9.3	8.4	8.2	10.6
Northwest	8.0	7.6	8.3	8.3	9.2	7.9	8.0	8.2	13.4
Southeast	5.5	5.3	5.5	5.9	6.6	6.9	7.1	5.8	6.6
Southwest	4.6	4.6	4.9	5.1	5.5	6.2	6.4	5.1	5.5
Central	5.1	5.1	5.7	6.1	6.5	7.1	6.9	5.8	7.3
Education									
No education	7.7	7.8	7.7	7.8	8.1	7.4	7.5	7.7	12.5
Primary	5.5	5.6	5.8	6.0	6.4	7.1	6.6	6.0	7.7
Secondary	4.9	4.8	5.1	5.4	5.8	6.4	5.9	5.1	6.0
Higher	3.4	4.3	4.2	4.6	4.5	4.6	5.1	4.4	6.2
All women	5.6	5.7	6.0	6.4	6.9	7.1	7.0	6.2	NA
All men	6.1	6.4	6.8	7.2	8.0	10.1	9.9	NA	7.8

NA = Not applicable

Rural women and men are more likely to want larger families than urban women and men. For women, this is true at every age group, and rural respondents want about one child more than their urban counterparts. The northern and southern regions differ by about three children in mean ideal number of children. Although the women in the Northeast and Northwest regions reported a mean of 8.2 children, those in the Southeast and Central regions reported a mean of 5.8 children and women in the Southwest region reported a mean of 5.1 children.

Ideal family size shows a strong negative correlation with women's level of education, declining from 7.7 children among women with no education to 4.4 children for women with a higher education. Moreover, this correlation is true at all ages. For men, the mean ideal number of children declines from 12.5 for those with no education to 6.2 children among those with a higher education.

6.4 Planning Status of Births

The NDHS collected information on births in the three years preceding the survey and any current pregnancy as to whether the pregnancy was planned (wanted then), unplanned (wanted later), or not wanted at all (wanted no more). The purpose of these questions was to assess how successfully couples control their fertility. The validity of the responses depends to a large extent on how honestly the questions are answered and how well the respondents remember their desires for pregnancies at the time. Mistimed and unwanted pregnancies at the time of conception may turn out to be wanted children after birth, which makes assessment of unplanned births more difficult.

Table 6.8 shows the percent distribution of births in the three years preceding the survey by fertility planning status, according to birth order and mother's age at birth. More than three-quarters of births were wanted at the time of conception, while 16 percent were mistimed and 3 percent were not wanted at the time they were conceived. As expected, the percentage of births that were not wanted increases with birth order (from less than 1 percent of first births to 6 percent of fourth or higher order births). Unwantedness also

Table 6.8 Fertility planning status

Percent distribution of births (including current pregnancy) in the three years preceding the survey by fertility planning status, according to birth order and mother's age at birth, Nigeria 1999

Birth order and mother's age at birth	Planning status of birth			Missing	Total	Number of births
	Wanted then	Wanted later	Not wanted			
Birth order						
1	79.5	16.9	0.6	3.0	100.0	900
2	82.7	14.2	0.6	2.5	100.0	756
3	82.9	13.8	1.0	2.3	100.0	695
4+	73.6	16.6	5.9	4.0	100.0	2,030
Age at birth						
<19	77.7	18.5	0.8	3.1	100.0	714
20-24	79.8	17.1	0.6	2.5	100.0	1,147
25-29	80.6	14.4	1.4	3.5	100.0	1,170
30-34	77.4	15.1	4.8	2.7	100.0	757
35-39	70.3	14.5	9.8	5.4	100.0	441
40-44	70.8	9.6	14.8	4.8	100.0	124
45-49	44.9	17.6	34.0	3.5	100.0	27
Total	77.8	15.8	3.1	3.3	100.0	4,381

Note: Includes current pregnancy

increases with the mother's age at the time of birth. For example, less than 1 percent of births to women age 24 and below were unwanted, compared with 34 percent of births to women age 45-49 years. This pattern may be caused by the fact that a lower proportion of older women than younger women are using contraception and the fact that older women are more likely to have achieved their desired family size and therefore consider an additional pregnancy unwanted. The percentage of births considered mistimed (wanted later) shows little difference with birth order and the age of mother at the time of the birth.

Compared with data from the 1990 NDHS, there has been an increase in the proportion of mistimed births. In 1990, only 8 percent of births were wanted later, compared with 16 percent of births in the 1999 survey. The proportion of unwanted births barely changed over the same period, rising from 2 to 3 percent of all births.

Table 6.9 Wanted fertility rates

Total wanted fertility rates and total fertility rates for the five years preceding the survey, by selected background characteristics, Nigeria 1999

Background characteristic	Total wanted fertility rates	Total fertility rates
Residence		
Urban	4.2	4.5
Rural	5.1	5.4
Region		
Northeast	6.4	6.8
Northwest	6.0	6.5
Southeast	4.2	4.6
Southwest	4.2	4.5
Central	4.2	4.5
Mother's education		
No education	5.8	6.1
Primary	5.1	5.6
Secondary	4.4	4.9
Higher	(2.3)	(2.4)
Total	4.8	5.2

Note: Figures in parentheses are based on 25-49 children. Rates are calculated based on women age 15-49 in the period 1-59 months preceding the survey. he total fertility rates are those presented in Table 3.2.

Table 6.9 presents the total wanted fertility rate and total fertility rates for the three years preceding the survey by selected background characteristics. The total wanted fertility rate is calculated in the same manner as the total fertility rate, but unwanted births are excluded from the numerator. For this purpose, unwanted births are defined as births that exceed the number considered ideal by the respondent. This rate expresses, in theory, what the level of fertility would have been if in the three years preceding the survey, all unwanted births were eliminated. A comparison of the two rates should suggest the potential effect of the elimination of unwanted births.

The total wanted fertility rate is 4.8 children per woman, which is 0.4 less than the actual total fertility rate (TFR) of 5.2 (see Table 3.1). The difference implies a low prevalence of unwanted births in Nigeria. There is a decline in both the wanted and actual fertility rates since 1990, when rates were 5.8 and 6.0, respectively. Differences between the wanted TFRs and actual TFRs are fairly uniform across all groups of women, with the former being generally 0.2 to 0.4 less than the latter.

CHAPTER 7

INFANT AND CHILD MORTALITY

7.1 Introduction

Rates of infant and child mortality reflect a country's level of socioeconomic development and quality of life. This chapter examines the mortality of children under five in Nigeria. Information on trends and differentials in neonatal, postneonatal, and infant and child mortality, as well as information on patterns of fertility associated with high mortality risk, is provided. Mortality estimates are disaggregated by sex, socioeconomic and demographic characteristics, region, and other factors in order to identify segments of the population requiring special attention. This information is useful for monitoring and evaluating population and health programmes and policies. For example, the 1988 National Policy on Population (NPP) aims to reduce the infant mortality rate to 30 per 1,000 live births by the year 2000. Data from the 1999 NDHS present an opportunity to assess whether this goal was met. Moreover, infant and child mortality rates are inputs for population projections.

In this report, mortality in early childhood is measured using the following five rates:

Neonatal mortality:	the probability of dying within the first month of life
Postneonatal mortality:	the difference between infant and neonatal mortality
Infant mortality (1q0):	the probability of dying before the first birthday
Child mortality (4q1):	the probability of dying between the first and fifth birthday
Under-five mortality (5q0):	the probability of dying between birth andthe fifth birthday.

All rates are expressed as deaths per 1,000 live births, except child mortality, which is expressed as deaths per 1,000 children surviving to the first birthday.

Childhood mortality rates are derived from the birth history section of the Womn's Questionnaire. During the survey, respondents were asked questions about their childbearing experience, i.e., their total number of sons and daughters who live in the household, who live elsewhere, or who have died. Then for each live birth, information on name, date of birth, sex, and survivorship status was recorded for any living child; information about his/her age (in completed years) and whether the child resided with his/her mother was obtained. For all children who had died, the respondent was asked their age at death.

7.2 Assessment of Data Quality

The reliability of early childhood mortality rates from birth history depends on the accuracy of reporting by respondents. In cultural settings, such as in Nigeria, where there is reluctance to speak about the dead, many mothers may omit dead children. Therefore, special skills are required to elicit accurate information from respondents about their deceased children. An examination of the birth history data in the 1999 NDHS (see Appendix C) shows evidence of omission of births and deaths, especially in the three years preceding the date of interview. Such omissions may result from interviewers displacing births to avoid the

numerous health questions that were to be asked about live births since January 1996. The conclusion of an in-depth assessment of the mortality data is that the reported rates are underestimates (see Appendix C.4). Nevertheless, the reported results are presented here in the belief that they may provide some useful insight into infant and child mortality conditions in Nigeria.

7.3 Levels of Childhood Mortality

Table 7.1 shows neonatal, postneonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey. The infant mortality rate (IMR) for the most recent period, 0-4 years before the survey, is 75 per 1,000 live births. The IMR for 1985-89 (10-14 years before the survey) is 77 per 1,000 live births. This rate is lower than the 87 per 1,000 live births reported for the period 1986-90 obtained from the 1990 NDHS and probably reflects the underreporting of mortality for the 1999 survey (see Appendix C.4).

The neonatal mortality rate is 37 per 1,000 live births and the postneonatal mortality rate is almost identical (38). Under-five mortality in Nigeria is 140 per 1,000 live births, a high level of mortality even by African standards. Under-five mortality for the 10-14 years before the survey (1985-89) is 142 per 1,000, which is low relative to the 1990 NDHS estimate of 192 per 1,000 for the same period.

Table 7.1 Rates of early childhood mortality

Neonatal, postneonatal, infant, child, and under-five mortality by five-year periods preceding the survey, Nigeria 1999

Years preceding survey	Neonatal mortality (NN)	Postneonatal mortality (PNN)	**Infant mortality** ($_1q_0$)	Child mortality ($_4q_1$)	**Under-five mortality** ($_5q_0$)
0-4	36.9	38.3	75.2	70.3	140.2
5-9	33.0	33.1	66.2	63.9	125.8
10-14	35.8	41.3	77.0	70.8	142.3

Note: See Appendix C for discussion of the quality of data.

7.4 Socioeconomic Differentials

The risk of early childhood death is higher in some subgroups of the population than in others. Table 7.2 shows the socioeconomic differentials in infant and child mortality in the 10 years before the 1999 NDHS. Urban areas have substantially lower childhood mortality rates than rural areas. It appears that a relatively larger proportion of infant deaths in urban areas occurs in the first month of life, while a slightly higher proportion of rural infant deaths occurs after the first month of life.

Infant and child mortality rates also vary according to mothers' region of residence. Under-five mortality in the ten years before the survey was highest in the Northwest (188 per 1,000 live births) and Notheast regions (175) and lowest in the Central region (84). The extent to which these differentials are real or due to differential underreporting of deaths is unclear.

Table 7.2 Neonatal, postneonatal, infant, child, and under-five mortality by socioeconomic characteristics

Neonatal, postneonatal, infant, child, and under-five mortality for the ten-year period preceding the survey, by socioeconomic characteristics, Nigeria 1999

Socioeconomic characteristic	Neonatal mortality (NN)	Post-neonatal mortality (PNN)	**Infant mortality** ($_1q_0$)	Child mortality ($_4q_1$)	**Under-five mortality** ($_5q_0$)
Residence					
Urban	36.2	23.1	59.3	51.6	107.8
Rural	34.6	40.4	75.0	73.4	142.9
Region					
Northeast	44.5	34.9	79.4	104.1	175.2
Northwest	25.1	57.5	82.6	115.1	188.2
Southeast	37.3	37.1	74.3	65.6	135.0
Southwest	42.6	27.3	69.9	33.9	101.5
Central	23.8	26.9	50.7	35.5	84.4
Mother's education					
No education	35.4	41.5	76.9	86.6	156.8
Primary	36.1	35.1	71.2	54.5	121.8
Secondary	34.5	24.5	59.0	39.3	95.9
Higher	25.3	15.2	40.5	13.0	53.0
Medical maternity care[1]					
No antenatal or delivery care	46.4	65.0	111.5	NA	NA
Either antenatal or delivery care	31.9	32.0	63.9	NA	NA
Both antenatal and delivery care	31.6	22.6	54.3	NA	NA
Total	35.0	35.8	70.8	67.4	133.4

NA = Not applicable
[1] Based on births in the five years preceding the survey

Mother's level of education is strongly related to levels of infant and child mortality. Educated mothers normally have better access to resources needed for improved child survival. In the 1999 NDHS, large differentials in childhood mortality rates by mother's education are observed. Mortality among infants was lowest among children of mothers with a pos-secondary education (41 per 1,000 live births) and highest among infants of mothers with no schooling (77 per 1,000 live births). Similarly, under-five mortality rates were highest among children of mothers with no schooling (157 per 1,000 live births) and lowest among those whose mothers had a postsecondary education (53 per 1,000 live births). These rates indicat that mothers with no education are almost three times as likely to have an infant die in the first year of life as those with a postsecondary education.

Table 7.2 also shows the relationship between antenatal care and delivery assistance by a trained medical person on one hand and infant mortality on the other. In general, infants whose mother received no medical maternity care were about twice as likely to die as those whose mothers received the basic medical care.

7.5 Demographic Differentials

The risk of infant death is influenced by biodemographic factors such as birth intervals, mother's age at birth, and birth order. Table 7.3 presents the relationship between infant and child mortality and various biodemographic variables. As is commonly observed, the 1999 NDHS data show that male infants

have higher risk of death than females. Infants of older mothers (40-49) are about twice as likely to die as infants of younger mothers (<40 years). Similarly, higher order births have elevated risks of dying in infancy. Seventh and higher births are twice as likely to die as infants as second and third births.

The 1999 NDHS also shows that short birth intervals (under two years) are associated with higher infant deaths. Infants born within two years of a preceding birth were twice as likely to die as those born after three years of a preceding birth. The level of under-five mortality also decreases as the spacing between births increases.

Table 7.3 Neonatal, postneonatal, infant, child, and under-five mortality by biodemographic characteristics

Neonatal, postneonatal, infant, child, and under-five mortality for the ten-year period preceding the survey, by selected biodemographic characteristics, Nigeria 1999

Biodemographic characteristic	Neonatal mortality (NN)	Post-neonatal mortality (PNN)	**Infant mortality ($_1q_0$)**	Child mortality ($_4q_1$)	**Under-five mortality ($_5q_0$)**
Sex of child					
Male	38.3	35.0	73.2	65.9	134.4
Female	31.6	36.6	68.2	69.0	132.5
Age of mother at birth					
< 20	36.0	37.9	74.0	91.6	158.8
20-29	33.9	31.1	65.0	60.7	121.7
30-39	32.0	39.1	71.1	61.4	128.1
40-49	76.2	77.8	154.1	94.6	234.1
Birth order					
1	39.0	26.9	65.9	61.3	123.1
2-3	25.8	29.3	55.1	58.8	110.7
4-6	32.9	37.3	70.2	73.8	138.8
7+	55.0	59.8	114.8	85.4	190.4
Previous birth interval					
< 2 years	51.5	52.0	103.6	78.7	174.1
2-3 years	25.7	33.5	59.2	70.6	125.6
4 or more years	24.3	26.2	50.5	44.4	92.7
Size at birth[1]					
Small or very small	49.9	38.9	88.7	NA	NA
Average or larger	28.1	31.8	59.9	NA	NA

NA = Not applicable
[1] Based on births in the five years preceding the survey

7.6 High-Risk Fertility Behaviour

Certain patterns of reproductive behaviour are associated with negative maternal and child health. They include motherhood at specific young or old ages, short spacing between births, and high parity. 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 over 34 years of age. A "short birth interval" is defined as a birth occurring less than 24 months after a previous birth, and a child is of "high birth order" if the mother had previously given birth to three or more children (i.e., if the child is of birth order four or higher). First births, although often at increased risk, are not placed in a high-risk category since they are not considered an avoidable risk.

The distribution of women and children according to fertility behaviour that exposes them to an elevated risk of dying is shown in Table 7.4. The data show that 64 percent of children born in the five years

preceding the survey have an elevated risk of dying. Out of this proportion, 40 percent are in the single high-risk category, and 24 percent are in the multiple high-risk category. Among children who fall in the single high-risk category, children born to adolescent mothers younger than 18 years are particularly at high risk of dying, almost twice (1.9) the risk of those not in any high-risk category. Another category of high risk is being born within a birth interval of less than 24 months (risk is 1.5). As expected, higher parity is also associated with an increased risk of dying.

In the multiple high-risk categoy, a combination of older age at motherhood, a short birth interval, and high parity contributes to the highest risk of mortality. Children in this category are almost four (3.6) times as likely to die as those who are not in any risk category. Children of older mothers born too close to a preceding birth are more than three (3.3) times as likely to die as those not in any risk category. Another important multiple risk category is children born with a birth interval of less than 24 months and a parity of 4 or higher; they have a mortality risk of 2.4. Thus, children who are in the multiple risk category were usually 2 to 4 times as likely to die as those not in any high-risk category. The good news is that the percentage of births in these multiple high-risk categories is low.

Table 7.4 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 percent distribution of currently married women at risk of conceiving a child with an elevated risk of dying, by category of increased risk, Nigeria 1999

Risk category	Births in 5 years preceding the survey		Percentage of currently married women[a]
	Percentage of births	Risk ratio	
Not in any high-risk category	22.8	1.00	15.8[b]
Unavoidable risk category (First births)	13.5	1.05	6.3
Single high-risk category			
Mother's age <18	8.0	1.91	2.8
Mother's age >34	1.0	0.67	3.8
Birth interval <24 months	6.9	1.48	8.8
Birth order >3	24.3	1.39	17.3
Subtotal	40.2	1.49	32.6
Multiple high-risk category			
Age <18 & birth interval <24 months[c]	1.2	0.80	0.8
Age >34 & birth interval <24 months	0.1	3.26	0.2
Age >34 & birth order >3	9.1	1.71	27.1
Age >34 & birth interval <24 months & birth order >3	2.6	3.63	5.4
Birth interval <24 months & birth order >3	10.4	2.37	11.8
Subtotal	23.5	2.18	45.3
In any high-risk category	63.7	1.74	77.9
Total	*100.0*	-	*100.0*
Number of births	6,190	-	5,808

Note: Risk ratio is the ratio of the proportion dead of births in a specific high-risk category to the proportion dead of births *not in any high-risk category.*

[a] Women were assigned to risk categories according to the status they would have at the birth of a child, if the child were conceived at the time of the survey: age less than 17 years and 3 months, age older than 34 years and 2 months, latest birth less than 15 months ago, and latest birth of order 3 or higher.

[b] Includes sterilised women

[c] Includes the combined categories *Age <18 and birth order >3.*

CHAPTER 8

MATERNAL AND CHILD HEALTH

This chapter presents findings on antenatal care, delivery care, childhood vaccinations, and selected childhood illnesses. Childhood illnesses are associated with a number of risk factors, including inadequate antenatal care, lack of or inadequate vaccination, high birth order, and malnutrition.

Irrespective of changes in the social role of women throughout the ages and the countless variations of that role in different cultures, women's status largely depends on the biological facts that women are the bearers of children and that the care of children is usually the responsibility of women. The state of maternal and child health reflects the society's level of development.

8.1 Antenatal Care

Antenatal Care Coverage

Table 8.1 shows the percent distribution of live births in the three years preceding the survey by antenatal care provider, according to maternal age, birth order, residence, region, and mother's education. It shows that for almost two-thirds of births (64 percent), mothers receive antenatal care either from a doctor, nurse, midwife, or auxiliary midwife. For less than one-third (30 percent) of births, mothers receive no antenatal care. Traditional birth attendants provide a very small proportion of antenatal care (4 percent of births) (Figure 8.1).

Differences in antenatal care coverage by mother's age at birth and birth order are not large, although teenaged mothers are particularly unlikely to obtain antenatal care. Pregnant women in rural areas are less likely than those in urban areas to receive antenatal care from a doctor or nurse or midwife (56 versus 84 percent). This differential could be because of lack of access to antenatal care providers, economic constraints, and/or lack of awareness of the importance of antenatal care. There are also differences in the sources of antenatal care for births in urban and rural areas. Forty percent of urban women receive antenatal care from a doctor, compared with only 19 percent of rural women. The difference is probably because of the higher concentration of hospitals and doctors in urban areas.

Antenatal care coverage is considerably higher in the southern part of the country than in the north. The proportion of births for which women receive antenatal care from either a doctor or a nurse or midwife ranges from 89 percent in Southwest region to 28 percent in the Northwest region. Moreover, births to women in the south are much more likely than births in the north to receive antenatal care from a doctor—39 percentand 51 percent in the Southeast and Southwest regions, respectively, compared with 5 percent and 7 percent in the Northeast and Northwest regions, respectively. Antenatal care coverage from doctors in the Central region is intermediate. Moe than half the births in the two northern regions do not benefit from any antenatal care at all; in the Northwest region, mothers did not receive any antenatal care for two-thirds of the births.

There is a positive association between mother's education and source of antenatal care. As the mother's level of education increases, so does the likelihood that she will receive antenatal care from a doctor during pregnancy—8 percent of mothers with no education receive antenatal care from a doctor, compared with 67 percent of women with a higher (postsecondary) education. Likewise, women with no education have

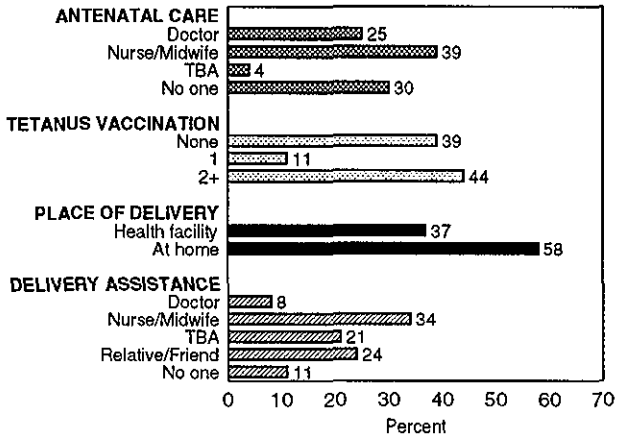
Table 8.1 Antenatal care

Percent distribution of births in the three years preceding the survey by source of antenatal care during pregnancy, according to selected background characteristics, Nigeria 1999

Background characteristic	Antenatal care provider[1]					Total	Number of births
	Doctor	Nurse/ Midwife[2]	Traditional birth attendant	No one	Missing		
Mother's age at birth							
< 20	13.1	33.8	4.6	45.4	3.1	100.0	615
20-34	28.0	39.8	3.8	26.1	2.4	100.0	2,468
35+	22.5	40.8	3.4	28.4	4.8	100.0	464
Birth order							
1	26.3	38.8	4.3	28.3	2.3	100.0	739
2-3	28.5	38.5	3.6	27.3	2.2	100.0	1,159
4-5	23.5	37.0	4.5	32.0	3.0	100.0	832
6+	19.1	41.4	3.2	32.2	4.2	100.0	818
Residence							
Urban	40.1	43.4	3.0	10.3	3.2	100.0	984
Rural	18.8	37.1	4.2	37.2	2.7	100.0	2,563
Region							
Northeast	4.5	35.8	1.5	54.1	4.1	100.0	788
Northwest	6.9	21.4	4.0	65.1	2.6	100.0	629
Southeast	39.0	42.5	8.3	7.7	2.4	100.0	649
Southwest	50.9	38.3	4.6	3.5	2.7	100.0	777
Central	21.1	55.1	1.4	20.2	2.3	100.0	704
Mother's education							
No education	7.9	30.7	3.6	54.4	3.3	100.0	1,714
Primary	29.7	51.9	5.4	10.6	2.5	100.0	868
Secondary	47.3	43.9	3.3	3.4	2.1	100.0	827
Higher	66.5	27.7	0.6	0.8	4.5	100.0	138
Total	24.7	38.9	3.9	29.7	2.9	100.0	3,547

[1] If the respondent mentioned more than one provider, only the most qualified provider is considered.
[2] Includes auxiliary midwives

Figure 8.1
Antenatal Care, Tetanus Vaccinations, Place of Delivery, and Delivery Assistance, Nigeria 1999



Note: Percentages are based on births in the three years preceding the survey.
TBA = Traditional birth attendant

NDHS 1999

the highest percentage (55 percent) who do not receive any antenatal care at all, compared with women with a secondary or higher education (4 percent and 1 percent, respectively).

Number and Timing of Antenatal Visits

The number and timing of antenatal care visits can be factors in their effectiveness in preventing adverse pregnancy outcomes. Table 8.2 shows the percent distribution of live births by the number of antenatal care visits and the stage of pregnancy during which the first visit occurred.

For almost half of all births (47 percent), mothers made four or more antenatal care visits. This level of contact with antenatal care providers constitutes 81 percent of all births that receive antenatal care, which implies that women who use antenatal clinics are aware of the importance of regular attendance. The median number of antenatal care visits is six.

Almost half of all pregnant women get antenatal care before the end of the second trimester (less than six months). The median duration of pregnancy at the time of the first antenatal care visit is 5.1 months. This figure means that half of all pregnant women have their first antenatal visit after five months or do not get any care at all. This timing of the first antenatal visit is considered late if mothers are to receive the maximum benefits of antenatal care.

Table 8.2 Number of antenatal care visits and stage of pregnancy

Percent distribution of live births in the last three years by number of antenatal care (ANC) visits, and by the stage of pregnancy at the time of the first visit, Nigeria 1999

Number of visits and stage of pregnancy	Percentage of births
Number of ANC visits	
None	29.7
1	1.7
2-3 visits	8.9
4+ visits	47.3
Don't know/missing	12.4
Total	100.0
Median	5.8
Number of months pregnant at time of first ANC visit	
No antenatal care	29.7
Less than 6 months	48.1
6-7 months	15.4
8+ months	1.9
Don't know/missing	4.9
Total	100.0
Median	5.1
Total	3,547

Tetanus Toxoid Vaccination

Tetanus toxoid injections are given during pregnancy for the prevention of neonatal tetanus, one of the principal causes of death among infants in many developing countries. 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 a current pregnancy. Five doses are considered to provide lifetime protection. In order to estimate the extent of tetanus toxoid coverage during pregnancy, the NDHS collected data for each birth in the three years before the survey on whether the mother had received tetanus toxoid vaccinations during pregnancy and, if so, the number of injections. These results are presented in Table 8.3. The data may underestimate the actual extent of protection from tetanus, since women were asked about vaccination during specific pregnancies. Women who had received prior vaccinations may not have received additional injections because they were considered unnecessary.

The data indicate that for more than 44 percent of all births, mothers received two or more doses of tetanus toxoid during pregnancy, while for 11 percent, they had received one dose. Almost 40 percent of births occurred without the benefit of any tetanus toxoid vaccination.

Tetanus toxoid coverage is higher among older than among younger women; well over half of teenage mothers received no injections at all during pregnancy. There is little difference in tetanus toxoid coverage by birth order, which is somewhat surprising since one would expect coverage might diminish with birth order, given that many women would have already received the recommended complete vaccinations in prior pregnancies. Tetanus toxoid vaccination coverage is higher in urban than in rural areas.

Table 8.3 Tetanus toxoid vaccinations

Percent distribution of births in the three years preceding the survey by number of tetanus toxoid injections mother received during pregnancy, according to selected background characteristics, Nigeria 1999

Background characteristic	Number of tetanus toxoid injections				Total	Number of births
	No injection	One dose	Two doses or more	Don't know/ Missing		
Mother's age at birth						
< 20	57.3	7.6	30.5	4.6	100.0	615
20-34	34.8	11.6	47.9	5.8	100.0	2,468
35+	34.8	13.8	43.3	8.0	100.0	464
Birth order						
1	40.3	10.4	43.9	5.4	100.0	739
2-3	34.6	12.8	47.0	5.7	100.0	1,159
4-5	40.9	10.2	43.2	5.6	100.0	832
6+	40.8	10.6	41.8	6.9	100.0	818
Residence						
Urban	19.3	14.1	59.6	7.0	100.0	984
Rural	46.1	10.0	38.4	5.5	100.0	2,563
Region						
Northeast	64.1	7.2	24.1	4.7	100.0	788
Northwest	69.2	5.2	21.0	4.6	100.0	629
Southeast	20.6	10.3	61.8	7.3	100.0	649
Southwest	13.3	14.6	63.9	8.1	100.0	777
Central	27.7	17.9	49.8	4.6	100.0	704
Mother's education						
No education	62.8	8.0	24.1	5.2	100.0	1,714
Primary	23.6	15.1	53.9	7.4	100.0	868
Secondary	10.1	13.4	70.6	5.9	100.0	827
Higher	5.8	12.6	76.4	5.2	100.0	138
Total	38.7	11.2	44.3	5.9	100.0	3,547

Mothers in the Southeast and Southwest regions are thrice as likely to have received two or more doses of tetanus toxoid during pregnancy (62 percent and 64 percent, respectively) than are mothers in the Northeast and Northwest regions (24 percent and 21 percent, respectively). Two-thirds of births in the northern part of the country are at risk of tetanus infection because the mothers did not receive any tetanus toxoid vaccination during pregnancy. In contrast, 28 percent of mothers in the Central region did not receive any tetanus toxoid vaccination.

Women with no education have the lowest tetanus toxoid vaccination coverage. Almost two-thirds of pregnant women with no education do not receive a tetanus toxoid vaccination; the percentage falls to 24 percent among those with a primary education, 10 percent among those with a secondary education, and only 6 percent among those with a higher education. Conversely, the proportion of women who received two or more doses of tetanus toxoid during pregnancy increases from 24 percent among women with no education to 76 percent among women with a higher education. Educated women may have a greater understanding of the advantages of vaccination and greater access to modern medical care. They may also be more willing to utilise the available services.

8.2 Delivery Care

Delivery is a potentially hazardous process. Indeed, most maternal mortality occurs during delivery. Therefore, the place of delivery and the type of assistance women receive during delivery are important components of reproductive health care and are crucial to efforts to promote safe motherhood.

Place of Delivery

The place of delivery is an important indicator of service coverage. Table 8.4 shows the distribution of births by place of delivery, according to maternal background characteristics. In all, 58 percent of births in Nigeria occur at home, while 37 percent occur in health facilities. Compared with 1990, there has been an increase in the proportion of births occuring in health facilities, from 31 to 37 percent (FOS, 1992: 89).

Table 8.4 Place of delivery

Percent distribution of births in the three years preceding the survey by place of delivery, according to selected background characteristics, Nigeria 1999

Background characteristic	Place of delivery: Health facility	At home	Don't know/ Missing	Total	Number of births
Mother's age at birth					
< 20	22.2	74.4	3.4	100.0	615
20-34	41.3	54.5	4.2	100.0	2,468
35+	36.2	57.3	6.5	100.0	464
Birth order					
1	43.6	52.4	4.0	100.0	739
2-3	40.7	55.6	3.8	100.0	1,159
4-5	35.0	60.6	4.4	100.0	832
6+	29.2	65.2	5.6	100.0	818
Residence					
Urban	52.5	42.2	5.4	100.0	984
Rural	31.5	64.5	4.0	100.0	2,563
Region					
Northeast	11.7	84.7	3.6	100.0	788
Northwest	6.4	91.0	2.6	100.0	629
Southeast	54.9	39.4	5.7	100.0	649
Southwest	67.2	25.5	7.3	100.0	777
Central	44.3	53.2	2.5	100.0	704
Mother's education					
No education	13.4	82.9	3.7	100.0	1,714
Primary	48.0	47.1	5.0	100.0	868
Secondary	67.9	27.0	5.1	100.0	827
Higher	83.9	11.4	4.7	100.0	138
Antenatal care visits					
None	2.5	96.9	0.6	100.0	1,054
1-3 visits	34.3	64.0	1.7	100.0	375
4 or more visits	59.7	38.0	2.3	100.0	1,677
Total	37.3	58.3	4.4	100.0	3,547

Note: Total includes 441 births for which data on antenatal visits are missing.

There was no clear-cut association between place of delivery and maternal age. Use of health facilities for delivery decreases with increasing birth order; sixth or higher births are least likely to occur in a health facility. Women in urban areas are more likely to deliver in a health facility than women in rural areas.

There are marked differences by region regarding place of delivery. Home deliveries are most common in the north, where almost nine in ten births occur at home, in contrast to one in three births in the south and one in two in the Central region. The percentage of births that occur in a health facility increases with education, from only 13 percent of births to women with no education to 84 percent among those with

a higher education. Women who have contact with health professionals during pregnancy are much more likely to deliver at a health facility than women who have no such contact. Women who make four or more antenatal care visits deliver 60 percent of their babies in a health facility, compared with 3 percent of women who make no antenatal care visits.

Assistance During Delivery

Another important aspect of maternal health care is care during delivery. Attendance by a medically trained person during labour and delivery can reduce maternal deaths, one goal of the global Safe Motherhood Initiative. Table 8.5 shows the distribution of births by type of assistance during delivery, according to selected maternal background characteristics.

Table 8.5 Assistance during delivery

Percent distribution of births in the three years preceding the survey by type of assistance during delivery, according to selected background characteristics, Nigeria 1999

Background characteristic	Attendant assisting during delivery						Total	Number of births
	Doctor	Nurse/ Midwife[1]	Traditional birth attendant	Relative/ Other	No one	Don't know/ Missing		
Mother's age at birth								
< 20	3.3	20.5	28.8	32.6	12.4	2.4	100.0	615
20-34	9.1	36.9	19.1	21.7	10.9	2.3	100.0	2,468
35+	7.3	34.1	18.7	22.3	13.0	4.6	100.0	464
Birth order								
1	10.0	36.5	21.2	23.9	6.4	1.9	100.0	739
2-3	9.2	35.1	20.3	22.6	11.0	1.8	100.0	1,159
4-5	7.8	32.1	18.9	26.5	11.8	3.0	100.0	832
6+	4.2	30.8	22.6	22.1	16.3	3.9	100.0	818
Residence								
Urban	14.0	43.9	15.5	14.2	9.6	2.8	100.0	984
Rural	5.5	29.8	22.7	27.3	12.1	2.6	100.0	2,563
Region								
Northeast	1.3	11.4	29.0	31.6	23.2	3.6	100.0	788
Northwest	1.6	6.5	38.7	25.5	25.5	2.3	100.0	629
Southeast	9.9	55.4	18.1	12.5	2.3	1.8	100.0	649
Southwest	17.7	55.5	10.6	10.5	2.4	3.2	100.0	777
Central	8.1	38.9	9.0	38.1	4.1	1.9	100.0	704
Mother's education								
No education	2.1	12.8	29.6	33.3	19.1	3.1	100.0	1,714
Primary	8.4	47.3	14.8	20.8	6.3	2.3	100.0	868
Secondary	15.0	59.2	11.1	9.8	2.7	2.1	100.0	827
Higher	33.4	54.7	4.4	5.2	0.8	1.6	100.0	138
Antenatal care visits								
None	0.5	2.7	34.8	37.9	24.0	0.0	100.0	1,054
1-3 visits	5.9	33.8	19.4	31.2	9.7	0.0	100.0	375
4 or more visits	12.5	52.7	13.3	15.1	6.1	0.3	100.0	1,677
Don't know/Missing	9.3	35.4	16.2	15.9	3.1	20.0	100.0	441
Total	7.9	33.7	20.7	23.7	11.4	2.6	100.0	3,547

[1] Includes auxiliary midwives

Forty-two percent of births in Nigeria are attended by medically trained personnel, mostly nurses or midwives; only 8 percent of births are attended by doctors. One in five births is assisted by a traditional birth attendant, while almost one in four is assisted by a relative or friend. Eleven percent of births are delivered without any assistance at all.

Women over the age of 20 years are almost twice as likely as women under 20 to be assisted at delivery by medically trained personnel. Since deliveries to young women are especially risky, the low coverage for teenaged mothers is a particularly important finding.

The proportion of births assisted by medically-trained personnel decreases at higher birth orders, from 47 percent of first births to only 35 percent of sixth and higher births Women in urban areas (58 percent) were more likely to be assisted at birth by medically trained personnel than rural women (35 percent). Births to women in the south are most likely to be attended by medically trained personnel (65 to 73 percent), followed by births to women in the Central region (47 percent). Only about 10 percent of births to women in the north are assisted by doctors, nurses, or midwives. One-quarter of births in the north are delivered without assistance, in sharp contrast with only 4 percent of births in the Central region and 2 percent of births in the south. A significant proportion of deliveries in the Central region (38 percent) and in the north (26 to 32 percent) are assisted by relatives and friends.

As expected, better-educated women tend to benefit from better assistance at delivery. Only 15 percent of births to uneducated women are assisted by medically-trained personnel, in contrast with 56 percent among births to women with a primary education, 74 percent among births to those with secondary education, and 88 percent among births to those with a higher education. Women who make no antenatal visits are much less likely to receive medically trained assistance than those who had antenatal care.

It is interesting to note that although doctors provide antenatal care for 25 percent of births (Table 8.1), they assist only 8 percent of deliveries (Table 8.5). Similarly, nurses and midwives provide antenatal care to 39 percent of births but assist 34 percent during delivery. On the other hand, traditional birth attendants assist with five times as many births as they provide antenatal care for. One possible reason for these discrepancies might be economi causes (i.e., antenatal care is available at a nominal fee but delivery fees are often unaffordable). Another reason might be inability to get to a health facility at the onset of labour, especially when labour occurs at night. It should be noted, however, that delivery in health facilities in Nigeria is usually conducted by nurses or midwives (even when a doctor is available), except where there are complications.

Characteristics of Delivery

Access to caesarean sections can save the lives of women who cannot deliver normally. Women interviewed in the NDHS were asked whether they had a caesarean section for any birth that occurred in the three years preceding the survey. The results in Table 8.6 show that only 4 percent of births in Nigeria—1 in 27—are delivered by caesarean section. The percentage of births delivered by caesarean section increases slightly with age. It is also higher in urban than in rural areas, which presumably reflects better access to higher quality care. There is variation among the regions with regard to the percentage of deliveries by caesarean section, ranging from a low of less than 1 percent in the Northeast region to a high of 7 percent in the Southwest region. The percentage of deliveries by caesarean section increases with mother's education.

Low birth weight is associated with morbidity and mortality during infancy (Faveau et al., 1990). Mothers of babies born in the three years prior to the survey were asked whether their children were weighed at birth and if so, how much they weighed. If the information was available on a health card or birth record,

Table 8.6 Delivery characteristics: caesarean section, birth weight and size

Among births in the three years preceding the survey, the percentage of deliveries by caesarean section, and the percent distribution by birth weight and by the mother's estimate of baby's size at birth, according to selected background characteristics, Nigeria 1999

Background characteristic	Delivery by C-section	Birth weight				Size of child at birth					Number of births
		Less than <2.5 kg	2.5 kg or more	Birth weight not provided	Total	Very small	Smaller than average	Average or larger	Don't know	Total	
Mother's age at birth											
<20	1.7	1.1	4.6	94.3	100.0	7.0	9.9	78.7	4.4	100.0	615
20-34	4.1	1.1	15.7	83.2	100.0	6.6	7.1	82.6	3.8	100.0	2,468
35+	4.5	2.1	10.4	87.5	100.0	6.8	9.3	76.4	7.5	100.0	464
Birth order											
1	4.0	1.8	15.7	82.5	100.0	7.1	9.7	79.8	3.3	100.0	739
2-3	3.3	1.2	15.3	83.5	100.0	6.1	6.6	83.1	4.1	100.0	1,159
4-5	4.2	0.6	12.9	86.5	100.0	7.5	7.2	80.7	4.7	100.0	832
6+	3.5	1.3	7.9	90.8	100.0	6.4	8.5	79.7	5.4	100.0	818
Residence											
Urban	5.2	2.3	21.9	75.8	100.0	5.7	6.8	82.3	5.2	100.0	984
Rural	3.1	0.8	9.7	89.5	100.0	7.1	8.2	80.6	4.1	100.0	2,563
Region											
Northeast	0.6	0.8	3.4	95.8	100.0	7.4	7.7	80.6	4.2	100.0	788
Northwest	2.1	0.3	2.9	96.8	100.0	9.4	11.8	75.1	3.7	100.0	629
Southeast	4.6	1.8	19.1	79.1	100.0	5.5	6.6	84.8	3.1	100.0	649
Southwest	7.2	1.7	23.0	75.3	100.0	7.3	6.6	81.8	4.3	100.0	777
Central	4.0	1.4	16.6	81.9	100.0	3.9	7.0	82.7	6.4	100.0	704
Mother's education											
No education	1.7	0.4	2.6	97.0	100.0	8.1	9.2	77.5	5.2	100.0	1,714
Primary	3.9	0.6	11.0	88.4	100.0	5.1	6.3	84.3	4.3	100.0	868
Secondary	6.6	2.9	29.3	67.7	100.0	5.5	7.1	84.1	3.3	100.0	827
Higher	10.6	5.2	59.6	35.2	100.0	6.6	4.6	87.2	1.6	100.0	138
Total	3.7	1.2	13.1	85.7	100.0	6.7	7.8	81.1	4.4	100.0	3,547

that information was noted on the questionnaire. In addition, mothers were asked for their subjective perception of the baby's size at birth (e.g., very large, larger than average, average, etc.).

Unfortunately, more than 85 percent of respondents did not know the birth weight of their babies, either because delivery was outside a health facility or because they did not remember. As long as delivery at home is prevalent and most babies are not weighed at birth, this lack of adequate data on birth weight will persist. Similar problems are found in other DHS surveys in Africa (e.g., Tanzania and Kenya). Of those for whom birth weight information is available, 8 percent weighed less than 2.5 kg and the remaining 92 percent were reported to weigh more than 2.5 kg. Although not as accurate or useful as the actual birth weight, it is notable that almost the same proportion of births (7 percent) were reported by the mother to be "very small" at birth.

8.3 Maternal Mortality

In an attempt to obtain an estimate of the level of maternal mortality in Nigeria, the 1999 NDHS included the DHS maternal mortality module, which asks questions about the survivorship of all live births

of the respondent's mother (i.e., the respondent's brothers and sisters). The "sisterhood" methodology is a means of enlarging the effective sample size without having to interview any additional respondents (Graham et al., 1989). The DHS approach to estimating maternal and adult mortality maximises use of the available data, using information on the age of surviving siblings, the age at death of siblings who died, and the number of years since the sibling died. Data can therefore be aggregated to determine the number of person-years of exposure to mortality risk and the number of sibling deaths occurring in defined calendar periods. Rates of maternal mortality are obtained by dividing maternal deaths by person-years of exposure (Rutenberg and Sullivan, 1991).

Each respondent interviewed was first asked to give the total number of her/his mother's live births. Then the respondent was asked to provide a list of all of the children born to her/his mother, starting with the firstborn. The respondent was also asked whether each of these siblings was still alive at the survey date. For living siblings, current age was collected; for deceased siblings, age at death and year of death or years since death were collected. Interviewers were instructed that when a respondent could not provide precise information on siblings age at death or number of years since death, approximate quantitative answers were acceptable. For sisters who died at age 10 or older, in order to determine whether the death was maternity-related, the respondent was asked: "Was [NAME OF SISTER] pregnant when she died?" and if not, "Did she die during childbirth?" If death was neither during pregnancy nor childbirth, one more question was asked: "Did she die within two months after the end of a pregnancy or childbirth?"

Unfortunately, it appears that many interviewers did not understand how to fill in the maternal mortality section of the questionnaire. Many questionnaires contained sibling histories that were not in proper order and/or that erroneously listed information for the respondent as well as her siblings. More damaging to the analysis was the fact that much of the information about siblings was missing. Among respondents' sisters who had died, 68 percent were missing information on the number of years since death, which is necessary for calculating maternal deaths occuring in a particular time period. For most other DHS surveys in Africa, the comparable figure is less than 2 percent missing (Stanton et al., 1997:16). Although it is sometimes possible to impute a value for the number of years since death if siblings are listed in the correct birth order, the ages of other siblings are given and the age at death of the deceased sibling is given, imputation was impossible for 24 percent of female sibling deaths because both the age at death and the years since death were missing. Without knowing age at death, it is impossible to know whether a sister died of maternal causes.

Another indicator of questionable data is the fact that the sex ratio of siblings was reported as 110.4. This ratio is higher than the expected level of about 102 to 105 and could indicate underreporting of female births and/or overreporting of male births by respondents. Finally, the data on the average number of siblings by age of respondents imply that fertility has been increasing over time. A more plausible explanation is that older respondents omitted reporting some of their siblings.

The magnitude of the problems with the data render any analysis suspect. The maternal mortality ratio was estimated to be 289 per 100,000 live births by the direct method applicable to the seven-year period prior to the survey (approximately 1993-99). The estimate is low, especially given that the period covered in this estimate was a time when Nigeria had very poor performance on most development indices. As such, it would be unusual to have improvement in maternal mortality rates during a period when development indices show deterioration. Maternal mortality ratios from other sub-Saharan countries range from 393 (Zimbabwe) to 1,451 (Central African Republic) deaths per 100,000 births (Stanton et al., 1997:31). Somewhat more plausible is the fact that the survey showed that maternal deaths represent approximately 23 percent of all deaths to women age 15-49 years.

8.4 Childhood Vaccination

Childhood vaccination remains an important strategy for the reduction of morbidity and mortality from common vaccine-preventable diseases. In Nigeria, such diseases include tuberculosis, diphtheria, pertussis (whooping cough), tetanus, poliomyelitis, and measles. High vaccination coverage is generally associated with low levels of disease in the population. Thus, high vaccination coverage is a crucial goal in all child survival programmes in Nigeria. Guidelines from the World Health Organisation (WHO) recommend that all children receive a BCG vaccination against tuberculosis; three doses of DPT vaccine for the prevention of diphtheria, pertussis (whooping cough), and tetanus; three doses of polio vaccine; and a vaccination against measles. WHO recommends that children receive all of these vaccines before their first birthday and that the vaccinations be recorded on a health card given to the parents.

In the NDHS, mothers were asked to show the interviewer the health cards of all children born in the three years before the survey. The interviewer copied from the card the date each vaccine was received. If a child never received a health card or if the mother was unable to show the card to the interviewer, the mother was asked to recall whether the child had received BCG, polio, DPT (including the number of doses for polio and DPT), and measles vaccinations. Mothers were able to produce health cards for only 20 percent of children age 12-23 months, which represents a decline from the level of 35 percent obtained in the 1990 NDHS (FOS, 1992:95).

Vaccination Coverage

Information on vaccination coverage is presented in Table 8.7, according to the source of information used to determine coverage, i.e., the vaccination card or mother's report. Data are presented for children age 12-23 months, thereby including only those children who have reached the age by which they should be fully vaccinated. The first indicator shows the proportion of these children who had been vaccinated at any age up to the time of the survey. These results are presented according to the source of the information used to determine coverage, i.e., vaccination record or mother's report. The second indicator shows the proportion of children who had been vaccinated by age 12 months, the age at which vaccination coverage should be complete.

Table 8.7 Vaccinations by source of information

Percentage of children 12-23 months who have received specific vaccines at any time before the survey, by source of information, and the percentage vaccinated by 12 months of age, Nigeria 1999

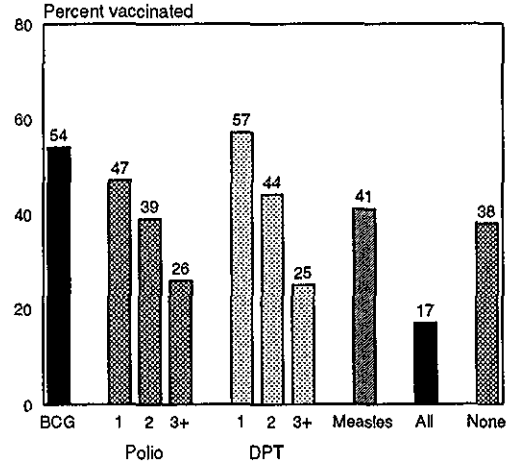
Source of information	Percentage of children who received:											Number of children
		DPT			Polio							
	BCG	DPT1	DPT2	DPT3	Polio0	Polio1	Polio2	Polio3	Measles	All[1]	None	
Vaccinated at any time before the survey												
Vaccination card	18.7	16.4	13.8	10.6	15.7	17.5	15.2	10.0	13.1	7.7	0.2	226
Mother's report	35.1	31.0	25.5	15.7	10.5	39.2	29.2	14.8	27.4	9.0	38.0	935
Either source	53.8	47.4	39.3	26.3	26.1	56.8	44.4	24.8	40.5	16.8	38.2	1,161
Vaccinated by 12 months of age[2]	52.0	45.7	37.6	24.8	25.7	54.3	41.3	23.0	32.1	14.3	39.1	1,161

[1] Children who are fully vaccinated (i.e., those who have received BCG, measles and three doses of DPT and polio (excluding polio 0)).
[2] 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 either the vaccination records or mothers' recall, only 17 percent of Nigerian children 12-23 months can be considered fully immunised. Although the level of coverage for BCG and the first doses of DPT and polio are close to or exceed 50 percent, the proportion who go on to receive the second and third doses of these two vaccines falls off sharply, to only about 25 percent for the third doses of the DPT and polio vaccines (Figure 8.2). Forty-one percent of children age 12-23 months have received the measles vaccine. Thirty-eight percent of Nigerian children have received no vaccinations at all. Of those children who do receive vaccinations, most receive them by the recommended age of 12 months.

The 1999 NDHS documented a significant worsening of vaccination coverage compared with the 1990 NDHS. The percentage of children 12-23 months who are fully vaccinated declined from 30 percent in 1990 to 17 percent in 1999. Although there has been a decline for all types of vaccines, the deline is greater for DPT and polio than it is for BCG and measles. The reason for the decline probably lies in the great shortage of all vaccines in Nigeria during the period 1996-1998.

Figure 8.2
Vaccination Coverage among Children Age 12-23 Months, Nigeria 1999



Note: Based on health card information and mother's report NDHS 1999

Differentials in Vaccination Coverage

As seen in Table 8.8, there are no large differences in vaccination status by the sex or birth order of the child. However, children in urban areas are almost three times more likely to be fully vaccinated than children in rural areas. Similarly, 75 percent of children in urban areas receive BCG vaccination, compared with 46 percent of children in rural areas. This strong urban-rural differential could be because of differences in awareness of the importance of vaccination and in the access to health services.

Coverage for all vaccines is highest in the south, followed by the Central region, and is lowest in the north. Although more than one-quarter of children in the south and 20 percent of children in the Central region are fully vaccinated, only about 6 percent of children in the north have been fully vaccinated.

Table 8.8 Vaccinations by background characteristics

Percentage of children 12-23 months who had received specific vaccines by the time of the survey (according to the vaccination card or the mother's report), and the percentage with a vaccination card, according to background characteristics, Nigeria 1999

Background characteristic	Percentage of children who received:											Percentage with a vaccination card	Number of children
		DPT			Polio								
	BCG	DPT1	DPT2	DPT3	Polio0	Polio1	Polio2	Polio3	Measles	All[1]	None		
Child's sex													
Male	53.8	48.1	40.1	25.3	26.0	57.2	44.4	24.1	40.1	16.1	38.8	18.7	610
Female	53.9	46.6	38.4	27.3	26.3	56.2	44.5	25.5	40.8	17.4	37.6	20.3	551
Birth order													
1	52.9	43.0	37.1	25.1	25.7	52.6	43.0	23.7	40.6	16.5	41.3	19.6	220
2-3	56.8	51.2	43.0	29.3	25.9	58.3	47.1	27.7	43.8	19.6	37.1	21.7	408
4-5	54.6	47.6	38.4	29.2	29.2	54.1	43.0	25.7	39.1	18.4	39.5	18.6	280
6+	48.9	44.9	36.3	19.3	23.6	60.8	42.8	20.0	36.4	10.6	35.9	16.9	252
Residence													
Urban	75.0	70.4	60.1	44.7	41.7	75.7	64.9	41.8	61.5	31.7	19.6	28.1	310
Rural	46.1	39.0	31.7	19.6	20.5	49.8	36.9	18.5	32.8	11.3	45.0	16.3	850
Region													
Northeast	26.0	26.6	19.6	12.1	9.7	35.9	23.7	11.1	19.7	7.5	60.9	7.2	241
Northwest	21.6	20.1	16.2	9.2	8.0	30.3	20.0	10.2	19.9	4.3	67.3	8.2	245
Southeast	73.3	66.8	59.7	40.7	29.5	78.1	63.2	36.7	54.3	24.9	17.6	27.7	194
Southwest	83.7	72.2	61.3	40.8	49.7	78.2	69.4	41.3	64.8	28.6	13.8	32.5	256
Central	67.9	54.6	42.9	31.2	33.8	65.1	48.6	26.3	45.3	19.6	27.7	23.0	224
Mother's education													
No education	29.9	24.3	18.2	11.1	12.8	36.2	23.0	10.5	20.7	6.3	59.8	8.1	581
Primary	67.7	59.5	49.3	32.4	33.8	67.2	55.7	30.1	49.5	18.1	23.7	27.3	285
Secondary	86.8	80.9	69.5	48.4	44.2	86.7	73.9	44.5	67.5	33.0	9.8	34.0	249
Higher	(90.8)	(82.9)	(80.5)	(60.5)	(50.5)	(89.5)	(85.0)	(65.9)	(87.2)	(52.9)	(9.2)	(35.5)	46
Total	53.8	47.4	39.3	26.3	26.1	56.8	44.4	24.8	40.5	16.8	38.2	19.5	1,161

Note: Figures in parentheses are based on 25-49 (unweighted) children.
[1] Children who are fully vaccinated (i.e., those who have received BCG, measles and three doses of DPT and polio (excluding polio 0)).

Complete coverage increases with increasing maternal education. Only 6 percent of children whose mothers have no education are fully vaccinated, in contrast with 53 percent of those whose mothers have higher than a secondary education. Sixty percent of children born to women with no education have no vaccinations at all.

8.5 Acute Respiratory Infection and Fever

Acute respiratory infection (ARI) is a major cause of morbidity and mortality among children in Nigeria. Common symptoms associated with severe respiratory infection include fever, cough, and difficult or rapid breathing. Early diagnosis and treatment with antibiotics can prevent a large proportion of deaths from respiratory infections. The prevalence of ARI was estimated by asking mothers interviewed in the NDHS if their children under age three had experienced coughing accompanied by short, rapid breathing, in the two weeks preceding the survey. Mothers whose children had experienced these symptoms were asked what they had done to treat the illness. It bears mentioning that reports of disease prevalence are inherently

imprecise, since they are based on a mother's subjective assessment. Information on the prevalence and treatment of ARI is presented in Table 8.9.

The data indicate that 11 percent of children under three were ill with a cough and rapid breathing in the two weeks preceding the survey. Less than 50 percent of these children were taken to a health facility for treatment.

Prevalence of ARI varies with the age of the child; it is lower for children under six months, who also have the lowest rate of health facility use for this illness. There are no large differentials by sex or birth order in the prevalence or treatment of ARI. There is no urban-rural differential in the prevalence of ARI, but affected children in urban areas are more likely to be taken to a health facility (65 versus 45 percent). Although there was minimal variation in the prevalence of ARI across regions, there are differences in the

Table 8.9 Prevalence and treatment of acute respiratory infection and fever

Percentage of children under three years who were ill with a cough accompanied by short, rapid breathing or a fever during the two weeks preceding the survey, by selected background characteristics, Nigeria 1999

Background characteristic	Percentage of children with cough and rapid breathing	Percentage of children with fever	Percentage of children taken to a health facility or provider[1]	Number of children
Child's age				
< 6 months	7.5	21.7	39.5	574
6-11 months	13.0	35.7	55.3	534
12-23 months	13.1	34.4	48.7	1,161
24-35 months	10.5	27.1	51.8	937
Child's sex				
Male	11.8	31.8	48.8	1,632
Female	10.8	28.6	50.7	1,574
Birth order				
1	13.2	28.9	47.6	675
2-3	10.0	27.7	44.9	1,071
4-5	11.5	31.1	51.8	754
6+	11.4	34.3	56.2	706
Residence				
Urban	10.3	26.5	64.8	896
Rural	11.7	31.6	44.5	2,310
Region				
Northeast	12.9	34.4	33.4	684
Northwest	10.8	32.9	45.5	572
Southeast	11.7	39.7	46.0	586
Southwest	9.3	22.8	68.6	714
Central	12.0	23.0	58.7	649
Mother's education				
No education	11.5	29.9	39.5	1,522
Primary	11.1	34.4	56.0	780
Secondary	11.0	27.6	58.5	775
Higher	13.1	23.8	78.2	130
Total	11.3	30.2	49.7	3,206

[1] Includes health centre, hospital, clinic, and private doctor

treatment of ARI. Only one-third of children with ARI in the Northeast region are taken to a health facility, compared with almost 70 percent of ill children in the Southwest region. Similarly, there are no differentials in the prevalence of ARI by maternal education. However, children of more-educated mothers are more likely to be taken to a health facility than children of less-educated mothers (ranging from 40 percent among mothers with no education to 78 percent among those with a higher education).

Malaria is endemic throughout Nigeria. Since the major manifestation of malaria is fever, mothers were asked whether their children under age 3 had a fever in the two weeks preceding the survey. Thirty percent of children under three years of age were reported to have had fever in the two weeks prior to the survey (Table 8.9). There are few major differentials in the prevalence of fever. It is slightly lower among children under six months of age and slightly higher in rural than in urban areas. There are some regional differentials with the Southeast region having higher figures than the other regions. Surprisingly, the Southwest region has unexpectedly low figures when compared with other regions. The reason for this difference is uncertain; however, it should be noted that fever can be associated with many diseases and the relative prevalence of these diseases at any point in time may differ between regions.

8.6 Diarrhoea

Dehydration caused by diarrhoea is a major cause of illness and death among young children in Nigeria. The mainstay of treatment for diarrhoea is oral rehydration therapy (ORT), either as a solution prepared from commercially available packets of oral rehydration salts (ORS), or as a homemade sugar-salt solution, or as some other homemade rehydration fluids.

Prevalence of Diarrhoea

Table 8.10 presents the prevalence of diarrhoea in children under three years of age. Fifteen percent of children had experienced diarrhoea in the two weeks preceding the survey. The prevalence of bloody diarrhoea (symptomatic of dysentery) was 2 percent. Diarrhoea prevalence is low (8 percent) among children under six months, most of whom are still being breastfed, and highest (18 to 19 percent) among children aged 6-23 months, many of whom are being weaned and are beginning to eat mushy and solid foods. Among regions, diarrhoea prevalence is highest in the Northeast region (22 percent) and lowest in the Southwest region (7 percent). Diarrhoea prevalence is associated with maternal education. Children whose mothers have no education had a diarrhoea prevalence of 18 percent, which falls to 14 percent among those with primary education, 12 percent of those with secondary education and 11 percent among those with a higher education.

Table 8.10 Prevalence of diarrhoea

Percentage of children under three years of age with diarrhoea and diarrhoea with blood during the two weeks preceding the survey, by selected background characteristics, Nigeria 1999

Background characteristic	Diarrhoea in the preceding 2 weeks: All diarrhoea	Diarrhoea with blood	Number of children
Child's age			
< 6 months	8.2	1.2	574
6-11 months	18.8	1.5	534
12-23 months	18.3	3.1	1,161
24-35 months	13.8	2.8	937
Child's sex			
Male	15.1	2.8	1,632
Female	15.4	2.0	1,574
Birth order			
1	14.7	2.4	675
2-3	14.6	2.5	1,071
4-5	16.7	2.3	754
6+	15.1	2.4	706
Residence			
Urban	13.9	2.0	896
Rural	15.8	2.6	2,310
Region			
Northeast	22.3	3.9	684
Northwest	17.9	2.2	572
Southeast	15.0	3.3	586
Southwest	7.1	0.7	714
Central	14.6	2.1	649
Mother's education			
No education	18.0	2.9	1,522
Primary	13.8	2.7	780
Secondary	12.2	1.5	775
Higher	10.7	0.0	130
Total	15.3	2.4	3,206

Treatment of Diarrhoea

Table 8.11 presents data concerning treatment of recent episodes of diarrhoea among children under three years as reported by the mother. Thirty-seven percent of all children who had a recent episode of diarrhoea were taken to a health facility or a medical care provider for treatment. Children 6-11 months old, urban children, children in the Southwest and Central regions, and children of more educated women were more likely to be taken to a health facility.

Table 8.11 Treatment of diarrhoea

Among children under three years who had diarrhoea in the two weeks preceding the survey, the percentage taken for treatment to a health facility or provider, the percentage who received oral rehydration therapy (ORT) (either solution prepared from ORS packets, homemade sugar-salt solution (SSS), or increased fluids), the percentage who received no ORT and the percentage given other treatments, according to selected background characteristics, Nigeria 1999

Background characteristic	Percentage taken to a health facility or provider[1]	Oral rehydration therapy				Did not received ORT	Other treatments		No treatment	Missing	Number of children
		ORS packet	SSS	Either ORS or SSS	Increased fluids		Injection	Home remedy/ Other			
Child's age											
< 6 months	25.9	23.1	28.3	37.8	46.8	38.7	2.1	89.2	4.8	0.0	47
6-11 months	46.4	40.1	42.6	57.5	52.4	25.5	8.9	90.2	5.8	0.0	101
12-23 months	33.4	34.9	38.9	51.7	53.3	24.4	8.1	92.9	2.8	0.4	212
24-35 months	41.1	32.7	37.6	50.3	56.9	25.2	11.2	95.0	2.3	0.0	129
Child's sex											
Male	37.2	30.9	38.2	47.7	55.1	27.1	10.3	93.3	3.5	0.4	246
Female	37.6	37.7	38.4	54.8	51.8	25.3	6.7	91.7	3.4	0.0	243
Birth order											
1	41.4	31.9	40.3	53.9	43.6	27.5	10.8	93.7	2.0	0.0	99
2-3	33.3	35.7	38.2	52.7	56.8	24.2	5.9	93.8	2.5	0.6	157
4-5	36.9	28.9	37.2	44.9	52.6	30.1	9.9	88.4	6.2	0.0	126
6+	40.4	40.8	38.1	54.0	58.6	23.3	8.5	94.5	3.0	0.0	107
Residence											
Urban	50.9	43.0	43.5	60.8	63.6	18.1	11.4	92.3	2.3	0.0	124
Rural	32.8	31.3	36.6	48.0	50.0	29.0	7.5	92.6	3.9	0.3	365
Region											
Northeast	32.1	24.0	22.6	35.3	62.1	27.8	2.8	89.7	6.5	0.0	153
Northwest	24.4	16.2	26.1	33.1	54.4	35.0	1.8	91.4	3.7	0.9	102
Southeast	36.8	38.4	57.3	70.4	47.8	21.9	6.2	96.5	0.0	0.0	88
Southwest	53.2	59.4	57.2	77.4	46.8	14.3	22.1	95.7	2.2	0.0	51
Central	51.9	52.9	49.0	64.3	47.2	24.8	19.8	93.0	2.4	0.0	95
Mother's education											
No education	29.4	23.4	28.7	37.1	55.4	31.6	8.7	90.3	5.6	0.3	273
Primary	45.0	44.6	42.0	61.0	47.5	23.9	7.8	95.5	0.9	0.0	108
Secondary	47.3	51.5	56.7	76.4	51.2	15.5	5.8	94.7	0.9	0.0	94
Higher	70.0	51.9	74.4	82.2	74.5	10.4	29.4	100.0	0.0	0.0	14
Total	37.4	34.3	38.3	51.2	53.4	26.2	8.5	92.5	3.5	0.2	489

ORS = Oral rehydration salts
[1] Includes health centre, hospital, clinic, and private doctor

Thirty-four percent of children with diarrhoea were given a fluid prepared from ORS packets, and 38 percent received a homemade sugar-salt solution. In all, 51 percent were given either ORS or a homemade solution. Mothers reported giving 53 percent of ill children an increased amount of fluid than before the onset of the diarrhoea. However, 26 percent of children were given neither ORS nor a homemade solution nor increased fluids, placing this group at a greater risk of dehydration and death. Nine percent of children who had diarrhoea were given an injection. It should be noted that 93 percent of all children who had diarrhoea were given a home remedy. Only 4 percent of the children did not receive any treatment for the diarrhoeal episode.

Rural children and those in the Northwest region are more likely than other children not to receive any kind of oral rehydration therapy. Similarly, children whose mothers are less educated are less likely to be given oral rehydration solutions when they have diarrhoea.

When asked about specific eating and drinking regimens for children with diarrhoea, the data in Table 8.12 shows that children with diarrhoea were given less to drink in 23 percent of cases, the same amount to drink in 18 percent, and more to drink in 53 percent of cases. About one-half (54 percent) gave children with diarrhoea less to eat, while 19 percent gave the same amount to eat and only 23 percent gave more to eat.

Table 8.12 Feeding practices during diarrhoea

Percent distribution of children under three years who had diarrhoea in the past two weeks by amount of fluids and solid foods given compared with normal practice, Nigeria 1999

Feeding practice	Percentage of children
Amount of fluids given	
Same	18.4
Increased	53.4
Decreased	23.4
Don't know/missing	4.8
Amount of solid foods given	
Same	19.2
Increased	23.0
Decreased	53.9
Don't know/missing	3.9
Total	100.0
Number	489

Knowledge of Diarrhoea Treatment

Besides asking mothers of children with diarrhoea what they actually do to treat their children, the NDHS also asked women interviewed whether they had heard of ORS and whether children with diarrhoea should be given more or less to drink and eat than usual.

On being asked "Have you ever heard of a special product called ORS you can get for the treatment of diarrhoea?" 58 percent of women with a birth during the three years before the survey said they had heard of ORS (Table 8.13). Knowledge of packets is higher among older women, urban women, those in the south, and those with more education.

Table 8.13 also shows that almost half of women with children under three believe that children with diarrhoea should be given increased fluids, while 31 percent believe the child should get less fluids. On the other hand, 25 percent of women believe that a child with diarrhoea should receive more to eat, while 52 percent believe that the child should have less to eat. These figures are short of the recommendation for increased fluids during a diarrhoeal episode and increased food intake both during and after a diarrhoeal episode. Urban women, women in the north, and women who are better educated are more likely to say that children with diarrhoea should receive more to drink and eat than usual.

Table 8.13 Knowledge of diarrhoea care

Percentage of women who had a birth in the three years preceding the survey who know about ORS packets for treatment of diarrhoea and the percent distribution by opinion on appropriate feeding practices during diarrhoea, according to selected background characteristics, Nigeria *1999*

Background characteristic	Know about ORS packets for treatment of diarrhoea	Perceived appropriate feeding practices during diarrhoea compared with usual feeding practices										Number of women
		Liquids					Solid foods					
		Less	Same	More	Don't know/ Missing	Total	Less	Same	More	Don't know/ Missing	Total	
Age												
15-19	40.3	34.8	11.9	35.6	17.7	100.0	46.0	12.7	23.2	18.2	100.0	285
20-24	54.2	30.9	13.0	45.3	10.8	100.0	50.7	16.7	22.6	10.0	100.0	704
25-29	58.4	31.7	10.8	49.6	7.9	100.0	51.3	14.4	26.7	7.5	100.0	854
30-34	67.2	29.7	10.4	52.9	6.9	100.0	53.2	15.2	24.8	6.9	100.0	641
35+	58.2	29.3	9.1	54.3	7.4	100.0	53.8	15.1	23.9	7.2	100.0	621
Residence												
Urban	68.9	24.3	7.9	58.5	9.3	100.0	55.3	13.3	22.1	9.3	100.0	868
Rural	53.2	33.5	12.2	45.3	9.1	100.0	50.1	15.7	25.4	8.7	100.0	2,237
Region												
Northeast	50.3	20.3	8.4	62.9	8.3	100.0	55.9	7.8	27.5	8.8	100.0	690
Northwest	35.2	26.9	13.4	48.3	11.4	100.0	42.8	17.6	27.5	12.2	100.0	556
Southeast	66.0	40.9	9.2	39.7	10.2	100.0	41.3	20.5	29.1	9.1	100.0	532
Southwest	65.7	34.7	7.4	50.2	7.7	100.0	61.9	13.1	18.4	6.5	100.0	686
Central	69.0	33.5	17.0	40.9	8.7	100.0	51.9	18.3	21.3	8.4	100.0	641
Education												
No education	44.9	28.7	12.0	48.6	10.7	100.0	51.8	12.6	24.9	10.7	100.0	1,522
Primary	65.4	36.8	9.5	45.8	7.9	100.0	52.3	17.2	22.8	7.6	100.0	761
Secondary	73.1	31.8	10.6	50.4	7.3	100.0	51.9	17.3	24.2	6.6	100.0	702
Higher	77.1	17.5	9.4	65.2	7.9	100.0	41.8	19.1	32.5	6.6	100.0	119
Total	57.6	30.9	11.0	49.0	9.1	100.0	51.5	15.1	24.5	8.9	100.0	3,104

ORS = Oral rehydration salts

CHAPTER 9

MATERNAL AND CHILD NUTRITION

Adequate nutrition, especially for women and children, remains an important concern in Nigeria. The 1999 NDHS collected data on several areas related to nutrition of women and children. Specifically, this chapter examines infant feeding practices (including breastfeeding and complementary feeding) and nutritional status (based on height and weight measurements) of children age 0-35 months. Data on women's nutritional status (body mass index and height) are also presented.

9.1 *Breastfeeding and Supplementation*

Infant feeding practices determine the nutritional status of children and in turn, their health status. It is generally recommended that children be exclusively breastfed with no supplements for the first four to six months of life, after which appropriate and adequate complementary foods should be given in addition to breast milk (WHO/UNICEF, 1990). The amount of health benefit derived from breastfeeding is influenced by the age of the baby at initiation of breastfeeding, the duration and intensity of breastfeeding, and the age at which the child starts to receive supplementary foods and other liquids.

By the age of six months, children require complementary foods in order to follow normal growth patterns. When children do not receive adequate complementary foods by the middle of the first year and/or when they experience frequent illnesses such as diarrhoea, malnutrition may result, thereby increasing the risk of serious illness and death.

Prevalence and Initiation of Breastfeeding

Breast milk contains all nutrients needed by children in the first few months of life. It also provides some immunity to disease through the mother's antibodies, particularly the colostrum which is the first breast milk produced. To encourage early initiation of breastfeeding, women are educated about the benefits of exclusive breastfeeding and are urged to put their babies to breast soon after birth.

NDHS data confirm that breastfeeding is widely practiced in Nigeria. Table 9.1 shows that 96 percent of children are breastfed. This figure is similar to the 1990 NDHS figure of 97 percent (FOS, 1992:108).

Table 9.1 also shows that 38 percent of newborns are put to the breast within one hour of birth and 66 percent within one day of birth. These percentages are a slight increase over the figures from the 1990 NDHS, which showed that 33 percent of children were put to the breast within one hour and 50 percent within one day of birth.

The timing of breastfeeding initiation differs between urban and rural respondents, with urban children breastfed earlier than rural children. For example, 43 percent of urban children are put to the breast within one hour of birth, compared with 36 percent of rural children. Similarly, 74 percent of urban children are breastfed within one day of birth, compared with 63 percent of rural children. This situation differs from the 1990 NDHS, which found either no difference or a slight advantage for rural children. The change may be partly because of the Baby Friendly Hospital Initiative (BFHI), which promotes exclusive breastfeeding and policies that support breastfeeding in hospitals, most of which are in urban areas. Also, health education about breastfeeding is being increasingly delivered through the print and electronic media which are more

Table 9.1 Initial breastfeeding

Percentage of children born in the five years preceding the survey who were ever breastfed, and who started breastfeeding within one hour and within one day of birth, by background characteristics, Nigeria 1999

Background characteristic	Percentage ever breastfed	Percentage who started breastfeeding: Within 1 hour of birth	Within 1 day of birth[1]	Number of children
Sex				
Male	95.8	38.4	65.7	1,807
Female	96.7	38.0	65.5	1,741
Residence				
Urban	96.4	43.0	73.5	984
Rural	96.2	36.3	62.6	2,563
Region				
Northeast	94.8	24.5	44.4	788
Northwest	95.4	51.4	66.4	629
Southeast	97.6	42.7	75.3	649
Southwest	97.4	26.7	69.0	777
Central	96.1	50.2	75.5	704
Education				
No education	95.4	37.7	57.6	1,714
Primary	96.5	37.8	71.3	868
Secondary	97.7	38.8	74.0	827
Higher	96.2	42.8	77.8	138
Assistance at delivery				
Medically trained	97.3	39.7	77.5	1,474
Traditional midwife	95.9	38.8	59.7	734
Other or none	95.0	38.8	59.6	1,246
Place of delivery				
Health facility	97.3	41.1	78.0	1,323
At home	95.4	38.2	60.4	2,068
Total	96.2	38.2	65.6	3,547

Note: Total includes 93 children for whom assistance at delivery information is missing and 156 for whom place of delivery information is missing.
[1] Includes children who started breastfeeding within one hour of birth.

accessible to urban residents. These may account for the observed increase in early initiation of breastfeeding by urban residents.

The proportion of babies put to the breast within one hour of birth shows considerable regional variation, the lowest being 25 percent in the Northeast region and the highest 51 percent in the Northwest region. Surprisingly, there were no differentials in the proportion of babies put to breast within one hour by the type of personnel who assisted at delivery nor by place of delivery, although children born in health facilities and assisted at delivery by medically trained personnel are more likely to be breasfed within the first day of life.

Timing of Introduction of Complementary Foods

The timing of introduction of complementary foods in addition to breast milk has important implications for the child and the mother. Early supplementation, especially under unhygienic conditions,

can result in infection with foreign organisms and lower immunity to disease. The timing of the introduction of food supplements also has an impact on the length of the mother's postpartum amenorrhoea. Early initiation of supplementation results in earlier resumption of the mother's menstrual periods, since supplementation reduces infants' dependence on breast milk and the frequency of suckling.

Mothers were asked about the current breastfeeding status of their most recent birth under age three and, if the child was being breastfed, whether various types of liquid or solid foods had been given to the child "yesterday" or "last night." Children who are *exclusively* breastfed are defined as receiving breast milk only, while *full* breastfeeding is defined as receiving breast milk and plain water only.

The results shown in Table 9.2 indicate that babies are breastfed for a relatively long time; even among children 12-13 months old, 86 percent are still receiving breast milk. However, the data indicate that supplementation of breast milk with other liquids and foods begins early in Nigeria. Among newborns less than two months of age, most are either exclusively breastfed (25 percent) or fully breastfed (48 percent); however, one-quarter of these very young babies are already receiving complementary foods or liquids. Among those age 2-3 months, 40 percent are being given supplements.

Table 9.2 Breastfeeding status by child's age

Percent distribution of living children under three years of age by breastfeeding status, according to child's age in months, Nigeria 1999

Child's age in months	Not breast-feeding	Exclusively breastfed	Breastfeeding and: Plain water only	Breastfeeding and: Supple-ments	Total	Number of children
<1	3.0	25.3	48.2	23.5	100.0	176
2-3	4.7	14.2	40.2	40.8	100.0	185
4-5	6.6	7.7	24.2	61.5	100.0	201
6-7	2.6	8.7	14.5	74.2	100.0	187
8-9	6.7	9.2	13.2	70.8	100.0	183
10-11	7.1	4.4	7.1	81.4	100.0	151
12-13	13.7	7.4	5.8	73.1	100.0	301
14-15	16.6	5.8	6.6	71.0	100.0	273
16-17	34.4	3.8	2.9	59.0	100.0	165
18-19	44.2	4.7	2.3	48.9	100.0	127
20-21	61.1	4.4	2.3	32.2	100.0	120
22-23	68.2	3.3	0.0	28.4	100.0	120
24-25	81.0	3.6	0.6	14.9	100.0	175
26-27	87.1	0.5	1.0	11.4	100.0	200
28-29	89.8	4.5	2.2	3.5	100.0	91
30-31	94.1	2.9	0.0	3.0	100.0	69
32-33	94.8	0.0	0.0	5.2	100.0	77
34-35	89.7	3.8	0.0	6.5	100.0	78
<3 months	3.9	19.6	44.1	32.4	100.0	361
4-6 months	5.7	8.2	21.0	65.1	100.0	285
7-9 months	5.0	8.8	14.0	72.2	100.0	286

Note: Breastfeeding status refers to last 24 hours. Children classified as *breastfeeding and plain water only* receive no supplements.

Among older children, it is the lack of complementary feeding that is a problem. Among children age 12-13 months—when supplements other than breast milk are generally considered necessary for adequate nutrition—the data show that 13 percent of children are being given only breast milk or breast milk and water.

The data imply that there has been a remarkable improvement since 1990 in the proportion of very young babies who are exclusively breastfed (from less than 2 percent to 25 percent of children under two months old and from 1 to 14 percent of children age 2-3 months old). However, it is likely that the difference is caused by changes in the series of questions used to determine child feeding practices.

Data on the median duration and frequency of breastfeeding are presented in Table 9.3. The estimates of mean and median duration of breastfeeding are based on current status data, that is, the proportion of children born in the three years before the survey who were being breastfed at the time of the survey, as opposed to retrospective data on the length of breastfeeding of older children who are no longer breastfed. The prevalence/incidence mean is also provided for possible comparison with other data sources.

The median duration of any breastfeeding is 19 months, a month short of the period documented in the 1990 NDHS. The median duration of exclusive breastfeeding is less than a month, while for full breastfeeding (breast milk plus plain water), it is a little more than two months.

The median duration of breastfeeding differs across background characteristics. For example, the median duration of breastfeeding is longer in rural areas (19 months) than in urban areas (17 months). Breastfeeding duration is longest in the Northwest region (22 months) and shortest in the Southeast region (16 months). It is also longer among women with no education (22 months) than among women with a primary education (18 months), a secondary (16 months), or a higher education (15 months). It is also longer for women who had no assistance at delivery (21 months) than for women who had medical assistance at delivery (17 months).

Overall, 86 percent of children under six months of age were breastfed six or more times in the 24 hours preceding the survey. The proportion is lower among children whose mothers have more than secondary school than among those whose mothers are less educated. This difference may be because many women with a higher education work outside the home in jobs to which they cannot take their young infants.

Table 9.3 Median duration and frequency of breastfeeding

Median durations of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among youngest children under three years, and the percentage of children under six months who were breastfed six or more times in the 24 hours preceding the survey, according to background characteristics, Nigeria 1999

Background characteristic	Median duration (months) of breastfeeding among children under three years[1]				Children under six months	
	Any breast-feeding	Exclusive breast-feeding	Predominant breast-feeding[2]	Number of children	Percentage breastfed 6+ times in last 24 hours	Number of children
Sex of child						
Male	18.2	0.5	3.0	1,579	85.6	256
Female	18.9	0.5	2.1	1,525	85.8	305
Residence						
Urban	17.0	0.6	2.0	868	85.2	141
Rural	19.1	0.5	2.6	2,237	85.9	421
Region						
Northeast	21.1	0.4	3.3	690	91.0	129
Northwest	22.2	0.5	4.4	556	94.8	91
Southeast	15.5	0.5	1.6	532	81.9	91
Southwest	17.1	0.6	1.4	686	79.0	128
Central	18.0	0.6	2.9	641	83.1	122
Mother's education						
No education	21.5	0.4	2.8	1,522	92.1	274
Primary	18.0	0.5	2.1	761	77.7	136
Secondary	16.2	0.6	2.5	702	83.5	134
Higher	15.1	0.5	0.5	119	64.5	17
Assistance at delivery						
Medically trained	17.2	0.6	2.3	1,282	81.1	244
Traditional midwife	20.3	0.4	3.3	653	92.7	116
Other or none	20.5	0.4	2.5	1,127	87.6	199
Missing	0.9	0.4	0.4	42	51.0	2
All children	18.5	0.5	2.4	3,104	85.7	561
Mean[1] for all children	18.9	2.8	5.8	96.4	NA	NA
P/I[3]	21.3	2.3	6.0	NA	NA	NA

NA = Not applicable
[1] Median and mean based on current status
[2] *Either exclusively breastfed or received only plain water, water-based liquids, and/or juice.*
[3] Prevalence-incidence mean

Types of Complementary Foods

As mentioned above, the timing and type of weaning foods given to children can have a profound effect on their health and nutritional status. In the survey, mothers of children under three were asked what foods and liquids their youngest child had received in the 24 hours preceding the survey. The data were only collected for children who were still being breastfed.

The data in Table 9.4 show that supplementation is started too early in Nigeria. Only about one-fifth of breastfed children age 0-3 months receive nothing besides breast milk. At that age, 10 percent are already being fed with cereal and 20 percent with other liquids. Common complementary foods at 4-6 months included cereal (44 percent); other liquids (38 percent); meat, fish, and eggs (16 percent); milk (13 percent); and roots and tubers (11 percent).

Table 9.4 Foods received by children in preceding 24 hours

Percentage of breastfeeding children under three years of age who received specific foods in the 24 hours preceding the interview, by child's age, Nigeria 1999

	Percentage of children who received specific foods in preceding 24 hours									
					Solid/semisolid foods					
Child's age in months	Breast milk only	Infant formula	Other milk	Other liquids	Meat/ fish/ poultry/ eggs	Grains/ bread/ cereal/ porridge	Tubers/ roots/ plan-tains	Other	Using bottle with a nipple	Number of children
<2	26.1	5.3	7.5	12.6	1.2	5.3	1.8	4.8	18.4	171
2-3	14.9	11.8	8.7	26.4	4.7	14.3	0.7	6.3	21.8	176
4-5	8.3	7.1	14.5	37.9	12.4	38.5	6.4	13.4	15.4	187
6-7	8.9	10.4	11.8	43.7	29.1	53.6	20.0	30.8	18.6	182
8-9	9.9	9.7	15.7	49.5	34.8	57.9	30.4	37.6	15.0	171
10-11	4.7	10.8	16.1	58.2	45.5	65.8	32.7	45.3	13.3	140
12-13	8.6	5.7	15.0	51.2	43.9	64.2	32.9	44.5	16.7	260
14-15	7.0	4.8	18.6	49.3	44.2	66.2	22.3	44.0	10.2	228
16-17	5.7	4.2	15.6	50.3	48.7	67.9	36.0	54.9	8.5	109
18-23	9.8	2.7	13.7	47.6	48.3	65.1	35.5	51.3	6.8	156
24-29	16.7	0.0	14.1	49.3	41.0	58.1	17.7	44.0	2.5	68
30-35	30.9	0.0	13.1	39.6	36.6	62.7	20.1	37.0	13.2	16
<4 months	20.4	8.6	8.1	19.6	3.0	9.9	1.2	5.5	20.1	347
4-6 months	8.7	7.8	13.2	37.6	15.5	43.9	10.5	18.3	16.5	268
7-9 months	9.3	10.3	14.7	49.5	34.6	55.5	26.7	35.5	16.2	272
Total	10.8	6.9	13.8	42.9	31.5	50.3	21.3	33.3	14.3	1,863

Note: Breastfeeding status refers to last 24 hours. Percentages may sum to more than 100 percent because child may have received more than one type of supplement. The category of tubers and roots also includes plantains and unripe bananas. Data are based on the youngest child only.

Use of infant formula is quite low, with only 9 percent of breastfeeding children under four months being given infant formula and 8 percent of those age 4-6 months. These figures for use of infant formula are considerably lower than the figures from the 1990 NDHS. Use of bottles with nipples is more common, being used to feed up to 20 percent of breastfeeding children age 0-3 months and 17 percent of those age 4-6 months.

9.2 Nutritional Status of Children Under Three

Nutritional status is an important determinant of child health and survival. Undernutrition in childhood is often initiated by inadequate food intake, recurrent infections, and/or inadequate maternal care. Besides questions about breastfeeding and weaning foods, the 1999 NDHS included an anthropometric component, in which all children under three and their mothers were both weighed and measured. Each interviewing team carried a scale, a measuring board, and a measuring tape. The scales were bathroom-type scales purchased in Nigeria. Young children were placed in a basket and then put on the scale. The boards were made by gluing a tailor's measuring tape to a flat board; they were used to measure children younger than 24 months by laying them down on the board (recumbent length). Older children and mothers were measured standing (height) against a wall, using the measuring tape.

Evaluation of nutritional status is based on the rationale that in a well-nourished population, there is a statistically predictable distribution of children of a given age with respect to height and weight. In any large population, there is variation in height and weight; this variation approximates a normal distribution.

Use of a standard reference population as a point of comparison facilitates the examination of differences in the anthropometric status of subgroups in a population and of changes in nutritional status over time. One of the most commonly used reference populations, and the one used in this report, is the U.S. National Center for Health Statistics (NCHS) standard, which is recommended for use by the World Health Organisation.

Three standard indices of physical growth that describe the nutritional status of children are presented:

- Height-for-age (stunting)
- Weight-for-height (wasting)
- Weight-for-age (underweight)

Each of these indices gives different information about growth and body composition that can be used to assess nutritional status.

Height-for-age is a measure of linear growth. A child who is below minus two standard deviations (-2 SD) from the median of the NCHS reference population in terms of height-for-age is considered short for his/her age, or *stunted*, a condition reflecting the cumulative effect of chronic malnutrition. If the child is below minus three standard deviations (-3 SD) from the reference median, then the child is considered to be severely stunted. A child between -2 SD and -3 SD is considered to be moderately stunted. Stunting reflects failure to receive adequate nutrition over a long period of time and may also be caused by recurrent and chronic illness. Height-for-age, therefore, represents a measure of the long-term effects of malnutrition in a population and does not vary appreciably according to the season of data collection. Stunted children are not immediately obvious in a population; a stunted three-year-old child could look like a well-fed two-year-old.

Weight-for-height measures body mass in relation to body length and describes current nutritional status. A child who is below minus two standard deviations (-2 SD) from the reference median for weight-for-height is considered to be too thin for his/her height, or *wasted*, a condition reflecting acute malnutrition. Wasting represents the failure to receive adequate nutrition in the period immediately preceding the survey and may be the result of inadequate food intake or recent episodes of illness causing loss of weight and the onset of malnutrition. As with stunting, wasting is considered severe if the child is more than three standard deviations below the reference mean. Severe wasting is closely linked to an elevated risk of mortality. Prevalence of wasting may vary considerably by season; therefore, it is useful to keep in mind that this survey was implemented in April and May.

Weight-for-age is a composite index of height-for-age and weight-for-height and thus does not distinguish between acute malnutrition (wasting) and chronic malnutrition (stunting). A child can be underweight for his/her age because he/she is stunted, wasted, or both. Weight-for-age is a useful tool in clinical settings for continuous assessment of nutritional progress and growth. Children whose weight-for-age is below minus two standard deviations from the median of the reference population are classified as *underweight*. In the reference population, only 2.3 percent of children fall below minus two standard deviations (-2 SD) for each of these three indices.

In the survey, all surviving children born since January 1996 were eligible for height and weight measurement. Of the 3,206 children eligible for measurement, 92 percent were weighed and measured. Unfortunately, of the children who were both weighed and measured, 42 percent were considered to have implausibly low or high values for height-for-age or weight-for-height. An additional 4 percent were missing age in exact months. The following analysis focuses on the 1,473 children under 36 months for whom complete and plausible anthropometric data were collected. Table 9.5 shows the percentage of children who

Table 9.5 Nutritional status of children by demographic characteristics

Percentage of children under three classified as malnourished according to three anthropometric indices of nutrition status: height-for-age, weight-for-height, and weight-for-age, by selected demographic characteristics, Nigeria 1999

Demographic characteristic	Height-for-age			Weight-for-height			Weight-for-age			Number of children
	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	
Child's age										
<6 months	7.1	21.4	-0.6	5.2	13.6	0.4	4.3	11.5	-0.1	243
6-11 months	18.8	39.0	-1.3	5.0	13.5	0.4	12.7	27.2	-0.7	290
12-23 months	31.4	54.9	-2.0	6.6	15.5	0.1	13.1	31.5	-1.2	526
24-35 months	33.7	52.1	-2.0	2.5	7.0	0.2	9.9	31.1	-1.0	415
Sex										
Male	27.0	48.4	-1.8	4.4	11.6	0.2	10.6	29.2	-1.0	748
Female	24.1	42.4	-1.5	5.4	13.3	0.3	10.7	25.3	-0.7	725
Birth order										
1	23.8	44.9	-1.6	7.3	13.5	0.1	10.1	25.9	-1.0	297
2-3	25.6	43.3	-1.6	3.7	10.9	0.3	7.3	24.9	-0.8	529
4-5	25.1	45.2	-1.7	5.0	14.3	0.3	12.4	29.4	-0.9	343
6 +	27.7	50.1	-1.7	4.6	11.8	0.2	15.3	30.4	-0.9	305
Birth interval										
First birth	23.6	44.5	-1.6	7.8	13.9	0.1	10.5	26.0	-1.0	304
<24 months	28.7	47.5	-1.7	3.4	10.7	0.5	9.5	26.4	-0.7	207
24-47 months	26.0	45.6	-1.6	4.7	11.5	0.3	10.3	27.7	-0.9	711
48 months	24.1	44.7	-1.5	3.1	14.6	0.2	13.0	28.4	-0.9	251
All children	25.6	45.5	-1.6	4.9	12.4	0.3	10.7	27.3	-0.9	1,473

Note: Table omits a large proportion of children for whom anthropometric data are not available (see text). Each of the indices is expressed in standard deviation units (SD) 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 International Reference Population (-3 SD and -2 SD) are shown according to demographic characteristics.

[1] Includes children who are below -3 standard deviations from the International Reference Population median

are classified as malnourished according to height-for-age, weight-for-height, and weight-for-age indices, by the child's age and selected background characteristics. It is impossible to know whether the 45 percent of children included in the analysis are representative of all children under three or whether the information is biased because of the omission of such a large proportion of eligible children.

Just under half of children under three in Nigeria were recorded as being short for their age or stunted, while about one-quarter are severely stunted (<-3 SD). The figures are high and suggest chronic food insecurity and/or repeated illnesses. Stunting is evident even among children under age six months (21 percent). The prevalence of stunting generally increases as children get older, up to a high of 55 percent among one-year-old children. Prevalence of stunting varies little by sex of the child, birth order or the length of the preceding birth interval.

As shown in Table 9.6, rural children are slightly more likely to be stunted than urban children (47 versus 42 percent). The two northern regions and the Central region have higher prevalences of stunting than the southern regions. Children of women with no education have a higher prevalence of stunting than children of women with any education (56 percent compared with 38-40 percent).

Table 9.6 Nutritional status of children by background characteristics

Percentage of children under three classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by selected background characteristics, Nigeria 1999

Background characteristic	Height-for-age			Weight-for-height			Weight-for-age			Number of children
	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score (SD)	
Residence										
Urban	22.8	41.6	-1.5	3.4	11.4	0.2	8.7	26.7	-0.8	417
Rural	26.7	47.0	-1.7	5.5	12.8	0.3	11.5	27.5	-0.9	1,056
Region										
Northeast	35.9	55.2	-2.1	7.9	16.3	0.1	19.4	38.0	-1.3	302
Northwest	35.9	57.0	-2.0	11.6	22.9	-0.2	24.3	45.2	-1.5	108
Southeast	18.3	35.3	-1.3	2.8	8.0	0.5	5.0	18.3	-0.4	368
Southwest	19.4	38.9	-1.2	4.2	12.4	0.1	6.5	25.1	-0.8	404
Central	28.8	53.1	-2.0	2.9	10.0	0.6	9.5	23.9	-0.9	291
Education										
No education	34.4	56.2	-2.0	6.4	15.0	0.2	17.8	36.3	-1.2	547
Primary	22.6	39.7	-1.5	5.0	12.6	0.2	6.8	23.9	-0.8	414
Secondary	17.9	38.8	-1.3	3.4	9.2	0.4	5.8	19.5	-0.6	446
Higher	22.5	37.6	-1.4	1.7	11.3	0.3	9.3	25.5	-0.7	65
All children	25.6	45.5	-1.6	4.9	12.4	0.3	10.7	27.3	-0.9	1,473

Note: Each of the indices is expressed in standard deviation units (SD) 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 (i.e., away in the negative direction) the median of the International Reference Population (-3 SD and -2 SD) are shown according to demographic characteristics.

[1] Includes children who are below -3 standard deviations from the International Reference Population median

Twelve percent of children under three are underweight for their height or are wasted; 5 percent are severely wasted (<-3 SD). The prevalence of wasting varies little with background characteristics, except that it is lower among children age 12-23 months. Another exception is regional differences. The two northern regions have a higher prevalence of wasting than the other three regions. Caution is necessary when interpreting regional differences, since the proportion of children with implausible anthropometric data was highest in the Northwest region (69 percent).

Twenty-seven percent of children are considered to be underweight (low weight-for-age), and 11 percent are classified as severely underweight. As with stunting, children under six months are least likely to be underweight, probably due to the positive effects of breastfeeding. After six months of age, the proportion of children who are underweight rises to about one-third of children age 12-35 months. The likelihood of being underweight varies little by any of the other characteristics examined except that it is higher among children in the northern regions than in the southern or Central regions.

Trends in Nutritional Status of Children

Trends in child nutrition in Nigeria can be observed by comparing data from the 1990 NDHS with that obtained in the present survey (1999 NDHS). The two surveys used similar sampling strategies and data processing and analysis methods. However, the 1990 survey covered children under five, while the 1999 survey focused on children under three; therefore, it was necessary to retabulate data from the 1990 NDHS

to restrict the data to the younger children. Also, the two surveys used different measuring equipment. Any interpretation of trends is based on the assumption that the results from the 45 percent of children with adequate data in the 1999 NDHS are representative of all children under three.

The data indicate that stunting and wasting seem to have increased (from 36 to 46 percent of children under age three for stunting and from 11 to 12 percent of children for wasting). However, the proportion of children who are underweight seems to have decreased from 35 to 27 percent. It should be noted that two other surveys exist but their data are not again directly comparable. The 1993 UNICEF survey had anthropometric data but they are not based on a nationally representative sample, rather on "focus" states that were purposively sampled. The National Micronutrient Survey (NMS 1993) was based on a nationally representative sample but covered a different age range: 6-71 months.

9.3 Nutritional Status of Mothers

All mothers of children born since January 1996 were also eligible to be weighed and measured. The objective was to determine the nutritional status of women of reproductive age. However, since weighing and measuring all women would add considerably to the length and cost of the fieldwork, it was decided to limit the anthropometric section to women with young children who would be measured anyway.[1] The information was used to construct the following indicators of mothers' nutritional status:

- Mean height (in centimetres)
- Body mass index (BMI).

Women who were pregnant at the time of the survey and those who had delivered a baby within the two months before the interview were excluded from the tables on weight and body mass index. Thus, the data on height are available for 2,494 or 80 percent of the eligible women, while data on weight are available for 2,219 or 87 percent of the nonpregnant, nonpostpartum women, and BMIs are available for 2,046 or 80 percent of the women.

Height is used to identify mothers at nutritional risk. Height of women can be used to predict the risk of difficulty in delivering children, given the association between height and size of the pelvis. Also, the risk of giving birth to low-weight newborns is higher among women of small stature. Although the cut-off point at which the mother can be considered at risk varies between populations, a value of 145 centimetres is used.

Indices of body mass are used to assess thinness or obesity. The most commonly used index is the body mass index or BMI (also referred to as the Quetelet index), which is defined as weight in kilograms divided by the square of the height in metres (kg/m^2). The main advantage of the BMI is that it does not require a reference table from a well-nourished population. For the BMI, a cut-off point of 18.5 has been recommended for defining thinness, or acute malnutrition. Obesity has not been defined clearly in terms of the scale, although a BMI or 25.0 or above is usually considered obese.

The mean height of mothers of young children in Nigeria is 159 cm (Table 9.7). Seven percent of mothers are shorter than the cut-off point of 145 cm. The mean BMI is 22.8, with 16 percent of mothers falling below the cut-off of 18.5.

[1] Interviewers were instructed to weigh and measure all women who had had a birth since January 1996, regardless of whether or not the child was living.

The prevalence of short stature (height less than 145 cm) falls somewhat with increasing age. There is also considerable regional variation, ranging from 4 percent of mothers in the Central region to 11 percent in the Northwest region. Mothers with no education have nearly twice the prevalence of short stature than mothers with some education.

The prevalence of a BMI less than 18.5 decreases with increasing age, from 19 percent among mothers 15-19 years to12 percent among those 35-49 years. It also varies with region, being considerably higher in the two northern regions and in the Southwest region than in the Central and Southeast regions. There was a lower prevalence with increasing education.

Since this is the first nationally representative data on the nutritional status of mothers in Nigeria, there is no way to assess trends over time. The data should provide a good baseline with which other studies can be compared in the future.

Table 9.7 *Nutritional status of women by background characteristics*

Among women who gave birth in the three years preceding the survey, mean height and percentage under 145 cm, mean body mass index (BMI), percentage whose BMI is below 18.5, mean DHS Z-score, and percentage wasted, *by selected background characteristics, Nigeria 1999*

	Height			Body mass index[1]					
Background characteristic	Mean height in cm	Percentage below 145 cm	Number of women	Mean body mass index (kg/m^2)	Percentage below 18.5	Number of women	Mean DHS Z-score	Percentage below -2 SD	Number of women
Age									
15-19	155.5	10.5	226	22.9	18.6	192	-0.5	8.3	176
20-24	157.4	8.1	556	22.5	17.5	443	-0.3	6.0	425
25-29	159.0	6.6	708	22.7	17.3	555	-0.6	13.2	540
30-34	160.6	4.4	520	23.0	15.5	447	-0.6	13.1	430
35-49	160.3	5.2	484	23.1	12.3	418	-0.8	14.5	402
Residence									
Urban	160.3	5.6	660	23.0	14.8	535	-0.5	10.5	522
Rural	158.4	6.9	1,834	22.7	16.5	1,520	-0.6	11.8	1,450
Region									
Northeast	159.1	7.4	586	22.3	25.0	486	-0.8	18.4	465
Northwest	158.7	10.7	387	23.2	18.0	342	-0.6	12.3	313
Southeast	157.3	6.4	461	23.9	6.5	351	-0.3	5.1	341
Southwest	161.1	5.1	544	22.0	19.9	442	-0.7	13.5	432
Central	158.0	4.1	515	23.0	8.4	434	-0.4	6.2	422
Education									
No education	158.4	8.6	1,207	22.5	19.7	1,022	-0.7	15.1	965
Primary	158.2	5.1	630	22.6	13.7	514	-0.6	9.4	503
Secondary	160.1	4.2	568	23.4	11.7	454	-0.3	6.7	440
Higher	163.8	4.1	90	24.6	7.9	66	-0.1	4.9	65
Total	158.9	6.5	2,494	22.8	16.1	2,055	-0.6	11.4	1,972

Note: The Body Mass Index (BMI) is expressed as the ratio of weight in kilograms to the square of height in metres (kg/m^2). *The DHS Z-score is based on a study of elite mothers in DHS surveys and indicates the number of standard* deviation units (SD) from the median of the DHS de facto reference population. The percentage of mothers who are more than two standard deviations below the median of the DHS reference population (-2 SD) are considered wasted.

[1] Excludes pregnant women and women with a birth in the preceding two months

CHAPTER 10

FEMALE GENITAL CUTTING

Although the practice of female genital cutting (female circumcision) has become an important issue in international discourse, nationally representative data on its prevalence are rare. For the first time in Nigeria, the 1999 NDHS collected information on this practice. Women were asked if they were circumcised, and if so, what type of circumcision they had, who performed the circumcision and at what age. Those who had daughters were asked the same series of questions about their eldest daughter. All women were asked their opinions on whether the practice should be continued or discontinued. In this chapter, data on the prevalence, types, age at circumcision and persons performing female circumcision in the country are presented. Respondents' opinions on confirmation of the practice and reasons for or against the practice are also presented.

10.1 Prevalence of Female Genital Cutting

The data show that circumcision is common, with one in four Nigerian women age 15-49 reporting that they were circumcised (Table 10.1). Among those circumcised, by far the most common procedure was

Table 10.1 Prevalence of female genital cutting

Percent distribution of women 15-49 by whether they have been circumcised and, among those circumcised, percent distribution by type of circumcision, according to background characteristics, Nigeria 1999

Background characteristic	Circum-cised	Not circum-cised	Missing	Total	Number of women	Type of circumcision			Missing	Total	Number of circum-cised women
						Clitori-dectomy	Excision	Infibu-lation			
Age											
15-19	8.8	38.6	52.5	100.0	1,775	82.0	5.1	7.8	5.1	100.0	157
20-24	19.6	65.2	15.2	100.0	1,521	81.4	7.8	3.4	7.4	100.0	298
25-29	26.4	69.0	4.6	100.0	1,516	81.2	8.3	2.9	7.7	100.0	400
30-34	31.3	67.4	1.3	100.0	1,137	82.1	6.5	3.2	8.2	100.0	356
35-39	31.0	67.9	1.2	100.0	992	81.0	6.7	5.7	6.5	100.0	307
40-44	37.9	60.9	1.2	100.0	696	81.3	6.6	4.7	7.4	100.0	264
45-49	48.3	51.3	0.4	100.0	568	86.9	4.7	0.8	7.6	100.0	274
Residence											
Urban	30.0	51.5	18.6	100.0	2,540	77.8	6.9	4.1	11.2	100.0	761
Rural	22.9	63.0	14.1	100.0	5,666	84.8	6.6	3.6	5.0	100.0	1,295
Region											
Northeast	1.9	91.1	7.0	100.0	1,292	(13.7)	(20.6)	(49.9)	(15.8)	100.0	25
Northwest	2.6	92.4	4.9	100.0	1,087	(69.1)	(14.7)	(13.3)	(2.9)	100.0	28
Southeast	36.5	39.1	24.4	100.0	1,886	75.0	11.7	3.7	9.6	100.0	689
Southwest	48.4	32.5	19.1	100.0	2,080	84.2	4.6	3.3	7.9	100.0	1,008
Central	16.4	69.1	14.5	100.0	1,861	98.6	0.7	0.7	0.0	100.0	306
Education											
No education	15.6	81.1	3.3	100.0	3,324	85.1	5.2	5.2	4.6	100.0	518
Primary	36.1	48.0	16.0	100.0	1,868	83.0	8.0	1.9	7.1	100.0	674
Secondary	27.6	40.3	32.1	100.0	2,506	79.9	6.7	4.6	8.8	100.0	692
Higher	33.8	54.7	11.5	100.0	508	79.6	6.5	3.6	10.3	100.0	172
Total	25.1	59.5	15.5	100.0	8,206	82.2	6.7	3.8	7.3	100.0	2,056

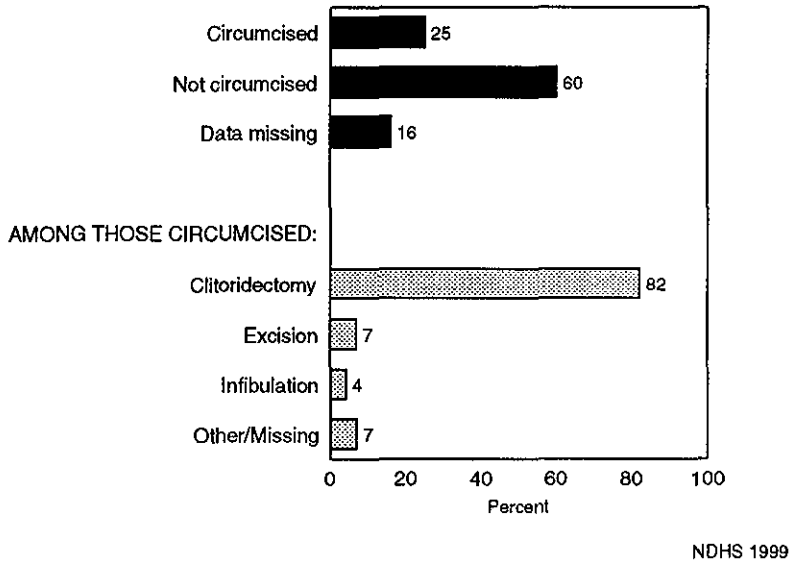
Note: The proportion with missing information is high due to an error in the questionnaires that resulted in women who had never had sexual intercourse skipping these questions. Figures in parentheses are based on 25-49 unweighted cases.

the least invasive form of clitoridectomy (82 percent) (Figure 10.1). Only a small proportion of circumcised women reported excision (removal of the labia) or infibulation (sewing together of the labia).

The prevalence of female genital cutting generally increases with age. Although almost half of women age 45-49 are circumcised, the proportion is one-quarter or less among women under age 30.[1]

There is a slight differential by urban-rural residence in female genital cutting, with a larger proportion of urban than rural women being circumcised. This difference may be a reflection of the pattern of settlement in the Southwest region, where the largest proportion of circumcised women lives (48 percent). The prevalence of the practice is lowest in the Northeast region (2 percent) and the Northwest region (3 percent). Female genital cutting is more common among better-educated women, which may again be a reflection of its being more prevalent in the Southwest and Southeast regions than in the northern regions. Although very few women in the north have been circumcised, they are more likely to report having had excision or infibulation than women in the south.

Figure 10.1
Prevalence of Female Genital Cutting, Nigeria 1999



[1] Because of an error in the questionnaire, women who had never had sexual intercourse were skipped on the questions on female circumcision. Since these women are more likely to be younger, this affects the analysis of age patterns.

10.2 Age at Circumcision

In Nigeria, female genital cutting is commonly performed in infancy; as shown in Table 10.2, 42 percent of circumcised women were circumcised before attaining one year of age. This pattern cuts across residence and educational levels. However, the few women in the north who are circumcised reported having the operation at older ages than those in the south. This pattern is also reflected in the type of circumcision, with clitoridectomy and excision generally being performed at younger ages than infibulation.

Table 10.2 Age at genital cutting

Percent distribution of circumcised women by age at circumcision, according to background characteristics, Nigeria 1999

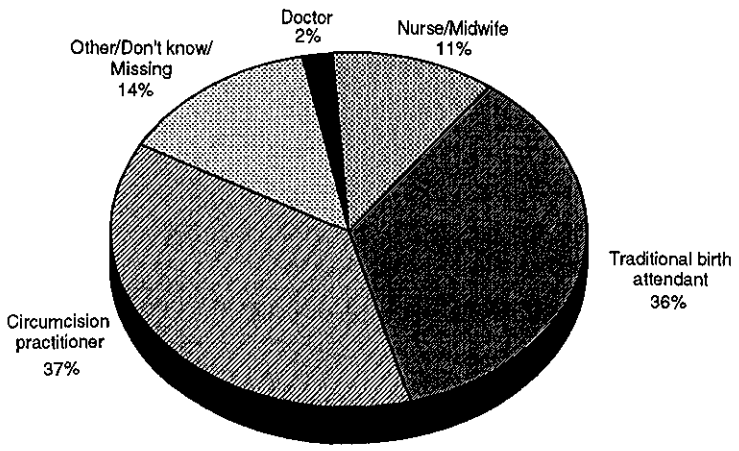
Background characteristic	Age at circumcision 0	1-4	5+	Don't know/ Missing	Total	Number of women
Residence						
Urban	43.1	7.9	17.6	31.4	100.0	761
Rural	40.7	7.8	26.6	24.8	100.0	1,295
Region						
Northeast	(7.8)	(20.9)	(51.1)	(20.2)	100.0	25
Northwest	(16.2)	(12.6)	(39.6)	(31.6)	100.0	28
Southeast	49.1	2.7	28.4	19.9	100.0	689
Southwest	40.6	10.7	16.2	32.5	100.0	1,008
Central	33.1	8.6	31.7	26.6	100.0	306
Education						
No education	34.5	10.7	26.8	28.0	100.0	518
Primary	44.1	6.4	22.7	26.9	100.0	674
Secondary	42.4	6.4	22.5	28.8	100.0	692
Higher	50.1	10.5	18.8	20.6	100.0	172
Type of circumcision						
Clitoridectomy	41.4	8.7	23.3	26.7	100.0	1,690
Excision	44.0	2.9	37.0	16.1	100.0	139
Infibulation	20.4	9.5	37.3	32.8	100.0	77
Other/Missing/ Don't know	52.5	2.1	4.1	41.3	100.0	150
Total	41.6	7.8	23.3	27.3	100.0	2,056

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

10.3 Person Who Performed Circumcision

The risks of complications and infection associated with female genital cutting may be a function of the environmental conditions under which the operation is performed and the cleanliness of the instruments. Questions on the person who performed circumcision were asked to indirectly gauge exposure to these risks. About 70 percent of circumcisions were performed either by traditional birth attendants (36 percent) or by circumcision practitioners (37 percent) (Figure 10.2). Only 13 percent were performed by trained modern medical personnel. This pattern holds in all regions and across all educational levels.

Figure 10.2
Provider of Female Genital Cutting, Nigeria 1999



NDHS 1999

10.4 Attitudes toward Female Genital Cutting

In response to the question "Do you think female circumcision should be continued or should it be discontinued?" only 15 percent of all women are of the opinion that the practice should be continued, while almost half believe that the practice should be discontinued and more than one-fifth said they do not know how they feel (Table 10.3). As might be expected, the pattern of favourable attitudes towards female genital cutting tends to mirror the pattern of the practice itself. Consequently, urban women and women in the south are more likely than others to favour continuation of the practice, as are those who have been circumcised. The one exception is educational attainment. Although educated women are more likely than uneducated women to be circumcised, almost three-quarters of those with more than secondary school say they think the practice should be discontinued.

Table 10.3 Attitudes toward female genital cutting

Percent distribution of all women by opinion on whether female genital cutting should be continued according to background characteristics and circumcision status, Nigeria 1999

Background characteristic	Attitude toward female genital cutting: Should be continued	Should be discontinued	Don't know	Missing	Total	Number of women
Residence						
Urban	16.7	48.7	16.6	18.0	100.0	2,540
Rural	14.8	46.2	24.9	14.0	100.0	5,666
Region						
Northeast	1.8	63.2	27.9	7.0	100.0	1,292
Northwest	3.6	48.3	43.5	4.6	100.0	1,087
Southeast	19.4	43.7	12.8	24.1	100.0	1,886
Southwest	31.4	38.6	11.4	18.6	100.0	2,080
Central	9.8	47.7	28.0	14.5	100.0	1,861
Education						
No education	11.8	49.3	35.6	3.3	100.0	3,324
Primary	23.1	44.8	16.4	15.7	100.0	1,868
Secondary	15.3	40.7	12.3	31.7	100.0	2,506
Higher	10.7	71.3	7.1	10.9	100.0	508
Circumcision status						
Circumcised	54.4	37.0	8.6	0.1	100.0	2,056
Not circumcised	2.8	63.2	33.8	0.2	100.0	4,879
Total	15.4	47.0	22.3	15.3	100.0	8,206

Note: The proportion with missing information is high due to an error in the questionnaires that resulted in women who had never had sexual intercourse skipping these questions.

Respondents who want the practice of female genital cutting to continue advanced several reasons for their opinion; the major ones are that circumcision is a good tradition/custom and that it will preserve virginity and prevent immorality (Table 10.4). Very few women cite religion as a reason for favouring the practice, nor do many women say that circumcision provides greater pleasure for husbands. Similarly, only 5-7 percent of women say that female circumcision should be continued because of cleanliness or because it will enhance a girl's marriage prospects.

As to why the practice should be discontinued, many respondents believe that it is a bad tradition, while some say that it is against religion (Table 10.5). Other reasons given for advocating a discontinuation of the practice include medical complications arising from the practice, painful personal experience, the indignity of the practice, and inhibition of sexual satisfaction.

Table 10.4 Reasons for supporting female genital cutting

Among women who say they think female circumcision should be continued, percentage who cite specific reasons, Nigeria 1999

Reason	Percentage of women
Good tradition	35.4
Custom and tradition	50.2
Religious demand	2.0
Cleanliness	5.3
Better marriage prospects	6.7
Greater pleasure of husband	2.6
Preserve virginity/ Prevent immorality	14.3
Other	5.6
Does not know	1.9
Number of women	1,263

Note: Multiple responses accepted

Women who had daughters were asked if their eldest daughter was circumcised and, if not, whether they planned to have her circumcised. The results in Table 10.6 show that only one in five daughters have been circumcised, with another 4 percent planned to be circumcised. Almost three-quarters of women with daughters say they do not plan to have the daughter circumcised. The pattern of responses generally follows that of circumcision among the women themselves; namely, the daughters of women in urban areas, in the Southwest and Southeast regions, and those whose mothers are circumcised are most likely to be circumcised. There is a clear relationship with age, with daughters of older women much more likely to be circumcised than daughters of younger women.

Table 10.5 Reasons for not supporting female genital cutting

Among women who say they think female circumcision should be discontinued, percentage who cite specific reasons, Nigeria 1999

Reason	Percentage of women
Bad tradition	60.6
Against religion	22.4
Medical complications	22.3
Painful personal experience	10.4
Against dignity of women	10.1
Prevents sexual satisfaction	6.5
Other	3.2
Does not know	2.8
Number of women	3,857

Note: Multiple responses accepted

Table 10.6 Genital cutting of daughters

Percent distribution of women with daughters by whether the oldest daughter is circumcised or circumcision is planned, according to background characteristics and circumcision status, Nigeria 1999

Background characteristic	Status of eldest daughter: Daughter circumcised	Plan to circumcise	Do not plan circumcision	Missing	Total	Number of women
Age						
15-19	3.9	3.8	89.1	3.1	100.0	157
20-24	8.2	6.4	82.5	2.9	100.0	546
25-29	13.7	4.5	79.4	2.4	100.0	951
30-34	19.4	3.9	74.4	2.4	100.0	895
35-39	21.0	3.3	74.7	0.9	100.0	858
40-44	28.3	3.2	67.2	1.3	100.0	614
45-49	41.9	2.6	54.8	0.7	100.0	482
Residence						
Urban	24.5	3.7	70.5	1.2	100.0	1,316
Rural	18.4	4.1	75.4	2.1	100.0	3,187
Region						
Northeast	1.6	0.6	95.3	2.4	100.0	785
Northwest	2.2	0.3	93.3	4.2	100.0	681
Southeast	30.6	8.1	60.6	0.7	100.0	861
Southwest	43.9	5.5	49.7	0.9	100.0	1,126
Central	11.9	3.8	82.4	1.9	100.0	1,050
Education						
No education	14.6	2.0	81.0	2.4	100.0	2,352
Primary	29.2	6.3	63.0	1.5	100.0	1,111
Secondary	24.4	6.9	67.4	1.3	100.0	815
Higher	19.4	2.3	77.9	0.5	100.0	225
Circumcision status						
Circumcised	59.9	10.9	28.3	0.8	100.0	1,416
Not circumcised	1.9	0.7	95.4	2.0	100.0	3,064
Total	20.2	4.0	73.9	1.9	100.0	4,503

CHAPTER 11

SEXUAL ACTIVITY AND KNOWLEDGE OF SEXUALLY TRANSMITTED DISEASES

11.1 Introduction

Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) are becoming an important public health concern in Nigeria. However, there are no reliable nationally representative data on sexual practices nor on knowledge and beliefs about HIV/AIDS and other sexually transmitted diseases (STDs). Therefore, several questions were included in the 1999 NDHS to ascertain the level of awareness about these health problems. Knowledge of means of avoiding AIDS can help prevent its spread. Both women and men were asked about their sexual practices, including giving or receiving gifts in exchange for sex. They were also asked whether they had ever heard of AIDS and, if so, where they had learned the most about AIDS. They were then asked whether they knew of anything a person could do to avoid getting AIDS. Finally, respondents were asked whether they thought it was possible for a healthy-looking person to have the AIDS virus and whether they thought that people with AIDS almost never, sometimes, or almost always died from the disease.

11.2 Awareness and Knowledge of HIV/AIDS

The future course of what has now become a pandemic depends to a large extent on the level of HIV/AIDS awareness and knowledge among the general public. Tables 11.1.1 and 11.1.2 present the percentage of women and men, respectively, who have heard of HIV/AIDS by source of information, according to background characteristics. The table shows that 74 percent of women and 90 percent of men have heard of HIV/AIDS.

The radio and relatives and friends are the most commonly cited sources of information about HIV/AIDS among both women and men. The radio was cited by 46 percent of women and 72 percent of men; relatives and friends were cited by 42 percent of women and 52 percent of men. Television is also an important source of HIV/AIDS information (24 percent of women and 40 percent of men). Men are more likely than women to cite every source of information about HIV/AIDS except health workers, which were cited by 17 percent of women and 14 percent of men.

The percentage of respondents who have heard of HIV/AIDS is surprisingly constant over the age groups, being only slightly lower among women in their 40s and men age 15-19. The percentage of women and men who have heard of HIV/AIDS is higher for those never married than for those who are currently or were formerly in union, especially among women. Knowledge of AIDS is higher in urban than in rural areas. It is also highest in the Southeast and Southwest regions and lowest in the Northwest region. The percentage of women and men who know of AIDS increases with level of education. As might be expected, radio, television, and newspapers are more important sources of AIDS information for urban than for rural respondents. Those sources are also more likely to be cited by more-educated respondents.

Women and men were asked what a person can do to avoid getting HIV/AIDS. Tables 11.2.1 and 11.2.2 show the percentage of women and men respectively, who cite various ways to avoid HIV/AIDS and the percentage who have been misinformed, according to background characteristics. The tables are based on respondents who have heard of AIDS.

Table 11.1.1 Knowledge of HIV/AIDS and sources of HIV/AIDS information: women

Percentage of women who have heard of HIV/AIDS and among women who have heard of HIV/AIDS percentage who received information about HIV/AIDS from specific sources, by background characteristics, Nigeria 1999

Background characteristic	Has heard of HIV/AIDS	Source of HIV/AIDS information											Number of women
		Radio	TV	News-paper	Pamph-let	Health worker	Mosque/ church	School	Com-munity meeting	Friend/ Rela-tive	Work-place	Other source	
Age													
15-19	74.2	39.9	21.3	8.4	3.7	6.8	4.6	21.0	2.4	41.2	1.1	1.9	1,775
20-24	76.6	48.1	28.0	12.6	5.9	15.6	6.4	12.0	4.0	43.3	2.9	1.9	1,521
25-29	75.4	48.8	27.5	11.6	4.9	23.8	6.1	4.8	5.6	39.5	3.9	1.7	1,516
30-39	75.0	49.3	26.1	8.6	4.8	22.6	6.5	3.0	6.0	42.1	4.0	1.7	2,129
40-49	69.8	40.3	17.2	4.8	2.6	13.8	7.1	1.0	6.9	41.2	3.7	2.3	1,265
Marital status													
Currently married	69.6	43.7	21.1	6.6	3.8	19.6	5.4	2.0	5.4	38.8	2.7	1.4	5,757
Formerly married	80.6	42.3	19.1	5.4	2.5	14.1	4.5	3.6	6.9	57.7	5.3	4.2	319
Never married	86.4	51.0	33.6	17.0	6.7	9.5	8.2	27.0	3.3	46.3	3.7	2.8	2,130
Residence													
Urban	87.6	61.3	49.7	17.4	7.4	22.9	6.1	10.7	4.1	43.5	5.1	0.8	2,540
Rural	68.5	38.5	12.9	5.6	3.1	14.0	6.1	7.6	5.3	40.7	2.2	2.4	5,666
Region													
Northeast	49.8	27.8	10.7	3.6	1.3	12.4	1.8	2.4	1.7	28.6	1.0	0.1	1,292
Northwest	47.4	31.7	7.8	1.6	1.1	7.1	2.9	1.2	2.1	32.7	0.4	0.1	1,087
Southeast	90.6	55.9	25.8	13.3	6.3	16.1	10.2	16.2	7.5	53.3	3.7	5.9	1,886
Southwest	84.9	57.7	42.2	12.5	5.0	19.3	4.1	8.3	3.2	38.8	3.7	1.0	2,080
Central	79.0	42.0	21.9	9.9	6.2	23.3	9.0	9.8	8.1	46.8	4.7	1.1	1,861
Education													
No education	49.5	23.7	4.8	0.3	1.1	10.1	3.2	0.2	4.6	32.2	0.8	0.6	3,324
Primary	85.7	49.9	19.1	2.6	2.7	18.6	7.5	3.2	5.9	52.1	2.8	3.4	1,868
Secondary	94.1	63.5	42.9	17.1	6.2	20.0	7.8	20.2	4.3	46.1	3.5	2.3	2,506
Higher	98.5	84.6	79.4	53.5	24.5	37.2	11.8	26.1	6.1	40.8	16.2	2.4	508
Total	74.4	45.6	24.3	9.3	4.5	16.8	6.1	8.6	4.9	41.5	3.1	1.9	8,206

Table 11.1.2 Knowledge of HIV/AIDS and sources of HIAV/AIDS information: men

Percentage of men who have heard of HIVAIDS and among men who heard of HIV/AIDS percentage who received information about HIV/AIDS from specific sources, by background characteristics, Nigeria 1999

Background characteristic	Has heard of HIV/AIDS	Source of HIV/AIDS information											Number of men
		Radio	TV	News-paper	Pamph-let	Health worker	Mosque/ church	School	Com-munity meeting	Friend/ Rela-tive	Work-place	Other source	
Age													
15-19	85.0	59.9	35.6	18.3	10.6	8.5	8.0	27.1	1.6	44.2	3.0	1.4	511
20-24	93.8	76.1	47.2	26.7	17.2	14.8	7.6	15.6	2.5	55.1	5.9	2.0	319
25-29	90.4	76.0	45.0	30.5	16.7	13.0	7.7	9.5	4.7	57.4	15.4	2.3	366
30-39	91.3	79.7	44.2	32.0	17.5	17.8	8.3	3.6	4.2	55.9	16.3	1.9	623
40-49	89.3	72.1	36.5	25.2	14.5	15.7	9.9	3.3	7.0	51.5	17.0	1.9	436
50-64	88.4	69.5	31.7	19.0	12.2	15.7	9.8	2.6	7.7	46.5	10.1	2.5	425
Marital status													
Currently married	88.9	73.6	36.9	24.2	13.8	15.8	8.8	3.0	5.9	52.9	14.1	2.0	1,612
Formerly married	88.5	67.1	39.5	24.9	18.6	18.8	8.7	6.2	6.0	57.0	16.4	1.2	81
Never married	90.5	70.1	44.5	27.3	15.9	11.6	8.2	22.1	2.3	49.0	6.9	2.0	988
Residence													
Urban	95.3	79.8	68.7	41.5	22.1	18.5	8.7	14.2	4.9	48.8	15.9	1.7	821
Rural	86.9	68.7	27.0	18.2	11.5	12.5	8.5	8.3	4.4	52.8	9.6	2.1	1,859
Region													
Northeast	76.9	61.3	28.0	16.8	10.0	8.7	3.7	3.7	1.7	56.1	5.3	0.7	437
Northwest	76.6	58.7	17.0	9.6	8.5	14.5	7.2	5.1	3.5	64.8	12.7	1.5	356
Southeast	96.1	79.6	42.1	25.9	14.5	8.8	10.9	12.4	7.9	57.9	15.2	3.2	590
Southwest	96.5	78.3	59.5	34.5	17.2	16.1	9.6	13.6	5.7	36.8	11.7	1.5	696
Central	91.7	73.5	36.8	29.8	19.1	21.7	9.6	11.5	2.8	51.3	11.6	2.6	601
Education													
No education	73.2	52.2	11.2	2.0	4.0	8.8	4.6	1.0	3.5	51.1	5.6	1.0	663
Primary	91.7	74.0	28.9	13.9	9.1	10.1	8.9	1.8	6.3	53.9	10.9	2.4	710
Secondary	95.8	78.9	54.1	34.7	16.6	14.5	9.4	19.0	3.8	49.4	11.3	1.4	986
Higher	98.8	88.2	79.2	70.2	43.5	34.8	13.5	20.0	5.5	54.3	25.9	5.0	321
Total	89.5	72.1	39.8	25.4	14.7	14.3	8.6	10.1	4.6	51.6	11.5	2.0	2,680

Table 11.2.1 Knowledge of ways to avoid HIV/AIDS: women

Among women who have heard of HIV/AIDS, percentage who know of specific ways to avoid HIV/AIDS and percentage with misinformation about HIV/AIDS, by background characteristics, Nigeria 1999

Background characteristic	Ways to avoid HIV/AIDS															
	No way to avoid HIV/AIDS	Abstain from sex	Use condoms	One sex partner	Avoid sex with prostitutes	Avoid sex with homosexuals	Ensure safe transfusions	Ensure safe injections	Ensure clean instruments for circumcision	Avoid contaminated objects	Avoid kissing	Avoid mosquito bite	Traditional healer/ Other	Doesn't know any way	Percentage with any misinformation[1]	Number of women
Age																
15-19	5.9	25.5	11.6	38.2	12.3	1.8	13.4	17.6	8.4	1.7	2.7	0.6	2.4	30.1	5.3	1,318
20-24	5.3	14.3	18.4	50.4	16.0	4.1	18.8	23.9	10.5	1.6	1.8	0.4	3.0	24.4	4.7	1,164
25-29	7.2	10.8	17.3	55.6	18.7	2.5	18.9	25.2	11.4	1.3	1.6	0.2	2.8	24.2	4.5	1,144
30-39	5.3	11.5	14.1	58.0	17.0	3.7	20.5	24.7	11.1	0.9	1.6	0.6	2.6	24.1	4.3	1,597
40-49	6.1	13.7	6.2	57.9	16.6	2.3	14.0	20.0	9.1	1.8	0.8	0.0	1.7	25.6	2.6	882
Marital status																
Currently married	6.2	8.9	12.0	56.9	18.9	3.2	17.3	21.7	9.8	1.3	1.2	0.3	2.2	25.9	3.4	4,007
Formerly married	5.1	17.0	11.1	45.2	10.8	2.8	13.5	19.0	7.7	0.6	0.0	0.4	4.6	27.3	5.1	257
Never married	5.4	28.7	18.2	41.7	10.5	2.5	18.3	24.4	11.3	1.8	3.3	0.6	3.1	24.9	6.4	1,841
Residence																
Urban	5.0	15.7	19.4	55.3	19.0	4.8	24.5	28.1	13.1	1.0	2.6	0.5	2.1	23.8	4.8	2,226
Rural	6.4	15.0	10.6	49.8	14.3	1.9	13.3	19.2	8.5	1.6	1.3	0.3	2.8	26.8	4.1	3,880
Region																
Northeast	4.6	2.9	7.0	41.0	39.6	4.7	20.3	24.8	9.1	0.6	0.4	0.1	0.5	33.3	1.0	644
Northwest	3.9	4.7	8.4	54.8	25.0	4.5	21.5	25.8	13.4	0.0	1.3	0.0	0.8	23.7	2.1	515
Southeast	4.6	28.2	13.0	48.9	7.3	1.6	15.3	23.0	9.1	2.8	1.5	0.4	4.8	22.6	6.2	1,710
Southwest	5.4	11.1	17.7	55.5	12.3	2.8	17.2	19.8	10.3	1.1	3.0	0.4	2.7	25.8	5.7	1,767
Central	9.3	14.1	15.1	54.4	17.2	3.3	17.4	22.6	10.6	1.0	1.4	0.6	1.3	26.5	2.9	1,470
Education																
No education	7.7	6.7	4.0	47.1	22.6	2.4	9.6	13.6	4.8	0.5	0.4	0.1	0.9	34.5	1.4	1,645
Primary	5.4	14.7	8.5	52.6	13.1	2.0	11.0	16.4	7.7	0.7	0.9	0.1	3.1	27.3	4.0	1,601
Secondary	5.5	20.0	18.3	50.3	12.6	2.6	20.6	26.1	12.1	2.2	2.8	0.6	2.9	22.2	5.9	2,358
Higher	3.4	22.6	41.6	71.7	20.1	9.2	48.5	53.0	26.8	2.9	4.0	1.6	4.3	7.6	8.2	501
Total	5.9	15.2	13.8	51.8	16.0	2.9	17.4	22.4	10.2	1.4	1.8	0.4	2.6	25.7	4.4	6,105

[1] Includes mosquito bites, kissing, or seeking care from a traditional healer or spiritual aid.

Table 11.2.2 Knowledge of ways to avoid HIV/AIDS: men

Among men who have heard of HIV/AIDS, percentage who know of specific ways to avoid HIV/AIDS and percentage with misinformation about HIV/AIDS, by background characteristics, Nigeria 1999

Background characteristic	Ways to avoid HIV/AIDS														
	No way to avoid HIV/AIDS	Abstain from sex	Use condoms	One sex partner	Avoid sex with prostitutes	Avoid sex with homosexuals	Ensure safe transfusions	Ensure safe injections	Ensure clean instruments for circumcision	Avoid kissing	Avoid mosquito bite	Traditional healer/ Other	Doesn't know any way	Percentage with any misinformation[1]	Number of men
Age															
15-19	3.2	32.3	29.7	25.6	29.3	5.7	14.8	17.1	13.7	2.0	1.1	6.0	24.6	8.4	435
20-24	2.4	27.8	38.6	37.3	35.0	6.5	18.2	23.9	18.9	2.0	1.3	5.8	13.4	8.9	299
25-29	3.0	21.7	37.4	45.9	45.7	9.9	23.5	34.5	21.2	3.2	1.6	5.4	10.0	9.9	331
30-39	2.6	22.6	30.4	50.8	50.1	10.8	25.4	27.8	22.3	3.1	1.5	6.8	9.3	9.6	569
40-49	1.8	23.7	23.5	50.2	47.9	8.3	22.0	24.7	19.2	2.6	1.3	7.7	9.8	10.8	389
50-64	1.7	22.9	19.3	46.5	46.6	8.1	17.1	20.9	13.5	1.7	0.6	3.6	17.5	5.3	376
Marital status															
Currently married	2.4	19.4	22.4	48.9	48.9	8.7	20.4	25.0	18.5	2.4	1.3	6.2	12.2	8.9	1,433
Formerly married	1.4	41.6	51.8	41.2	46.2	18.7	31.5	37.1	24.4	2.5	1.7	4.2	11.7	6.8	71
Never married	2.7	32.9	38.8	33.9	33.2	7.0	19.6	23.3	17.5	2.5	1.1	5.8	17.2	8.9	894
Residence															
Urban	1.4	23.1	39.8	45.5	38.1	10.4	26.0	29.7	21.4	3.5	1.4	4.7	13.0	8.8	783
Rural	3.0	26.0	24.4	41.9	45.3	7.4	17.8	22.3	16.8	2.0	1.2	6.6	14.6	8.9	1,616
Region															
Northeast	2.6	19.2	17.2	29.1	63.7	15.5	20.8	25.0	26.5	3.7	4.6	7.5	14.9	12.1	336
Northwest	0.8	6.6	10.1	35.4	78.6	15.3	20.0	36.2	27.0	1.5	0.7	7.3	11.4	9.2	273
Southeast	3.7	43.0	29.6	42.5	21.9	2.3	16.4	20.3	10.8	0.5	0.0	8.8	17.3	9.3	567
Southwest	3.9	19.8	37.1	38.2	30.8	2.0	22.5	25.2	14.5	3.0	0.6	4.5	16.4	7.9	671
Central	0.2	25.8	36.9	62.0	49.1	14.6	22.2	22.9	21.3	3.6	1.5	3.5	8.7	7.5	551
Education															
No education	2.6	14.9	9.9	35.5	58.1	11.7	11.6	18.3	15.5	1.3	1.3	5.8	18.1	7.1	485
Primary	3.1	25.1	18.3	41.2	36.4	4.1	9.9	14.9	11.0	1.2	0.6	6.0	17.1	7.4	652
Secondary	2.6	27.4	38.0	40.7	37.0	6.3	21.2	25.3	18.8	2.5	1.2	5.9	13.9	9.0	945
Higher	0.6	33.6	56.3	65.8	50.9	18.0	53.6	53.1	35.9	6.7	2.6	6.4	2.1	14.1	317
Total	2.5	25.1	29.4	43.1	42.9	8.4	20.5	24.7	18.3	2.5	1.2	6.0	14.1	8.9	2,399

[1] Includes mosquito bites, kissing, or seeking care from a traditional healer or spiritual aid.

Six percent of women and 3 percent of men say that there is no way to avoid HIV/AIDS, while about a quarter (26 percent) of women and 14 percent of men say that they do not know any way to avoid getting HIV/AIDS. Urban respondents are less likely than rural respondents to report that there is no way to avoid getting HIV/AIDS. Similarly the tendency to report that there is no way to avoid getting HIV/AIDS declines with increase in the level of education.

Among both women and men, the most common way to avoid HIV/AIDS mentioned is to keep to one sexual partner, cited by 52 percent of women and 43 percent of men. The same is true for almost all subgroups, particularly among urban and better-educated respondents. Although avoiding sex with prostitutes is the next most frequently reported way to avoid HIV/AIDS among by men (43 percent), among women, ensuring the use of sterilised needles for injections is the next most frequently reported (22 percent). Men cite use of condoms as the third most common way to avoid AIDS. Condom use as a way to avoid AIDS is more likely to be cited by urban and more educated respondents than their rural and less-educated counterparts.

Tables 11.3.1 and 11.3.2 present the distribution of women and men who know about AIDS according to their opinions on various HIV/AIDS-related issues, by background characteristics. Three in five women and men know that a healthy-looking person can be infected with the AIDS virus. Women and men who live in urban areas and those who have more formal education are more likely to be aware that healthy-looking people can be carrying HIV.

There is widespread understanding that AIDS is a fatal disease that cannot be cured. More than 85 percent of women and men report that AIDS is almost always fatal, while 85 percent of women and 74 percent of men know that the disease cannot be cured.

More than half of women and 47 percent of men know that the AIDS virus can be transmitted from mother to child. Urban residents, those who live in the south, and those with more education are more likely to be aware of mother-to-child transmission of the virus.

As a means of gauging the personal impact of HIV/AIDS, respondents were asked if they personally know someone who has AIDS or who has died of AIDS. Overall, slightly less than a third of respondents (32 percent of women and men) reported that they know someone who has AIDS or who has died of AIDS. Respondents who live in the Northwest and Central Regions and those with more education are more likely to know someone with AIDS.

Table 11.3.1 HIV/AIDS-related knowledge: women

Percent distribution of women who have heard of AIDS by responses to questions on various HIV/AIDS-related issues, according to background characteristics, Nigeria 1999

Background characteristic	Can a healthy-looking person have the AIDS virus?			Is AIDS a fatal disease?				Can AIDS be cured?			Can the AIDS virus be transmitted from mother to child?			Total	Knows someone with AIDS or who died of AIDS	Number of women
	Yes	No	Don't know	Almost never	Some-times	Almost always	Don't know	Yes	No	Don't know	Yes	No	Don't know			
Age																
15-19	54.9	20.3	24.8	0.8	6.1	86.1	6.9	6.1	83.4	9.4	49.7	14.9	35.2	100.0	32.3	1,318
20-24	65.2	15.3	19.1	0.4	6.0	87.1	5.8	5.4	85.4	8.2	56.4	12.8	30.0	100.0	31.8	1,164
25-29	65.4	14.8	19.7	0.9	6.5	87.3	5.2	4.7	86.6	7.3	57.5	13.1	28.7	100.0	33.4	1,144
30-39	61.1	14.7	23.8	0.6	5.5	85.9	7.7	4.9	83.6	10.2	56.3	12.5	30.7	100.0	33.1	1,597
40-49	57.1	15.4	27.4	0.6	5.9	85.9	7.4	2.5	86.6	9.8	50.8	12.8	36.0	100.0	30.0	882
Marital status																
Currently married	59.9	15.6	24.3	0.7	6.1	85.6	7.2	4.6	84.3	9.6	53.3	13.0	33.1	100.0	32.1	4,007
Formerly married	55.5	16.1	28.0	0.7	6.8	84.5	7.2	3.8	85.8	10.1	46.8	15.4	36.7	100.0	31.1	257
Never married	63.4	17.4	19.1	0.6	5.4	88.5	5.5	5.5	86.2	7.6	57.5	13.4	28.6	100.0	32.8	1,841
Residence																
Urban	67.1	13.2	19.5	0.8	6.8	86.2	6.1	5.7	83.8	9.2	62.1	9.3	28.3	100.0	28.6	2,226
Rural	57.1	17.9	24.8	0.6	5.5	86.6	7.0	4.4	85.5	9.0	49.9	15.5	34.0	100.0	34.4	3,880
Region																
Northeast	56.8	9.4	33.8	0.6	8.9	79.4	11.0	9.8	70.6	17.9	33.9	17.7	48.0	100.0	25.7	644
Northwest	31.3	26.8	41.5	0.9	5.8	79.5	13.7	5.0	80.8	13.0	35.1	14.1	49.7	100.0	47.2	515
Southeast	64.3	16.4	19.2	0.8	4.2	90.3	4.5	4.8	85.6	8.5	60.9	13.0	25.6	100.0	35.5	1,710
Southwest	68.5	14.3	17.0	0.4	7.0	88.9	3.4	4.6	88.8	5.4	61.7	11.6	26.2	100.0	18.3	1,767
Central	59.4	17.5	22.9	0.9	5.4	84.5	8.7	3.1	87.1	8.9	53.5	13.2	32.9	100.0	43.0	1,470
Education																
No education	43.9	17.2	38.6	0.6	6.8	80.0	12.2	3.7	80.1	14.7	35.3	15.6	48.4	100.0	29.3	1,645
Primary	59.3	17.8	22.7	0.7	5.4	86.7	6.9	4.1	85.1	9.7	53.4	14.2	31.8	100.0	32.1	1,601
Secondary	67.7	16.0	16.2	0.8	5.8	89.5	3.9	5.8	87.6	5.5	62.2	12.3	25.1	100.0	32.9	2,358
Higher	88.6	8.0	3.4	0.4	6.0	92.5	1.1	6.9	87.4	4.9	82.6	6.7	10.3	100.0	39.8	501
Total	60.8	16.2	22.9	0.7	6.0	86.4	6.7	4.9	84.9	9.0	54.3	13.2	31.9	100.0	32.3	6,105

Table 11.3.2 HIV/AIDS-related knowledge: men

Percent distribution of men who have heard of AIDS by responses to questions on various HIV/AIDS-related issues, according to background characteristics, Nigeria 1999

Background characteristic	Can a healthy-looking person have the AIDS virus?			Is AIDS a fatal disease?				Can AIDS be cured?			Can the AIDS virus be transmitted from mother to child?			Total	Knows someone with AIDS or who died of AIDS	Number of men
	Yes	No	Don't know	Almost never	Some-times	Almost always	Don't know	Yes	No	Don't know	Yes	No	Don't know			
Age																
15-19	51.6	16.9	31.1	0.8	10.9	79.4	7.9	7.8	73.8	18.1	42.0	11.2	45.9	100.0	24.3	435
20-24	66.0	11.4	22.5	0.4	8.4	85.9	5.3	8.3	77.3	14.4	47.2	13.5	36.9	100.0	31.7	299
25-29	69.8	11.7	17.9	0.3	7.0	84.5	6.6	9.4	74.1	15.2	51.4	10.4	36.6	100.0	37.5	331
30-39	67.8	10.6	21.6	0.0	5.7	90.2	4.1	8.7	75.4	15.6	52.3	9.7	36.4	100.0	34.3	569
40-49	58.9	14.1	26.2	0.4	4.7	89.0	5.0	6.8	74.4	17.8	47.6	5.8	43.7	100.0	32.6	389
50-64	50.0	12.9	36.0	0.0	6.7	81.7	10.2	6.7	71.4	21.1	37.0	10.3	49.7	100.0	30.6	376
Marital status																
Currently married	59.3	12.6	27.4	0.2	6.0	86.4	6.6	7.6	75.0	16.7	45.9	9.0	42.8	100.0	32.8	1,433
Formerly married	63.2	18.5	18.3	0.0	5.9	88.2	5.9	9.6	55.6	34.8	34.8	13.6	50.8	100.0	33.6	71
Never married	62.7	13.0	24.1	0.5	9.1	83.6	6.2	8.4	74.9	16.2	48.4	11.2	38.7	100.0	29.9	894
Residence																
Urban	68.4	11.1	19.9	0.6	6.6	85.2	6.7	10.4	71.9	17.2	54.5	8.2	35.4	100.0	31.3	783
Rural	56.9	13.8	28.9	0.1	7.5	85.5	6.3	6.7	75.5	17.0	42.6	10.9	44.4	100.0	32.0	1,616
Region																
Northeast	48.6	13.8	37.0	0.4	9.8	79.2	9.7	10.2	72.9	16.4	24.8	10.6	61.2	100.0	36.9	336
Northwest	39.9	16.7	43.4	0.0	3.2	87.6	8.9	4.7	81.9	13.0	37.2	4.3	57.3	100.0	39.4	273
Southeast	62.3	10.8	25.8	0.6	4.2	88.4	5.7	10.3	69.7	18.0	51.3	13.5	31.7	100.0	27.9	567
Southwest	64.0	19.0	16.6	0.3	9.0	83.8	5.9	9.4	80.7	9.8	55.6	13.5	29.1	100.0	16.7	671
Central	72.7	5.3	22.0	0.0	8.3	87.0	4.5	3.9	68.6	27.4	48.3	4.6	46.8	100.0	47.1	551
Education																
No education	37.7	14.8	47.1	0.5	7.4	81.1	10.3	6.8	69.7	22.8	24.6	7.9	65.5	100.0	27.9	485
Primary	52.2	16.2	31.1	0.0	7.4	83.7	8.1	5.5	73.7	19.8	39.5	10.7	47.6	100.0	31.4	652
Secondary	68.3	12.3	18.9	0.4	7.8	85.9	5.0	8.5	77.1	13.9	51.2	12.1	34.6	100.0	29.1	945
Higher	90.7	5.0	3.9	0.4	4.3	93.8	1.2	13.1	74.6	12.0	80.4	5.6	12.6	100.0	46.2	317
Total	60.7	12.9	25.9	0.3	7.2	85.4	6.4	7.9	74.4	17.1	46.5	10.0	41.5	100.0	31.7	2,399

11.3 Perceptions of the Risk of Getting HIV/AIDS

Women and men who had heard of AIDS were asked what they perceived to be their personal risk of contracting HIV/AIDS. They were asked to classify their risk as small, moderate, great, or no risk at all. Table 11.4 presents the distribution of respondents who know about AIDS by perception of risk according to background characteristics. The data reveal that about two-thirds of women and men believe they have no risk at all of getting AIDS. One-quarter of women and 30 percent of men say their chance is small, while only 5 percent of women and 3 percent of men say that they have a moderate chance of getting AIDS and very few think that their chance of getting AIDS is great (3 percent of women and 2 percent of men). Differences in the perceptions of HIV/AIDS risks between subgroups are small; however, the proportion of respondents who consider themselves at no risk of getting AIDS is somewhat higher among the youngest respondents (age 15-19), as well as among those in the Southwest region.

It is possible to use the fact that women and men were interviewed separately to link data on currently married men and their wives living in the same household. Such linking of data allows for a close assessment of couples as units of study. Table 11.5 presents the percent distribution of couples who know about HIV/AIDS by husbands' and wives' perception of the risk of getting HIV/AIDS. The table shows that among couples who have heard of AIDS, 44 percent share the view that they are at no risk of contracting HIV/AIDS. Similarly, in 8 percent of couples, both believe their chance of getting HIV/AIDS is small. Among couples who have differing viewpoints, there is a slight tendency for wives to perceive a somewhat greater risk of becoming infected than their husbands. For example, in 18 percent of couples, the husband says he has no risk at all, but the wife says she feels she has a small chance of becoming infected. This compares with 16 percent of couples in which the wife reports no risk but the husband reports a small risk.

Table 11.6 shows the reasons respondents give for perceiving their risk of contracting AIDS as small or nil. Nineteen percent of women and 21 percent of men state that their risk is low or nil because they are abstaining from sex altogether. Women (65 percent) are more likely than men (59 percent) to report that sticking to one partner or limiting their number of partners is the reason for their low risk, while men (17 percent) are more likely than women (7 percent) to report that condom use is the reason for their low risk of contracting the AIDS virus.

Similarly, respondents who said they felt they had a moderate or great risk of getting HIV/AIDS were asked the reasons for their perception. Table 11.7 shows the reasons respondents give for perceiving their risk of contracting AIDS as moderate or great. About 40 percent of women and men believe that they are at moderate or great risk because they have multiple sexual partners. Slightly more than one-quarter of women and men report that they are at moderate or great risk because they do not use condoms. Seventeen percent of women, compared with 8 percent of men, believe they are at moderate or great risk because their spouse has other sexual partners, while one in five men reports that having sex with prostitutes is the reason for believing he is at risk of getting AIDS. The same proportion of women report prostitutes as the source of risk, presumably because their partner frequents prostitutes. Finally, blood transfusions and injections are considered the source of HIV risk for a sizeable proportion of women and men in Nigeria.

Table 11.4 Perception of risk of getting HIV/AIDS

Percent distribution of women and of men who have heard of HIV/AIDS by their perception of the risk of getting HIV/AIDS according to background characteristics, Nigeria 1999

Background characteristic	Chances of getting HIV/AIDS: women								Chances of getting HIV/AIDS: men						
	No risk at all	Small	Moderate	Great	Has AIDS	Don't know	Total	Number of women	No risk at all	Small	Moderate	Great	Don't know	Total	Number of of men
Age															
15-19	69.2	24.3	3.7	2.3	0.2	0.5	100.0	1,318	71.6	24.3	2.2	1.3	0.6	100.0	435
20-24	62.6	27.7	4.5	4.2	0.6	0.5	100.0	1,164	61.5	32.7	2.8	2.5	0.4	100.0	299
25-29	63.5	25.1	6.8	3.7	0.7	0.3	100.0	1,144	61.7	33.0	3.5	0.9	0.9	100.0	331
30-39	64.5	26.2	4.8	3.1	0.5	0.8	100.0	1,597	60.7	34.0	3.0	1.5	0.8	100.0	569
40-49	68.5	23.6	4.4	2.9	0.2	0.3	100.0	882	62.6	31.0	3.3	2.0	1.1	100.0	389
50-64	NA	NA	NA	NA	NA	NA	NA	NA	68.0	26.6	2.7	1.8	0.9	100.0	376
Marital status															
Currently married	64.6	25.4	5.3	3.5	0.6	0.6	100.0	4,007	64.4	29.8	3.1	1.8	0.9	100.0	1,433
Formerly married	64.4	25.2	7.2	2.4	0.4	0.4	100.0	257	54.1	39.6	3.5	2.9	0.0	100.0	71
Never married	67.8	25.7	3.3	2.8	0.2	0.3	100.0	1,841	65.1	30.4	2.5	1.3	0.7	100.0	894
Residence															
Urban	69.4	21.8	4.4	3.1	0.8	0.4	100.0	2,226	64.3	29.6	3.5	2.0	0.6	100.0	783
Rural	63.3	27.6	5.0	3.3	0.2	0.6	100.0	3,880	64.4	30.6	2.6	1.5	0.9	100.0	1,616
Region															
Northeast	68.3	22.0	7.3	1.0	0.3	1.1	100.0	644	51.4	41.9	3.5	2.3	0.9	100.0	336
Northwest	48.5	42.3	7.8	0.8	0.2	0.3	100.0	515	67.0	28.1	4.1	0.3	0.4	100.0	273
Southeast	61.3	30.1	3.3	4.7	0.1	0.4	100.0	1,710	64.1	31.5	1.6	0.7	2.1	100.0	567
Southwest	76.9	17.7	3.4	1.5	0.1	0.5	100.0	1,767	71.2	21.2	4.1	3.2	0.3	100.0	671
Central	61.4	25.1	6.2	5.3	1.5	0.5	100.0	1,470	62.9	34.2	1.8	0.9	0.2	100.0	551
Education															
No education	62.4	26.6	6.9	3.0	0.4	0.7	100.0	1,645	63.9	31.9	2.4	1.0	0.9	100.0	485
Primary	66.2	25.9	3.8	3.2	0.3	0.6	100.0	1,601	65.1	28.6	2.6	2.5	1.1	100.0	652
Secondary	67.1	24.7	4.0	3.4	0.5	0.3	100.0	2,358	66.0	28.6	3.3	1.4	0.7	100.0	945
Higher	66.4	24.5	4.9	3.3	0.7	0.2	100.0	501	58.6	36.5	3.0	1.6	0.3	100.0	317
Total	65.5	25.5	4.8	3.2	0.4	0.5	100.0	6,105	64.4	30.3	2.9	1.6	0.8	100.0	2,399

NA = Not applicable

Table 11.5 Perception of the risk of getting HIV/AIDS among couples

Percent distribution of couples who know about AIDS by husband's and wife's perceptions of the risk of getting HIV/AIDS, Nigeria 1999

Chances of getting HIV/AIDS: wife	Chances of getting HIV/AIDS: husband					
	No risk at all	Small	Moderate	Great	Don't know	Total
No risk at all	44.3	15.8	1.7	1.4	0.3	63.4
Small	17.6	8.2	1.2	0.4	0.2	27.7
Moderate	1.9	3.1	0.2	0.1	0.0	5.3
Great	1.2	1.2	0.0	0.0	0.1	2.5
Has AIDS	0.2	0.4	0.0	0.0	0.0	0.7
Don't know	0.3	0.0	0.1	0.0	0.0	0.4
Total	65.6	28.7	3.1	1.9	0.6	100.0

Table 11.6 Reasons for perception of small/no risk of getting HIV/AIDS

Percentage of women and men who think they have a small or no risk of getting HIV/AIDS, by reasons for that perception of risk and marital status, Nigeria 1999

Marital status	Abstains from sex	Uses condom	Has only one partner/ limits sexual partners	Spouse has no other partners	Avoids prosti-tutes	No homo-sexual contact	Ensure safe blood trans-fusion	No injec-tions	Other	Number of women/ men
WOMEN										
Never in union	45.2	11.1	42.9	NA	7.3	2.0	15.1	24.0	6.2	1,720
Currently in union	4.7	4.9	76.4	NA	13.7	2.9	16.1	23.6	6.7	3,605
Formerly in union	38.4	5.8	45.9	NA	9.4	2.0	14.7	20.5	8.7	231
Total	18.7	6.8	64.8	0.0	11.5	2.6	15.7	23.6	6.6	5,556
MEN										
Never in union	44.4	25.2	35.4	2.6	18.0	5.0	16.5	20.7	7.1	854
Currently in union	5.5	11.5	74.1	11.7	35.3	5.7	18.1	20.0	5.0	1,350
Formerly in union	32.9	31.0	45.7	11.7	36.6	12.8	24.0	30.3	3.6	67
Total	21.0	17.3	58.7	8.3	28.8	5.6	17.7	20.6	5.8	2,271

NA = Not applicable (no code for the category)

Table 11.7 Reasons for perception of moderate/great risk of getting HIV/AIDS

Percentage of women and men who think they have a moderate or great risk of getting HIV/AIDS, by reasons for that perception of risk and marital status, Nigeria 1999

Respondents	Doesn't use condoms	Has many sex partners	Spouse has other partner(s)	Has sex with prosti-tutes	Homo-sexual contact	Had blood trans-fusion	Had injec-tions	Other	Number of women/ men
Women	26.2	38.9	17.0	20.2	8.2	23.8	17.3	9.9	491
Men	27.0	43.9	8.3	21.3	1.6	13.7	28.0	18.9	109

Note: Response categories printed on the Woman's Questionnaire were incorrect; however, interviewers were instructed to write in the women's answers, which were subsequently assigned to the above categories.

11.4 Behaviour Change

NDHS respondents who had heard of HIV/AIDS were asked whether or not they had changed their behaviour since they learned of the disease. If they responded positively, they were asked what they did. Tables 11.8.1 and 11.8.2 present the percentage of women and men respectively, who report specific changes in behaviour to avoid HIV/AIDS, according to background characteristics.

The tables show that 26 percent of women and 15 percent of men say they have not changed their behaviour since hearing about HIV/AIDS. Women in the Northeast and Southwest regions and men in the Southeast region are less likely to have changed their behaviour than other women and men. Less-educated women are less likely to have changed their behaviour since hearing about HIV/AIDS than more-educated women; men differ little by education in their behavioural response to the disease.

Table 11.8.1 HIV/AIDS prevention behaviour: women

Percentage of women who have heard of HIV/AIDS who report specific changes in behaviour in order to avoid HIV/AIDS, according to background characteristics, Nigeria 1999

Background characteristic	No change in sexual behaviour	Change in sexual behaviour to avoid HIV/AIDS									Change in non-sexual behaviour to avoid HIV/ AIDS	Number of women
		Kept virginity	Stopped sex	Began using condoms	Restricted to one partner	Fewer partners	Asked spouse to be faithful	No homo-sexual contact	Ensure safe injec-tions	Other sexual behaviour		
Age												
15-19	24.1	36.7	4.8	3.8	21.9	2.9	12.5	0.5	10.2	0.7	30.3	1,318
20-24	20.2	11.0	4.6	8.6	41.9	5.4	24.2	1.1	14.3	0.3	24.8	1,164
25-29	26.7	3.3	3.5	5.6	41.0	4.7	30.0	0.5	13.5	0.5	31.3	1,144
30-39	27.0	0.9	3.8	5.2	40.9	4.7	33.2	0.6	14.3	0.6	32.3	1,597
40-49	30.5	0.3	8.4	1.5	37.0	3.7	29.1	1.0	13.2	0.6	33.9	882
Marital status												
Currently in union	28.3	0.4	2.3	3.8	41.3	4.6	33.0	0.8	12.5	0.5	33.1	4,007
Formerly in union	27.2	0.4	26.8	3.8	26.1	3.5	17.1	0.2	14.7	0.4	31.5	257
Never married	19.2	35.4	7.1	8.0	27.4	3.7	11.6	0.7	14.1	0.7	24.7	1,841
Residence												
Urban	25.3	12.5	4.3	7.1	37.1	4.0	26.8	1.1	13.9	0.4	29.3	2,226
Rural	25.7	10.0	5.0	3.9	36.1	4.4	25.3	0.5	12.6	0.6	31.2	3,880
Region												
Northeast	51.7	5.0	1.4	2.5	19.0	4.2	19.3	0.8	13.1	1.0	55.7	644
Northwest	15.8	6.1	2.2	3.9	43.3	5.6	26.7	1.4	15.7	0.8	18.1	515
Southeast	18.4	17.0	9.4	4.1	34.9	2.7	20.0	0.2	15.0	0.8	27.0	1,710
Southwest	32.3	10.6	2.3	5.7	38.3	4.9	23.7	1.1	11.1	0.3	35.5	1,767
Central	17.7	8.6	4.8	7.0	41.2	5.0	37.8	0.7	12.5	0.3	21.8	1,470
Education												
No education	31.9	1.7	4.3	2.4	33.3	4.4	30.4	0.8	8.9	1.0	36.0	1,645
Primary	27.6	7.4	6.0	3.1	37.5	4.3	23.8	0.4	10.8	0.3	32.4	1,601
Secondary	21.1	20.8	4.4	6.4	36.2	3.8	22.5	0.7	14.6	0.3	26.7	2,358
Higher	18.7	6.0	4.4	13.7	45.2	6.1	33.0	1.7	27.1	0.4	24.0	501
Total	25.5	10.9	4.8	5.1	36.5	4.3	25.8	0.7	13.1	0.5	30.5	6,105

Table 11.8.2 HIV/AIDS prevention behaviour: men

Percentage of men who have heard of HIV/AIDS who report specific changes in behaviour in order to avoid HIV/AIDS, according to background characteristics, Nigeria 1999

Background characteristic	No change in sexual behaviour	Change in sexual behaviour to avoid HIV/AIDS										Change in non-sexual behaviour to avoid HIV/AIDS	Number of men
		Kept virginity	Stopped sex	Began using condoms	Restricted to one partner	Fewer partners	Asked spouse to be faithful	No homo-sexual contact	Avoid sex with prosti-tutes	Ensure safe injec-tions	Other sexual behaviour		
Age													
15-19	17.9	51.2	8.4	9.6	12.0	6.3	3.6	4.3	10.7	12.1	2.1	2.7	435
20-24	15.0	24.1	6.9	21.9	31.6	12.7	6.8	2.3	14.1	15.3	1.9	0.7	299
25-29	10.5	7.6	4.7	21.8	48.3	17.3	11.3	3.0	23.8	17.9	1.5	1.3	331
30-39	11.0	0.8	2.3	18.1	54.7	16.1	16.2	6.0	32.2	20.5	2.5	0.2	569
40-49	18.0	0.2	2.0	9.0	55.1	12.5	13.7	3.5	27.5	14.5	3.2	1.1	389
50-64	17.8	0.5	6.0	9.0	47.4	15.0	18.4	4.2	23.4	14.6	2.1	0.8	376
Marital status													
Currently in union	14.3	0.2	2.0	10.7	55.1	13.7	15.7	4.0	28.6	16.6	2.2	0.7	1,433
Formerly in union	14.3	0.0	18.8	28.8	31.9	24.7	13.9	11.5	28.5	20.7	7.6	0.0	71
Never married	15.8	36.3	8.2	19.8	22.1	11.7	5.9	3.9	13.0	14.9	2.0	1.8	894
Residence													
Urban	12.7	15.1	5.7	21.5	41.8	13.4	12.7	4.6	19.5	19.5	2.5	1.4	783
Rural	15.9	12.9	4.4	11.3	42.2	13.3	11.7	3.9	24.3	14.4	2.1	1.0	1,616
Region													
Northeast	14.2	14.6	3.4	3.5	35.5	5.4	10.9	3.8	41.8	21.3	2.0	1.2	336
Northwest	7.1	11.4	1.1	1.4	36.9	6.6	12.2	3.2	47.2	23.1	5.2	0.0	273
Southeast	24.5	11.9	5.7	10.0	41.9	16.0	5.4	0.5	3.5	4.8	2.2	1.1	567
Southwest	13.5	14.4	5.7	22.4	43.7	10.9	11.4	0.9	15.6	18.0	1.9	1.7	671
Central	10.8	15.0	5.7	23.4	47.0	21.6	20.2	12.6	27.5	18.6	1.5	0.9	551
Education													
No education	14.5	6.0	3.7	2.1	39.5	11.9	14.2	5.7	41.5	14.4	3.2	0.7	485
Primary	17.1	9.1	5.9	10.2	45.8	14.1	10.1	2.8	15.4	8.6	2.0	0.8	652
Secondary	14.3	23.1	5.1	19.0	37.3	11.9	10.2	3.1	17.5	16.6	1.9	1.6	945
Higher	12.6	6.2	3.6	30.0	53.0	18.0	18.0	7.7	24.9	32.3	2.6	1.0	317
Total	14.9	13.6	4.8	14.7	42.1	13.3	12.0	4.2	22.8	16.1	2.3	1.1	2,399

The most common change in behaviour among both women and men was to restrict sex to one partner (37 percent of women and 42 percent of men). Among women, the next most common response was to ask their partner to be faithful; one-quarter of women gave this answer. Among men, the next most common response was to avoid having sex with prostitutes (23 percent). Only 5 percent of women and 15 percent of men say they began using condoms, while 5 percent of women and men say they stopped having sex. A sizeable proportion of respondents said they responded to the risk of HIV/AIDS by keeping their virginity (11 percent of women and 14 percent of men). Expectedly, younger and never-married women and men are more likely than older, ever-married respondents to say they kept their virginity to avoid the risk of contracting HIV/AIDS.

Table 11.9 Knowledge of condom use to protect against HIV/AIDS and STIs

Among women and men who have heard of HIV/AIDS and who have ever had sexual intercourse, percentage who know condoms are used to prevent HIV/AIDS and STIs, by background characteristics, Nigeria 1999

Background characteristic	Women		Men	
	Percentage knowing condoms can prevent HIV/AIDS and STIs	Number of women	Percentage knowing condoms can prevent HIV/AIDS and STIs	Number of men
Age				
15-19	65.0	511	93.3	130
20-24	75.4	960	91.0	195
25-29	74.8	1,089	87.2	293
30-39	71.9	1,581	84.9	562
40-49	57.7	879	77.9	388
50-64	NA	NA	70.7	376
Marital status				
Currently in union	66.8	4,004	77.8	1,433
Formerly in union	66.5	257	80.5	71
Never married	88.1	759	97.3	438
Residence				
Urban	81.7	1,799	93.3	620
Rural	63.5	3,221	77.1	1,322
Region				
Northeast	36.4	584	64.3	266
Northwest	54.3	487	52.8	238
Southeast	77.5	1,303	89.2	460
Southwest	84.0	1,432	92.0	538
Central	68.0	1,215	89.9	441
Education				
No education	42.3	1,609	52.8	444
Primary	71.4	1,383	81.7	564
Secondary	89.2	1,587	95.9	643
Higher	97.8	440	98.2	291
Total	70.0	5,020	82.3	1,943

NA = Not applicable

11.5 Knowledge of Condom Use to Protect against Disease

Condoms are the only proven barrier method for reducing the risk of all sexually transmitted infections, including HIV. Thus they can be used for dual protection against unintended pregnancy and sexually transmitted diseases. Because of the important role condom use plays in preventing HIV transmission, respondents were asked whether they had heard of using condoms to avoid getting AIDS or other sexually transmitted diseases. Table 11.9 presents the percentage of respondents who answered affirmatively, according to background characteristics. Data are restricted to those who have heard of HIV/AIDS and who have ever had sexual intercourse.

Seventy percent of women and 82 percent of men know of the disease prevention capabilities of condoms. Knowledge about condoms is more widespread among urban respondents than among their rural counterparts. The percentage of respondents who know that condoms can be used to prevent sexually transmitted diseases increases with level of education. Knowledge about condoms is more widespread among the never-married than among the currently and formerly married respondents. The data also indicate a significant difference between knowledge of condoms among men and women. For example, it is notable that among young people age 15-19 years who have ever had sex and who have heard of AIDS, knowledge of the disease prevention capabilities of condoms is high, especially for men (65 percent for women and 93 percent for men).

11.6 Use of Condoms

As shown in Tables 11.10.1 and 11.10.2, 12 percent of women and 31 percent of men who have heard of HIV/AIDS and who have had sex in the 12 months before to the survey report that they have ever used a condom for family planning purposes. Similarly, 15 percent of women and 32 percent of men have used condoms to prevent getting sexually transmitted diseases. Twenty percent of women and 38 percent of men have ever used condoms for either family planning or disease prevention reasons. However, only 7 percent of women and 15 percent of men had used a condom the last time they had had sex.

Among both women and men, condom use peaks at age 20-24 years and decreases thereafter, regardless of whether condoms were used for family planning or disease prevention reasons or whether they were used during the last sexual intercourse. Condom use is considerably higher among those who have never married than among those who were formerly married and those who are currently married. It is also higher in urban than in rural areas and rises steeply with education of respondent.

Table 11.10.1 Use of condoms: women

Among women who have heard of HIV/AIDS and who have had sexual intercourse in the 12 months preceding the survey, percentage who ever used a condom for family planning or to avoid STIs and percentage who used a condom during last sexual intercourse, according to background characteristics, Nigeria 1999

Background characteristic	Ever used condom			Used a condom during last sexual intercourse	Number of women
	For family planning	To avoid STIs	Either		
Age					
15-19	12.7	18.3	21.8	10.3	460
20-24	16.7	21.9	27.3	9.5	859
25-29	13.3	16.3	23.5	5.7	987
30-39	10.9	12.7	18.9	5.9	1,390
40-49	4.9	5.5	8.8	2.3	633
Marital status					
Currently in union	8.3	10.0	15.6	3.4	3,568
Formerly in union	14.6	22.9	27.7	12.3	120
Never married	31.4	40.5	45.8	22.8	642
Residence					
Urban	15.6	19.1	26.3	8.3	1,569
Rural	9.8	12.5	17.1	5.5	2,760
Education					
No education	2.1	5.0	6.2	1.6	1,353
Primary	8.5	10.6	15.0	4.2	1,145
Secondary	17.4	21.5	29.9	10.3	1,428
Higher	35.2	36.9	50.2	16.1	403
Total	11.9	14.9	20.4	6.5	4,329

STI = Sexually transmitted infection

Table 11.10.2 Use of condoms: men

Among men who have heard of HIV/AIDS and who have had sexual intercourse in the 12 months preceding the survey, percentage who ever used a condom for family planning or to avoid STIs and percentage who used a condom during last sexual intercourse, according to background characteristics, Nigeria 1999

Background characteristic	Ever used condom			Used a condom during last sexual intercourse	Number of men
	For family planning	To avoid STDs	Either		
Age					
15-19	42.5	47.8	51.8	26.5	108
20-24	50.4	52.3	57.8	38.3	175
25-29	40.4	40.8	46.7	21.3	267
30-39	29.9	34.2	39.9	10.8	503
40-49	22.1	20.2	25.8	6.3	347
50-54	19.4	17.7	24.1	8.5	330
Marital status					
Currently in union	21.9	22.3	28.1	6.8	1,302
Formerly in union	55.0	52.1	59.0	32.9	48
Never married	58.2	62.5	67.6	40.0	381
Residence					
Urban	47.4	47.6	55.6	22.6	548
Rural	23.1	24.7	29.3	11.2	1,182
Education					
No education	5.8	7.0	9.1	2.7	388
Primary	22.4	23.1	29.0	10.3	495
Secondary	43.7	46.2	52.4	22.0	576
Higher	54.5	53.7	63.0	25.4	271
Total	30.8	32.0	37.7	14.8	1,730

STI = Sexually transmitted infection

11.7 Payment for Sexual Relations

Among respondents who have ever had sexual intercourse, Table 11.11 shows the percentage of women and men who gave or received money, gifts, or favours in return for sex in the past 12 months according to marital status and background characteristics. Overall, 6 percent of women and 11 percent of men report having such an exchange.

Unmarried respondents (both women and men) are much more likely than married respondents to have exchanged goods or favours for sex. For example, less than 2 percent of currently married women say they received money, gifts, or favours in return for sex during the previous year, compared with 24 percent of unmarried women. Similarly, 7 percent of currently married men gave or received money, gifts, or favours for sex during the previous 12 months, comapred with 24 percent of unmarried men. Urban unmarried women and men are less likely to give or receive money, gifts, or favours than their rural counterparts.

Table 11.11 Payment for sexual relations

Among women and men who have ever had sexual intercourse, the percentage who gave or received money, gifts, or favours in return for sex in the last 12 months, by marital status and background characteristics, Nigeria 1999

Background characteristic	Women						Men					
	Currently married		Not currently married		Total		Currently married		Not currently married		Total	
	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Age												
15-19	1.1	464	32.0	301	13.3	765	*	12	28.4	125	27.3	137
20-24	2.1	934	25.8	344	8.5	1,278	4.6	46	20.1	159	16.6	205
25-29	1.8	1,272	26.1	183	4.9	1,455	9.0	202	20.9	120	13.4	322
30-39	2.0	1,955	22.5	157	3.5	2,112	8.8	532	32.5	82	11.9	613
40-49	1.3	1,122	4.9	140	1.7	1,262	6.4	413	24.0	22	7.3	435
50-54	NA	NA	NA	NA	NA	NA	5.1	406	11.0	19	5.4	425
Residence												
Urban	1.9	1,668	14.1	377	4.1	2,044	8.3	460	22.0	186	12.3	646
Rural	1.7	4,079	29.6	749	6.1	4,828	6.7	1,152	25.1	339	10.9	1,491
Education												
No education	0.8	3,024	10.0	188	1.3	3,213	3.7	545	21.3	43	5.0	588
Primary	2.7	1,298	24.6	263	6.4	1,561	7.0	476	27.0	123	11.1	599
Secondary	3.2	1,122	30.6	531	12.0	1,653	8.7	373	24.0	281	15.2	654
Higher	2.9	303	20.3	142	8.4	445	13.9	217	20.9	79	15.8	295
Total	1.8	5,747	24.4	1,125	5.5	6,872	7.2	1,612	24.0	525	11.3	2,137

Note: An asterisk indicates that the figure is based on less than 25 unweighted cases and has been suppressed.
NA = Not applicable

11.8 Awareness of Sexually Transmitted Diseases

All respondents were asked whether they had heard about diseases that can be transmitted through sexual intercourse and, if so, which specific diseases they knew. Table 11.12 presents the percentage of women and men who have heard of specific sexually transmitted infections by various background characteristics.

Knowledge of sexually transmitted infections is nearly universal among men, with only 9 percent not having heard of at least one such disease. Knowledge of sexually transmitted infections is much lower among women, one-third of whom do not know of any such disease.

The most widely known sexually transmitted disease reported by women is AIDS (62 percent), while gonorrhoea (83 percent) is the most widely known for the men.[1] Although gonorrhoea is the next most widely known sexually transmitted infection among women (43 percent), AIDS is next among men (78 percent). Far fewer women and men mentioned syphilis or genital warts as being sexually transmitted diseases.

[1] The proportion of respondents who have heard of HIV/AIDS is based on spontaneous mention of the disease. It differs from the data presented in Table 11.1, which is based on responses to a specific question on whether the respondent had ever heard of AIDS ("prompted knowledge").

Tableau 11.12 Knowledge of sexually transmitted infections

Percentage of women and men who have heard of specific sexually transmitted infections (STI), by background characteristics, Nigeria 1999

Background characteristic	Women							Men						
	Syphilis	Gonor-rhoea	HIV/ AIDS	Genital warts	Other	No knowledge of STIs	Number of women	Syphilis	Gonor-rhoea	HIV/ AIDS	Genital warts	Other	No knowledge of STIs	Number of men
Age														
15-19	6.5	32.0	58.9	1.1	1.4	37.5	1,775	15.6	61.4	69.2	1.3	1.1	19.4	511
20-24	14.4	47.5	65.6	2.2	1.1	30.8	1,521	26.6	87.4	84.5	4.2	1.6	4.3	319
25-29	16.6	48.4	63.9	2.7	1.5	30.5	1,516	37.9	89.4	84.0	7.1	3.1	6.2	366
30-39	14.3	46.6	62.9	2.5	1.4	32.4	2,129	41.5	89.1	82.4	7.4	2.3	5.6	623
40-49	9.1	40.6	57.1	2.6	1.2	36.4	1,265	35.2	87.6	78.9	7.7	5.3	5.6	436
50-64	NA	NA	NA	NA	NA	NA	NA	28.5	85.3	72.0	7.9	4.7	8.5	425
Marital status														
Currently in union	11.0	41.1	57.9	1.9	1.1	37.3	5,757	33.3	87.1	78.1	7.5	3.7	7.0	1,612
Formerly in union	17.5	52.5	65.3	4.8	2.5	25.8	319	42.4	91.5	69.4	14.6	2.6	6.2	81
Never married	14.9	46.9	72.0	2.5	1.7	24.2	2,130	26.8	75.1	78.9	2.8	1.7	11.4	988
Sexually active	27.1	68.4	81.6	4.6	3.2	13.1	807	41.7	93.3	89.4	4.4	2.3	0.9	445
Sexually inactive	7.5	33.8	66.1	1.2	0.7	30.9	1,323	14.7	60.2	70.2	1.5	1.2	20.1	543
Residence														
Urban	17.4	55.3	75.8	3.1	0.9	20.2	2,540	36.9	87.5	86.2	6.7	3.2	4.4	821
Rural	10.0	37.5	55.6	1.7	1.5	39.4	5,666	28.7	80.7	74.5	5.6	2.8	10.5	1,859
Region														
Northeast	7.9	16.2	34.0	0.5	0.0	63.5	1,292	43.0	73.3	66.2	7.7	1.1	20.1	437
Northwest	6.8	26.9	41.5	1.9	0.2	56.4	1,087	25.2	82.2	73.4	11.6	0.6	13.4	356
Southeast	19.8	53.6	72.5	3.4	4.0	19.7	1,886	42.1	84.2	75.7	4.0	5.1	5.3	590
Southwest	11.2	51.8	71.7	2.3	1.2	22.7	2,080	19.6	85.6	85.5	1.0	4.2	3.7	696
Central	11.9	50.5	71.2	2.1	0.4	25.1	1,861	29.0	85.6	83.4	9.0	2.1	6.5	601
Education														
No education	3.6	22.1	38.5	0.6	0.4	57.0	3,324	22.8	74.7	59.9	8.3	3.1	18.1	663
Primary	9.6	47.4	69.1	1.7	2.0	24.3	1,868	23.9	83.6	76.1	3.5	3.6	7.8	710
Secondary	16.2	59.1	80.9	2.3	1.7	15.1	2,506	29.2	82.8	86.2	3.7	2.2	5.4	986
Higher	59.0	84.8	93.8	13.3	3.1	3.1	508	71.1	97.8	95.4	13.4	3.4	0.9	321
Total	12.3	43.0	61.8	2.2	1.3	33.5	8,206	31.2	82.8	78.1	6.0	2.9	8.6	2,680

NA = Not applicable

Both women and men are less likely to be informed about sexually transmitted diseases if they are younger (15-19 years) or older (50-64 years), if they are currently in union, and if they have never had sex. Knowledge of sexually transmitted diseases is higher among urban than among rural respondents. The percentage of women and men who cannot name any sexually transmitted infection is considerably higher in the north than in the south, being highest in the Northeast region and lowest in the Southeast region for women and the Southwest region for men. Knowledge of sexually transmitted diseases is positively associated with increase in level of education.

11.9 Prevalence of Sexually Transmitted Diseases

Respondents were asked whether they had had any sexually transmitted disease in the previous 12 months and if so, which one and what action (if any) was taken in response to the most recent episode. Less than 1 percent of women and only 4 percent of men reported having any such disease in the 12 months before the survey (data not shown). These figures are likely to be underestimates of the true prevalence of sexually transmitted infections for two reasons. First, many sexually transmitted diseases may go unrecognised because they produce no obvious symptoms, no health care was sought, or the problem was misdiagnosed or misunderstood by the respondent when diagnosed. Second, many women and men fail to report a recent sexually transmitted disease because of the social stigma.

Because of the small numbers of respondents who reported having had sexually transmitted infections, detailed analysis is impossible. However, gonorrhoea accounted for more infections than any of the other diseases. Most of the respondents (84 percent of women and 82 percent of men) who had a sexually transmitted disease in the previous year reported that they sought treatment for it. Women were more likely than men to inform their partners of the disease (67 versus 49 percent).

Among infected men, 31 percent reported that they avoided sex, 30 percent said they took some kind of medicine, and 3 percent reported using condoms to prevent spreading the infection to their partners. One-third of women and men took no measures to protect their partners, although sometimes this was because their partners were already infected (data not shown).

CHAPTER 12

AVAILABILITY OF HEALTH AND FAMILY PLANNING SERVICES

12.1 Introduction

Use of family planning and health services is determined by supply as well as demand. The 1999 NDHS fielded a Service Availability Questionnaire (reproduced in Appendix E) to provide a picture of the health care service environment that prevails in Nigeria. This is important because inaccessibility to and lack of availability of health and family planning services are some of the reasons for the low contraceptive prevalence rate, high maternal and infant mortality rates and high incidence of sexually transmitted diseases including HIV/AIDS.

The questionnaire on service availability solicits information on the services that are available and nearest to a majority of the people in the community. It was administered at the community level (enumeration area) by interviewing knowledgeable informants in the selected community. It included the state and local government area identifiers, community characteristics such as the size of the sampled community (large town, other town or village), general services such as post office and bank, as well as health and family planning service providers. Respondents were asked to identify the nearest of each of the following types of facilities that offer health and family planning services: private doctors; pharmacies/patent medicine stores; health centres/posts; clinics/hospitals; family planning clinics; and maternal and child health centres.

12.2 Organisation of Health and Family Planning Services

The objective of the national health policy is to "achieve health for all Nigerians based on the national philosophy of social justice and equity" (Ransome Kuti et al., 1989; FOS 1990). The emphasis in health care delivery for the entire country is on the provision and expansion of primary health care. The prevention of premature deaths and illnesses among high-risk mothers and children is an essential aspect of the health delivery system. States of the Federation are free to determine how to achieve this goal, hence there are diverse policy implementation strategies for health and family planning services in the country. There is active involvement of both the private and public sectors in the establishment of appropriate structures to coordinate and facilitate the interaction of the three tiers of government for successful policy implementation.

Nigeria has three levels of administration in its health care provision system—federal, state and local government area (LGA). Policies and guidelines on health and family planning matters are set at the federal level by the Federal Government while policies for service provision are determined at the state level. The actual implementation and provision of care is handled at the LGA level.

The organisation of stationary health facilities is structured on a three-tier system. The primary level consists of health centres/clinics (as well as outreach services) provided by LGAs that provide maternal and child health care, preventive care, and basic curative care. The secondary level, which is based at the state level, is largely composed of district hospitals that provide curative and some preventive services. The tertiary level encompasses teaching hospitals, which are under the control of the Federal Government. Some communities—especially in large towns and cities—are well served by the three types of facilities. However, general success in making health and family planning services easily accessible and available in Nigeria is

still limited. More than a decade after adoption of the national health policy, the time required to obtain such services and the cost of providing family planning services to a large population of reproductive age, is of great concern to the government.

12.3 Community Characteristics

As shown in Table 12.1, most households in Nigeria are located in or near urban areas and overall, 47 percent are within 15 kilometres of a town. In the Southwest region, which is more urbanised than other regions, 75 percent of households are located within 15 kilometres of a town. Looking at rural households, about one in four is within 15 kilometres of a town.

Table 12.1 Distance to urban areas

Percent distribution of households by distance to nearest town, according to region and urban-rural residence, Nigeria 1999

Distance to nearest town (km)	Region					Residence		Total
	North-east	North-west	South-east	South-west	Central	Urban	Rural	
<15	45.6	40.4	32.8	75.0	31.5	100.0	23.6	46.7
15-29	14.6	22.1	22.5	9.8	14.1	0.0	23.1	16.1
30+	18.6	28.2	24.4	7.1	30.1	0.0	29.6	20.6
Don't know/missing	21.3	9.3	20.4	8.1	24.3	0.0	23.7	16.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of households	1,211	1,075	1,814	2,002	1,546	2,313	5,334	7,647

Table 12.2 presents data on the main access route between rural communities and towns. All-weather roads are the primary means of access to cities and towns in Nigeria (46 percent), although one-third of rural communities are accessible by seasonal roads only. Distance from the nearest town makes little difference in the type of access road to the rural community.

Table 12.2 Main access route to rural communities

Percent distribution of rural households by main access route to nearest town, according to distance to town, Nigeria 1999

Distance to urban area (km)	Main access route to town					Total	Number of households
	All weather road	Seasonal road	River/ rail	Path	Don't know/ Missing		
<15	55.7	40.0	0.0	4.3	0.0	100.0	1,257
15-29	53.8	42.8	1.9	1.4	0.0	100.0	1,235
30+	55.7	41.5	0.6	2.1	0.0	100.0	1,578
Don't know/missing	14.7	6.0	0.0	0.0	79.4	100.0	1,264
Total	45.5	33.1	0.6	2.0	18.8	100.0	5,334

As shown in Table 12.3, the vast majority of rural households use motorised transportation to get to towns (72 percent). Other means of transportaion include cycling (4 percent) and walking (4 percent). Walking is more common for households located within 15 kilometres of a town (10 percent) than for those more distant (1-3 percent).

Table 12.3 Transportation to nearest town

Percent distribution of rural households by most commonly used type of transportation to nearest town, according to distance to town, Nigeria 1999

Distance to nearest town (km)	Type of transportation to nearest town							Number of households
	Motorized	Animal	Walking	Cycling	Other	Don't know/ Missing	Total	
<15	81.4	1.4	9.8	6.9	0.6	0.0	100.0	1,257
15-29	92.1	0.0	1.4	4.6	1.9	0.0	100.0	1,235
30+	93.7	1.0	2.6	2.6	0.0	0.0	100.0	1,578
Don't know/missing	17.5	0.0	1.4	1.9	0.0	79.2	100.0	1,264
Total	72.4	0.6	3.7	3.9	0.6	18.8	100.0	5,334

Table 12.4 shows the distance of Nigerian households from various services. Primary schools are very common in Nigeria. Four out of five households lives within one kilometre of a primary school and all but a fraction live within 10 kilometres of a primary school. Secondary schools are somewhat less common, with only about half of households living within one kilometre of a secondary school. Two-thirds of households are within less than 10 kilometres of a post office, while almost 90 percent are within 10 kilometres of a local market. Cinemas are less common, since only 37 percent of households are within 10 kilometres of a movie theatre and there is no known cinema in areas where 17 percent of households live. Three in five households live within 10 kilometres of a bank, while 85 percent of households are within 10 kilometres of public transportation. Almost four in five household (78 percent) are within 10 kilometres of some kind of health facility. Distance to health services is explored in greater detail in the remainder of this chapter.

Table 12.4 Distance to various services

Percent distribution of households by distance (kilometres) to various services, Nigeria 1999

Distance to service (km)	Services							
	Primary school	Secondary school	Post office	Local market	Cinema	Bank	Health centre/ hospital	Public transport
<1	81.1	53.3	36.4	61.7	21.7	36.9	52.3	67.3
1-4	13.0	18.6	16.4	17.2	8.1	16.3	18.0	10.4
5-9	3.1	9.9	13.5	8.1	7.6	7.7	7.2	7.3
10-14	0.7	6.0	5.8	5.0	4.6	5.8	5.8	2.1
15-29	0.5	4.7	12.5	3.8	14.4	12.5	8.0	4.9
30+	0.2	3.4	9.8	1.3	26.9	13.9	4.7	2.6
Don't know/missing	0.1	0.7	1.4	0.1	10.5	2.2	1.0	1.9
Total	98.6	96.6	95.7	97.1	93.7	95.2	97.0	96.6
Number of households	7,647	7,647	7,647	7,647	7,647	7,647	7,647	7,647

12.4 Distance and Time to Health Services

Table 12.5 shows the distribution of households by distance to nearest health facilities (kilometres) (top panel) and time (bottom panel) to nearest health facilities (minutes). As expected, health centres and clinics are the closest health care facilities, with 68 percent of households residing within 10 kilometres of a health centre and 54 percent within 10 kilometres of a clinic. Hospitals are more distant; however, almost

half (45 percent) of households are within 10 kilometres of a hospital. When any of these three types of health care facilities are taken into account, 81 percent of households are within 10 kilometres of one of the three. Looking at the private sector, half of households are within 10 kilometres of a private doctor and two-thirds are within 10 kilometres of a pharmacy.

In terms of time taken to reach health facilities, 59 percent of households are within 30 minutes of a health centre or a pharmacy, while 48 percent are within 30 minutes of a clinic, 42 percent are within 30 minutes of a hospital, and 45 percent are within 30 minutes of a private doctor. The median number of minutes required to reach facilities should be viewed with caution, since many respondents round the time to the nearest 5, 10 or 15 minutes. However, the median time to facilities follows the same general pattern as distance to facilities, with pharmacies and health centres being closer than hospitals.

Table 12.5 Distance to health facilities by type

Percent distribution of households by distance (kilometres) and time (minutes) to nearest health facility, private doctor, or pharmacy, according to type, Nigeria 1999

Distance and time	Health facility				Private doctor	Pharmacy
	Health centre	Clinic	Hospital	Any of the three facilities		
DISTANCE (KILOMETRES)						
<1	38.1	34.7	17.7	53.0	30.6	43.5
1-4	22.5	15.5	17.0	19.9	15.4	16.5
5-9	7.1	3.4	10.2	8.4	4.5	5.7
10-14	6.9	1.9	8.3	3.9	3.9	3.8
15-29	5.1	3.7	15.1	3.2	6.5	3.0
30+	2.4	2.4	13.3	1.8	3.9	3.2
Don't know/missing	1.0	1.0	0.6	0.4	0.8	0.8
No facility	17.0	37.3	17.9	9.4	34.4	23.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households	7,647	7,647	7,647	7,647	7,647	7,647
TIME (MINUTES)						
<15	38.1	34.1	23.7	52.0	29.4	44.3
15-29	20.8	13.9	18.3	18.2	15.4	14.5
30-59	10.4	7.2	17.7	7.9	10.8	7.7
60-119	9.3	5.1	10.8	8.5	6.3	6.6
120+	4.2	1.5	10.9	3.6	3.1	2.9
Don't know/Missing	0.2	0.7	0.8	0.4	0.6	0.6
No facility	17.0	37.3	17.9	9.4	34.4	23.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households	7,647	7,647	7,647	7,647	7,647	7,647
Median time	15.3	10.8	25.6	10.6	15.5	10.6

Table 12.6 presents data on distance to the closest health facility (health centre, clinic, or hospital) by region. The data indicate that households in the southern part of the country are generally closer to health facilities than those in the other regions, although the Central region has the highest proportion of households within 1 kilometre of a facility. The proportion of households residing within 10 kilometres of a health centre, clinic, or hospital is 88 percent in the Southwest region and 87 in the Southeast region, compared with 82 percent in the Central region, 73 in the Northeast region, and 67 percent in the Northwest region.

Table 12.6 Distance to health facility by region

Percent distribution of households by distance (kilometres) and time (minutes) to nearest facility, acccording to region, Nigeria 1999

Distance and time	Region					Total
	North-east	North-west	South-east	South-west	Central	
DISTANCE (KILOMETRES)						
<1	51.2	45.2	35.7	58.4	73.3	53.0
1-4	15.2	12.9	37.4	22.5	4.5	19.9
5-9	6.5	9.0	13.8	7.5	4.4	8.4
10-14	3.8	8.0	4.3	2.1	3.1	3.9
15-29	2.1	7.0	4.6	3.1	0.0	3.2
30+	0.0	5.5	0.0	2.6	1.5	1.8
Don't know/missing	0.0	1.4	0.0	0.7	0.0	0.4
No facility	21.2	11.0	4.3	3.1	13.2	9.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households	1,211	1,075	1,814	2,002	1,546	7,647
TIME (MINUTES)						
<15	47.6	51.3	29.0	65.2	65.8	52.0
15-29	17.9	12.4	25.3	19.4	12.5	18.2
30-59	8.4	10.5	11.7	6.1	3.7	7.9
60-119	3.8	12.1	21.0	4.8	0.0	8.5
120+	1.1	1.3	8.6	0.7	4.9	3.6
Don't know/Missing	0.0	1.4	0.0	0.7	0.0	0.4
No facility	21.2	11.0	4.3	3.1	13.2	9.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of households	1,211	1,075	1,814	2,002	1,546	7,647
Median time	10.6	10.6	20.6	8.0	10.2	10.6

The distribution of households by the amount of time required to reach the nearest health facility generally follows the distribution for distance. One exception is that households in the Southeast region appear to require the longest amount of time to reach a facility. Since respondents were asked to report time to reach the nearest facility using the most common means of transport to get there, it is possible that more people in the Southeast region walk or use a slower means of transport, compared with people in communities located further from the nearest facility.

Table 12.7 shows the distribution of households by distance and time to the nearest facility providing specific kinds of services, namely, delivery care, childhood immunisations and family planning services. There appears to be little difference in distance or time to specific services. In other words, it seems that the nearest facility usually provides all three of these services. This no doubt reflects a policy of integration of services so that people do not need to go to one facility for family planning and another for child immunisations.

Table 12.7 Distance to specific health services

Percent distribution of households by distance (kilometres) and time (minutes) to nearest facility providing specific services, Nigeria 1999

Distance and time	Health service			Total
	Delivery care	Child immuni-sations	Family planning service	
DISTANCE (KILOMETRES)				
<1	48.4	51.9	52.5	53.0
1-4	19.4	17.4	16.4	19.9
5-9	8.3	7.4	6.5	8.4
10-14	3.8	6.1	3.3	3.9
15-29	4.9	3.3	4.8	3.2
30+	3.4	3.7	3.1	1.8
Don't know/missing	0.0	0.2	0.2	0.4
No facility	11.8	10.0	13.3	9.4
Total	100.0	100.0	100.0	100.0
Number of households	7,647	7,647	7,647	7,647
TIME (MINUTES)				
<15	47.9	50.8	52.3	52.0
15-29	18.0	17.4	12.9	18.2
30-59	8.5	8.5	10.3	7.9
60-119	9.0	8.4	5.9	8.5
120+	4.8	4.8	5.2	3.6
Don't know/Missing	0.0	0.0	0.0	0.4
No facility	11.8	10.0	13.3	9.4
Total	100.0	100.0	100.0	100.0
Number of households	7,647	7,647	7,647	7,647
Median time	10.8	10.7	10.5	10.6

12.5 Contraceptive Use by Distance to Services

Family planning programme managers often debate whether physical availability of services affects the level of use. Table 12.8 shows the distribution of married women by whether they are using a modern method, a traditional method, or no method, according to distance to the nearest facility providing family planning services. It is apparent that the level of use of modern methods is highest among women who live closest to family planning services, dropping from 12 percent among women who live within 1 kilometre of a family planning service to 3 percent among those living 15 kilometres or more from a source of family planning.

From this analysis it is not possible to say whether the availability of services causes contraceptive prevalence rates to be higher among women living closer to facilities providing family planning services or higher rates among those women are a function of an urban lifestyle or some other factor. That use of traditional methods of family planning is also generally higher among women who live closer to a source of family planning services indicates that factors other than proximity to services have an affect, since traditional methods such as periodic abstinence, withdrawal, and herbs, do not require health facilities.

Table 12.8 Contraceptive use and distance to family planning services

Percent distribution of currently married women by contraceptive use, according to distance (kilometres) to nearest facility providing family planning (FP) services, Nigeria 1999

Distance to FP services	Contraceptive method currently used: Modern method	Traditional method	Not using FP method	Total	Number of women
<1	12.4	7.9	79.7	100.0	2,954
1-4	6.7	9.4	83.9	100.0	809
5-14	4.4	5.6	90.0	100.0	613
15+	2.6	3.9	93.4	100.0	502
Don't know/missing	10.0	10.0	80.0	100.0	10
No facility	3.2	2.7	94.0	100.0	920
Total	8.5	6.7	84.8	100.0	5,808

CHAPTER 13

POLICY IMPLICATIONS OF THE NDHS DATA

13.1 Introduction

Policy formulation and implementation are often data-driven. Data enrich the goals and objectives of policies, the targets to be achieved and strategies for achieving such targets. Policies are often revised to respond to problems raised by data. The generation of a new set of data therefore has policy implications that may take either of two directions:

- The data might call for the introduction of a new policy with a set of goals and objectives that would address issues raised.
- The data might require changing strategies and setting new targets.

The 1999 Nigeria Demographic and Health Survey generated a large amount of data on the social and health status of the population. These include data on fertility, childhood mortality, reproductive health, child health, nutrition, family planning, HIV/AIDS and other sexually transmitted diseases, female circumcision, etc. Being the first such data to be generated in recent times, the NDHS data have potentially extensive implications for policy.

Basically, the demographic, health and social issues raised by the NDHS data are not substantially different from issues that had been of central concern to past population intervention programmes. The problems of high fertility, lack of adequate maternal and child health care, early marriage, low nutritional status, low usage of contraceptive methods had been well articulated in the past and these concerns had led to the adoption of the National Policy on Population and Development by the Federal Government in 1988. As stated in Chapter 1, the four main goals of the policy are to improve the standard of living of people in part by preventing premature death and illness, as well as to reduce fertility by increasing contraceptive use and to achieve a more even urban-rural distribution of the population. A number of policy objectives that would achieve these goals were set. It is useful to review the goals and objectives of the National Population Policy in light of the NDHS data.

13.2 Assessing the Goals of the National Population Policy (NPP)

NDHS data indicate some progress in achieving the goals of the NPP. Although the levels of childhood mortality measured in the NDHS are most probably underestimates, thus artifically amplifying the decline in mortality, there has almost certainly been at least a modest decline in childhood mortality over the past decade. NDHS data do not shed much light on what might be contributing to the decline. According to survey findings, there has been no improvement in the nutritional status of children as measured by height and weight. More distressing is that the proportion of one-year-old children vaccinated against the major childhood diseases has declined from 30 percent in 1990 to a shockingly low 17 percent in 1999. In addition, survey data do not show large declines in the percentage of children under five who were ill with fever, respiratory infections, or diarrhoea, although it appears that children are increasing likely to be taken to a health facility when ill and those with diarrhoea are now more likely to be treated with oral rehydration therapy. In short, there is much room for further action.

With regard to the NPP's fertility-related goals, survey data show evidence of a gradual decline in the total fertility rate from about 6.0 in the late 1980s to about 5.2 in the mid-1990s. Given the NPP's focus on reducing adolescent fertility, it is particularly encouraging that the decline in fertility has been steeper than average for women 15-19. Nevertheless, NDHS data indicate that challenges still remain. For example, the NPP posited to reduce pregnancies to women below 18 years and above 35 years by 50 percent by 1995 and 90 percent by the year 2000. Again, NDHS data show some progress, with the proportion of 20- to 24-year-old women who gave birth to a child before age 18 declining from 35 percent in 1990 to 28 percent in 1999. However, this is still a relatively high level. Moreover, NDHS data show that 30 percent of 18-year-olds and 26 percent of 17-year-olds have either given birth or are pregnant with their first child, indicating that teenage pregnancy rates are still high.

The NPP also hoped to reduce the proportion of women who get married before the age of 18 years by 50 percent in 1995 and by 80 percent by the year 2000. Once again, it appears that there has been progress, albeit modest. The proportion of women age 20-24 who have married by age 18 has declined from 52 percent in 1990 to 40 percent in 1999. Over the same period, the median age at marriage among these women has increased by about two years, from 17.8 to 19.6. Still, it is doubtful that the NPP targets have been met.

Other areas of improvement include knowledge and use of contraceptive methods. The proportion of married women who have heard of contraceptive methods has increased dramatically since 1990 and is now higher for every method mentioned, perhaps as a result of more widespread exposure to family planning messages on the radio and television. Contraceptive use has increased from only 6 percent of married women to 16 percent in 1999.

Despite these areas of progress, change has been modest and gradual. Consequently, by and large, the targets of the National Population Policy remain unmet. In addition, health problems that were not envisaged to be of great concern in the NPP have assumed dangerous proportions. These include the increasing prevalence of HIV/AIDs and the continuing practice of female genital cutting which was not specifically addressed in the NPP but which data from NDHS indicate is not uncommon.

The non-attainment of targets set by the NPP and the emergence of new problems call for policy review not in terms of setting new goals and objectives but in terms of designing new strategies to realise the goals of the NPP. What should be the main thrust of the review of the NPP as reflected by the NDHS? What new goals and objectives should be set? What new strategies should be adopted? In the light of the NDHS data, the goals and objectives of the NPP are still relevant. What is therefore required is a more aggressive implementation of the policy in addition to devising strategies that would make its targets more feasible and attainable.

The policy implications of the NDHS can be divided into specific and general policies. While the specific policies seek to directly redress the demographic and health problems raised by the NDHS data, the general policies seek to effect major changes that would create a conducive atmosphere for solving demographical and health problems raised by the NDHS data. The contents of the policy implications are outlined below:

Specific Policy Implications of the NDHS Data

These are strategies that would help to achieve the targets set out in the NPP:

i) Provision of adequate health care facilities in the urban and rural areas and at a cost affordable to the majority of Nigerians. These facilities would help reduce mortality

particularly among infants and mothers by reducing the burden of childhood diseases as well as ensuring adequate antenatal, postnatal and emergency obstetrical care. The introduction of the National Health Insurance scheme should also be pursued vigorously.

ii) Facilitate access to family planning services. Though the NDHS data show noticeable improvement in contraceptive knowledge, use of methods is still low. Efforts should concentrate in the Northwest, where unmet need is higher and knowledge of methods lower.

iii) More aggressive promotion of Family Life Education and propagation of the values of small family size. NDHS data show that Nigerian couples still want many children. About 66 percent of women and 71 percent of men desire more children. The mean ideal family size is 6.2 children for women and 7.8 for men.

iv) Integration of traditional birth attendants and health practitioners into the modern health care system. The traditional sector meets a large proportion of the health need of the populace particularly in the rural areas and are also agents of questionable health practices. A substantial proportion of female circumcisions are carried out by birth attendants. Proper orientation of the traditional health sectors on the principles of modern health care would help to reduce the incidence of harmful health practices.

v) Appropriate and feasible incentives and legislation for fertility regulation should be put in place.

vi) In view of the increasing prevalence of HIV/AIDS cases, there is need to step up the AIDS awareness campaign, particularly among those in rural areas where awareness is low.

vii) The proposed bill in the National Assembly to legislate against female circumcision should be pursued with vigor to its enactment.

General Policy Implications of the NDHS Data

In addition to the specific strategies outlined above, there is the need for government to embark on social and economic programmes that would solve on a more sustainable basis the demographic and health problems observed in the NDHS data. Survey findings show that socio-economic indicators such as educational attainment are strongly correlated with most of the indicators measured. For example, fertility preferences, knowledge and use of contraceptives, prevalence of female circumcision and other health problems are strongly related to education levels, rural-urban residence, and to a larger extent, the economic and occupational status of respondents. Government should therefore implement wide ranging socio-economic programmes such as:

i) Universal, free and compulsory education that would bring schooling to the doorstep of all Nigerians. The Universal Basic Education (UBE) is a step in the right direction.

ii) A poverty alleviation programme that would increase the living standard of the people and their purchasing power.

iii) A coordinated rural development programme. This would ensure the provision of basic facilities such as water, electricity, health facilities, schools etc.

iv) Adoption of the gender factor as an integral part of the development process. Women should be empowered and their social and economic conditions should be improved.

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APPENDIX A

SAMPLE DESIGN

APPENDIX A

SAMPLE DESIGN

A.1 Preamble

The 1999 National Demographic Sample survey was designed as probability sampling of eligible respondents within all regular households in the entire country.

The sampling frame used for selecting the Primary Sampling Units (PSUs) was the Enumeration Areas (EAs) into which the country was delineated for the 1991 National Population Census. The frame contains 212,079 EAs that are mutually exclusive and collectively exhaustive of the territorial land area of Nigeria.

The survey was aimed at producing an unbiased nationally represented data and statistics. It was also structured to produce mainly regional (domain) and rural-urban (strata) estimates. Nevertheless, estimates for the administrative divisions (states) will be obtained for variables that yield adequate data at that level of division.

The 36 states and Federal Capital Territory (FCT) of the country were grouped into five Survey Statistical regions as shown below:

CENTRAL	NORTHEAST	NORTHWEST	SOUTHEAST	SOUTHWEST
Plateau	Jigawa	Kebbi	Ebonyi	Lagos
Benue	Gombe	Kaduna	Anambra	Oyo
Nasarawa	Kano	katsina	Bayelsa	Osun
Taraba	Borno	Zamfara	Cross-River	Delta
Adamawa	Bauchi	Sokoto	Akwa-Ibom	Ogun
Kogi	Yobe		Enugu	Edo
Kwara			Rivers	Ekiti
Niger			Abia	Ondo
FCT			Imo	

The 212,079 EAs were classified into one of the two strata —(i) rural and (ii) urban, where urban EA (U) is defined as an EA within a locality having population of 20,000 and above, while, rural EA (R) is an EA within a locality with population less than 20,000 persons.

A.2 Sample Allocation Procedure

The DHS was designed to give every eligible woman (aged between 10-49 years) nationwide an equal probability of being selected.

Consideration was initially given to updating and segmentation of the existing EAs into standard units (clusters) of almost equal population/households, from where a fixed "sample-take" of households ought to be drawn. But after considering the technicalities involved, time and cost under the stringent budget for the survey and judging from the balance of advantage of not segmenting, a decision was taken not to undertake the segmentation exercise. As the primary objective of the survey is to obtain rates rather than

absolute yield, an unbiased spread of the selected clusters (EAs) was seen more as a priority rather than cluster size which is known not to vary considerably within a strata of state.

A proportional allocation of the eligible women (to be sampled) was assigned for each state using the projected population from the 1991 census as an auxiliary information. In determining the number of PSUs (EAs), that will yield the allocated number of eligible women for a state and stratum, an even distribution of the target population among the EAs within a stratum of a state was assumed. By targeting 10,000 eligible women age 15-49 (or 12,504 aged 10-49) and allowing for 10 percent nonresponse, a field return of 9,000 eligible women (aged 15-49) was expected. The target population represented 0.0003707 of the projected eligible women. Targeting this same proportion of eligible women existing in the rural and urban strata of a state, the expected number of EAs to yield the target after a second stage sampling was obtained.

A.3 Sample Selection

A two stage sampling procedure was adopted to sample eligible women. A sub-sample of selected households for eligible women interview was selected (at third stage) for the canvassing of the men questionnaire.

A.3.1 First Stage Sampling (Sampling of EAs)

After arranging the EAs in each stratum of a state in their geographic order, the PSUs allocated to the stratum in the state were selected by systematic sampling procedure. Selection was therefore independent both within stratum and between states. The selection probability of all PSUs within a stratum in a state are equal. Thus,

$$\sum_{i=1}^{N_{hk}} P_{ihk} = N_{nk}C_{nk} = 1$$

where P_{ihk} = probability of selecting the i^{th} PSU in the h^{th} stratum of the K^{th} state.

N_{hk} = Total number of EAs in the h^{th} stratum of state k

h = 1 or 2
k = 1,2,.....,37.
i = 1,2,....., N_{hk}
C_{hk} = the constant selection probability from the h^{th} stratum of the K^{th} state.

A.3.2 Household Listing and Quality Control

The primary sampling units which serve as clusters for enumeration were selected centrally by a trained statistician at the National Population Commission's Liaison Office in Lagos. The selected EAs were sent to the local governments for the NPC's resident technical staff to re-identify the EA boundaries and obtain a sketch map of the EA, indicating all buildings within the EA.

The NPC Comptroller of the local government who is a very senior staff thereafter cross checked the work of the technical staff to ensure no omission of any building within the EA or inclusion of a building outside the boundaries of the EA. After approval of the building numbering and listing, the technical staff who did not serve as interviewers in the EA identified and listed all households within the EA in the Household Listing Form - NDHS-07. The Comptroller again was supposed to spot check the listed households by re-listing all households in one of five residential buildings listed by the technical staff.

The following quality control procedure was adopted:

i) If no error was found in the re-listing (sample), then the listing was accepted for enumeration,
ii) if 2 or more percent error was found then, the entire EA was re-listed
iii) if errors were found but less than 2 percent, a second independent sample was drawn, the cumulative errors were found, if 2 or more percent error was obtained (from the two samples), the entire households in the EA will be re-listed, otherwise correction was to be made on the Household Listing Form (NDHS-07). (Note that in an EA, where there are less than 10 residential buildings the comptroller is expected to quality check one of every five households listed in the EA).

A.3.3 Second Stage Sampling (Household and Eligible Women Sampling)

After the spot/quality check as described in 1.3.2 above, one in every five households listed was selected by adopting the systematic sampling procedure. The number of secondary sampling units (SSUs)—households selected (i.e. sample size) for the EAs is variable, i.e.

$$n_i \; 1.\, T$$

where

n_i = the number of secondary sampling units (households) selected for the canvassing of eligible women and household questionnaires in the i^{th} PSU.
T = total household in the i^{th} PSU.

Hence,

$$Pr\ (SSUi;\backslash EA_i) = 0.20$$

where,

SSU_{ij} = the j^{th} household in the i^{th} PSU.

All eligible women (EW_{ij}) within the selected sample units are included in the sample. That is,

$$Pr\ (EW_{ij}\backslash SU_{ij}) = 1.$$

Whereas for the eligible men's (EM_{ij}) interview, a sub-sample (n_{im}), one in every three SSUs selected for women's questionnaire is systematically selected. Therefore

$$Pr\ (Em_{ij}\backslash EA_i) = 0.667.$$

A.4 Weighting Field Returns

The field returns from the designed sampling procedure as described above have to be weighted because the field returns for the sampling domains did not reflect entirely a self weighting sample of the population in the domains.

Though the population used as auxiliary information to estimate the number of eligible women to be sampled from each state (under a self weighting sample) is a projection— i.e "an estimate," it is reliable. However, the inability to strictly adhere to and implement the recommended quality control procedures (A.3.2) and the small number of PSUs relative to the variability that exists within the PSUs account for the field returns deviating from the self-weighting sample envisaged during the sample design.

It should be noted that while the returns from the rural stratum show an appreciable level of self weighting, the returns from the urban stratum showed a significant level of deviation from self weighting. The deviation from the urban stratum was due to under-listing of dwellings in some PSUs due to changes in physical features at the EAs boundaries over time. Therefore in processing and estimating the population parameters, the sample returns were weighted by taking into consideration the selection probabilities of the primary sampling units, the expected and eventual field returns and the differential in response rate among the domains. The weights were standardized and entered with the individual data records.

Fortunately, the clusters (EAs) were evenly spread over the geographical area of the domain and the under-listing or otherwise of dwelling was not systematic, it was rather random within the domain, hence, bias of a differential in variable values between the listed and the unlisted dwellings does not arise.

Table A.1.1 Sample implementation: women

Percent distribution of households and eligible women in the NDHS sample by results of the household and individual interviews and household, eligible women, and overall response rates, according to region and urban-rural residence, Nigeria 1999

Result	Region					Residence		Total
	North-east	North-west	South-east	South-west	Central	Urban	Rural	
Selected households								
Completed (C)	99.2	99.4	94.5	96.5	95.2	95.5	97.1	96.6
Household present but no competent respondent at home (HP)	0.0	0.1	1.0	0.6	1.8	1.0	0.7	0.8
Refused (R)	0.1	0.2	0.5	0.6	0.1	0.7	0.2	0.3
Household absent (HA)	0.4	0.3	1.5	1.3	2.6	2.0	1.0	1.3
Dwelling vacant/address not a dwelling (DV)	0.2	0.0	0.5	0.0	0.2	0.3	0.2	0.2
Other (O)	0.2	0.1	2.0	0.9	0.1	0.6	0.9	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of households	*1,206*	*1,129*	*1,921*	*2,023*	*1,640*	*2,600*	*5,319*	*7,919*
Household response rate (HRR)[1]	99.9	99.7	98.4	98.7	98.1	98.3	99.1	98.8
Eligible women								
Completed (EWC)	96.8	97.7	94.3	93.8	94.5	94.0	95.6	95.1
Not at home (EWNH)	2.7	1.6	4.0	4.9	4.5	4.5	3.5	3.8
Postponed (EWP)	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0
Refused (EWR)	0.1	0.1	0.8	0.7	0.3	0.8	0.3	0.5
Partly completed (EWPC)	0.1	0.0	0.2	0.0	0.3	0.2	0.1	0.1
Incapacitated (EWI)	0.2	0.0	0.4	0.2	0.3	0.2	0.3	0.2
Other (EWO)	0.1	0.5	0.2	0.3	0.0	0.3	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	1,641	1,396	2,461	2,522	2,297	3,424	6,893	10,317
Eligible woman response rate (EWRR)[2]	96.8	97.7	94.3	93.8	94.5	94.0	95.6	95.1
Overall response rate (ORR)[3]	96.8	97.4	92.8	92.6	92.7	92.4	94.8	94.0

Note: The household response rate is calculated for completed households as a proportion of completed, no competent respondent, postponed, refused, and dwelling not found. The eligible woman response rate is calculated for completed interviews as a proportion of completed, not at home, postponed, refused, partially completed, incapacitated and "other." The overall response rate is the product of the household and woman response rates.

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{C}{C + HP + R + HA + DV + O}$$

[2] Using the number of eligible women falling into specific response categories, the eligible woman response rate (EWRR) is calculated as:

$$\frac{EWC}{EWC + EWNH + EWP + EWR + EWPC + EWI + EWO}$$

[3] The overall response rate (ORR) is calculated as:

$$ORR = HRR * EWRR$$

Table A.1.2 Sample implementation: men

Percent distribution of households and eligible men in the NDHS sample by results of the household and individual interviews, and household, eligible men, and overall response rates, according to region and urban-rural residence, Nigeria 1999

Result	Region					Residence		Total
	North-east	North-west	South-east	South-west	Central	Urban	Rural	
Selected households								
Completed (C)	98.7	99.7	95.6	97.5	96.5	97.2	97.4	97.3
Household present but no competent respondent at home (HP)	0.0	0.3	1.1	0.4	1.1	0.9	0.5	0.6
Refused (R)	0.0	0.0	0.2	0.3	0.2	0.1	0.2	0.2
Household absent (HA)	0.8	0.0	0.8	1.0	2.0	1.2	0.9	1.0
Dwelling vacant/address not a dwelling (DV)	0.5	0.0	0.6	0.1	0.2	0.2	0.3	0.3
Other (O)	0.0	0.0	1.7	0.6	0.0	0.4	0.7	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of households	399	377	636	667	541	849	1,771	2,620
Household response rate (HRR)[1]	100.0	99.7	98.7	99.2	98.7	98.9	99.3	99.2
Eligible men								
Completed (EMC)	92.6	91.3	94.2	92.9	91.4	89.9	94.0	92.6
Not at home (EMNH)	4.4	6.8	4.1	6.0	8.6	8.4	4.8	6.0
Postponed (EMP)	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0
Refused (EMR)	0.4	0.8	0.6	0.5	0.0	0.6	0.4	0.4
Partly completed (EMPC)	0.6	0.0	0.5	0.1	0.0	0.2	0.3	0.2
Incapacitated (EMI)	0.8	0.0	0.0	0.1	0.0	0.2	0.2	0.2
Other (EMO)	1.1	1.1	0.5	0.3	0.0	0.6	0.4	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men	472	369	639	751	663	981	1,913	2,894
Eligible man response rate (EMRR)[2]	92.6	91.3	94.2	92.9	91.4	89.9	94.0	92.6
Overall response rate (ORR)[3]	92.6	91.1	93.0	92.2	90.2	88.9	93.3	91.8

Note: The household response rate is calculated for completed households as a proportion of completed, no competent respondent, refused, and dwelling not found. The eligible man response rate is calculated for completed interviews as a proportion of completed, not at home, postponed, refused, partially completed, incapacitated and "other." The overall response rate is the product of the household and man response rates.

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{C}{C + HP + R + HA + DV + O}$$

[2] Using the number of eligible men falling into specific response categories, the eligible man response rate (EMRR) is calculated as:

$$\frac{EMC}{EMC + EMNH + EMP + EMR + EMPC + EMI + EMO}$$

[3] The overall response rate (ORR) is calculated as:

$$ORR = HRR * EMRR$$

APPENDIX B

ESTIMATES OF SAMPLING ERRORS

APPENDIX B

ESTIMATES OF SAMPLING ERRORS

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 NDHS to minimise 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 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 NDHS sample is the result of a two-stage stratified design, and, consequently, it was necessary to use more complex formulae. The computer software used to calculate sampling errors for the NDHS is the ISSA Sampling Error Module. This module used the Taylor linearisation 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 linearisation method treats any percentage or average as a ratio estimate, $r = y/x$, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below with the standard error being the square root of the variance:

$$var(r) = \frac{1-f}{x^2} \sum_{h=1}^{H} \left[\frac{m_h}{m_h - 1} \left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h} \right) \right]$$

in which

$$z_{hi} = y_{hi} - r.x_{hi} \text{ , and } z_h = y_h - r.x_h$$

where h represents the stratum which varies from 1 to H,
m_h is the total number of enumeration areas (EAs) selected in the h^{th} stratum,
y_{hi} is the sum of the values of variable y in the i^{th} EA in the h^{th} stratum,
x_{hi} is the sum of the number of cases in the i^{th} EA in the h^{th} stratum, and
f is the overall sampling fraction, which is so small that it is ignored.

The Jackknife repeated replication method derives estimates of complex rates from each of several replications of the parent sample, and calculates standard errors for these estimates using simple formulae. Each replication considers *all but one* clusters in the calculation of the estimates. Pseudo-independent replications are thus created. In the NDHS, there were 399 non-empty clusters. Hence, 399 replications were created. The variance of a rate r is calculated as follows:

$$SE^2(R) = var(r) = \frac{1}{k(k-1)} \sum_{i=1}^{k} (r_i - r)^2$$

in which

$$r_i = kr - (k-1)r_{(i)}$$

where r is the estimate computed from the full sample of 399 clusters,
$r_{(i)}$ is the estimate computed from the reduced sample of 398 clusters (i^{th} cluster excluded), and
k 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 NDHS are calculated for selected variables considered to be of primary interest. The results are presented in this appendix for the country as a whole, for urban and rural areas, and for the five 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.9 present the value of the statistic (R), its standard error (SE), the number of unweighted (N) and weighted (WN) cases, the design effect (DEFT), the relative standard error (SE/R), and the 95 percent confidence limits (R±2SE), for 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 since 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 15-49*) can be interpreted as follows: the overall average from the national sample is 2.848 and its standard error is .04. Therefore, to obtain the 95 percent confidence limits, one adds and subtracts twice the standard error to the sample estimate, i.e., 3.848±2×.04. There is a high probability (95 percent) that the *true* average number of children ever born to all women aged 15 to 49 is between 2.771 and 2.925.

Sampling errors are analysed for the national 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 0 percent and 50.7 percent with an average of 6.6 percent; the highest relative standard errors are for estimates of very low values (e.g., *currently using implants* among currently married women who were currently using a contraceptive method). If estimates of very low values (less than 10 percent) were removed, then the average drops considerably. 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, 2.2 percent. However, for the mortality rates, the average relative standard errors are somewhat higher, e.g., 4.8 percent for under-five mortality.

There are differentials in the relative standard error for the estimates of sub-populations. For example, for the variable *with secondary education or higher*, the relative standard errors as a percent of the estimated mean for the whole country, for the rural areas, and for the Northeast region are 3.1 percent, 4.4 percent, and 17.5 percent, respectively.

For the total sample, the value of the design effect (DEFT) averaged over all variables is 1.46, which means that due to multi-stage clustering of the sample variance is increased by a factor of 1.46 over that in an equivalent simple random sample.

Table B.1 List of selected variables for sampling errors, Nigeria 1999

Variable	Estimate	Base population
Urban	Proportion	All women 15-49
No education	Proportion	All women 15-49
With secondary education or higher	Proportion	All women 15-49
Never married	Proportion	All women 15-49
Currently married/in union	Proportion	All women 15-49
Married before age 20	Proportion	All women 15-49
Sex before age 18	Proportion	All women 15-49
Children ever born	Mean	All women 15-49
Children ever born to women over 40	Mean	All women 40-49
Children surviving	Mean	All women 15-49
Knowing any contraceptive method	Proportion	Currently married women 15-49
Knowing any modern contraceptive method	Proportion	Currently married women 15-49
Ever used any contraceptive method	Proportion	Currently married women 15-49
Currently using any method	Proportion	Currently married women 15-49
Currently using a modern method	Proportion	Currently married women 15-49
Currently using pill	Proportion	Currently married women 15-49
Currently using IUD	Proportion	Currently married women 15-49
Currently using injectables	Proportion	Currently married women 15-49
Currently using implants	Proportion	Currently married women 15-49
Currently using condom	Proportion	Currently married women 15-49
Currently using female sterilisation	Proportion	Currently married women 15-49
Currently using periodic abstinence	Proportion	Currently married women 15-49
Currently using withdrawal	Proportion	Currently married women 15-49
Using public sector source	Proportion	Current users of modern method
Want no more children/sterilised	Proportion	Currently married women 15-49
Want to delay at least 2 years	Proportion	Currently married women 15-49
Ideal number of children	Mean	All women 15-49
Mothers received tetanus injection	Proportion	Births in last 3 years
Mothers received medical care at birth	Proportion	Births in last 3 years
Had diarrhoea in the last 2 weeks	Proportion	Children under 3
Treated with ORS packets	Proportion	Children under 3 with diarrhoea in last 2 weeks
Having health card, seen	Proportion	Children 12-23 months
Received BCG vaccination	Proportion	Children 12-23 months
Received DPT vaccination (3 doses)	Proportion	Children 12-23 months
Received polio vaccination (3 doses)	Proportion	Children 12-23 months
Received measles vaccination	Proportion	Children 12-23 months
Fully immunised	Proportion	Children 12-23 months
Weight-for-height (below -2 SD)	Proportion	Children under 3
Height-for-age (below -2 SD)	Proportion	Children under 3
Weight-for-age (below -2 SD)	Proportion	Children under 3
Total fertility rate (5 years)	Rate	Woman-years of exposure to child-bearing
Neonatal mortality rate	Rate	Number of births
Postneonatal mortality rate	Rate	Number of births
Infant mortality rate	Rate	Number of births
Child mortality rate	Rate	Number of births
Under-five mortality rate	Rate	Number of births

Table B.2 Sampling errors: National sample, Nigeria 1999

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.310	0.015	8199	8206	3.009	0.050	0.279	0.340
No education	0.405	0.014	8199	8206	2.528	0.034	0.378	0.432
With secondary education or higher	0.367	0.011	8199	8206	2.128	0.031	0.345	0.390
Never married	0.260	0.006	8199	8206	1.333	0.025	0.247	0.272
Currently married/in union	0.702	0.007	8199	8206	1.414	0.010	0.687	0.716
Married before age 20	0.612	0.010	6425	6431	1.568	0.016	0.593	0.631
Sex before age 18	0.506	0.009	6425	6431	1.474	0.018	0.488	0.525
Children ever born	2.848	0.039	8199	8206	1.205	0.014	2.771	2.925
Children ever born to women over 40	6.121	0.101	1251	1265	1.234	0.016	5.920	6.323
Children surviving	2.433	0.032	8199	8206	1.187	0.013	2.369	2.497
Knowing any contraceptive method	0.644	0.014	5755	5757	2.231	0.022	0.616	0.672
Knowing any modern contraceptive method	0.619	0.014	5755	5757	2.257	0.023	0.590	0.648
Ever used any contraceptive method	0.287	0.010	5755	5757	1.707	0.035	0.267	0.308
Currently using any method	0.153	0.007	5755	5757	1.483	0.046	0.139	0.167
Currently using a modern method	0.086	0.006	5755	5757	1.620	0.070	0.074	0.098
Currently using pill	0.024	0.003	5755	5757	1.283	0.107	0.019	0.029
Currently using IUD	0.020	0.002	5755	5757	1.162	0.107	0.016	0.024
Currently using injectables	0.024	0.003	5755	5757	1.396	0.118	0.018	0.029
Currently using implants	0.001	0.000	5755	5757	0.980	0.507	0.000	0.001
Currently using condom	0.012	0.001	5755	5757	1.014	0.119	0.010	0.015
Currently using female sterilisation	0.003	0.001	5755	5757	0.970	0.247	0.001	0.004
Currently using periodic abstinence	0.046	0.003	5755	5757	1.135	0.068	0.040	0.052
Currently using withdrawal	0.012	0.002	5755	5757	1.204	0.142	0.009	0.016
Using public sector source	0.429	0.023	720	728	1.239	0.053	0.383	0.475
Want no more children/sterilised	0.193	0.008	5755	5757	1.500	0.040	0.177	0.208
Want to delay at least 2 years	0.284	0.008	5755	5757	1.286	0.027	0.269	0.299
Ideal number of children	6.165	0.068	6753	6756	1.894	0.011	6.030	6.300
Mothers received tetanus injection	0.554	0.016	3549	3547	1.782	0.029	0.522	0.587
Mothers received medical care at birth	0.416	0.016	3549	3547	1.736	0.038	0.384	0.447
Had diarrhoea in the last 2 weeks	0.153	0.007	3208	3206	1.064	0.045	0.139	0.166
Treated with ORS packets	0.343	0.026	491	489	1.182	0.076	0.291	0.395
Having health card, seen	0.195	0.015	1166	1161	1.274	0.077	0.165	0.225
Received BCG vaccination	0.538	0.022	1166	1161	1.455	0.040	0.495	0.581
Received DPT vaccination (3 doses)	0.263	0.018	1166	1161	1.375	0.069	0.227	0.299
Received polio vaccination (3 doses)	0.248	0.017	1166	1161	1.304	0.068	0.214	0.281
Received measles vaccination	0.405	0.020	1166	1161	1.377	0.050	0.364	0.445
Fully immunised	0.168	0.014	1166	1161	1.232	0.083	0.140	0.195
Weight-for-height (below -2 SD)	0.124	0.008	1456	1473	0.970	0.067	0.107	0.141
Height-for-age (below -2 SD)	0.455	0.015	1456	1473	1.139	0.033	0.424	0.485
Weight-for-age (below -2 SD)	0.273	0.014	1456	1473	1.147	0.050	0.246	0.300
Total fertility rate (5 years)	5.146	0.112	NA	36250	1.525	0.022	4.922	5.369
Neonatal mortality rate (0-4 years)	36.923	2.974	6979	6479	1.140	0.081	30.975	42.872
Postneonatal mortality rate (0-4 years)	38.093	2.853	6503	6503	1.089	0.075	32.388	43.798
Infant mortality rate (0-4 years)	75.016	4.295	6507	6507	1.160	0.057	66.426	83.606
Child mortality rate (0-4 years)	70.321	4.454	6614	6612	1.211	0.063	61.414	79.229
Under-five mortality rate (0-4 years)	140.062	6.654	6646	6644	1.323	0.048	126.754	153.370

NA = Not applicable

Table B.3 Sampling errors: Urban sample, Nigeria 1999

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	1.000	0.000	2697	2540	NA	0.000	1.000	1.000
No education	0.249	0.022	2697	2540	2.627	0.088	0.205	0.292
With secondary education or higher	0.541	0.020	2697	2540	2.072	0.037	0.501	0.581
Never married	0.306	0.010	2697	2540	1.122	0.033	0.286	0.325
Currently married/in union	0.657	0.011	2697	2540	1.159	0.016	0.636	0.679
Married before age 20	0.503	0.016	2131	2008	1.467	0.032	0.471	0.535
Sex before age 18	0.398	0.015	2131	2008	1.411	0.038	0.368	0.428
Children ever born	2.528	0.061	2697	2540	1.183	0.024	2.406	2.649
Children ever born to women over 40	5.653	0.188	393	380	1.477	0.033	5.277	6.030
Children surviving	2.236	0.050	2697	2540	1.104	0.022	2.137	2.336
Knowing any contraceptive method	0.833	0.023	1769	1670	2.622	0.028	0.787	0.880
Knowing any modern contraceptive method	0.820	0.024	1769	1670	2.664	0.030	0.772	0.869
Ever used any contraceptive method	0.427	0.021	1769	1670	1.799	0.050	0.385	0.469
Currently using any method	0.234	0.017	1769	1670	1.640	0.071	0.201	0.267
Currently using a modern method	0.157	0.013	1769	1670	1.539	0.085	0.130	0.184
Currently using pill	0.055	0.007	1769	1670	1.318	0.131	0.040	0.069
Currently using IUD	0.040	0.005	1769	1670	1.142	0.134	0.029	0.050
Currently using injectables	0.030	0.005	1769	1670	1.255	0.169	0.020	0.040
Currently using implants	0.002	0.001	1769	1670	1.010	0.507	0.000	0.005
Currently using condom	0.025	0.003	1769	1670	0.932	0.138	0.018	0.032
Currently using female sterilisation	0.002	0.001	1769	1670	1.031	0.582	0.000	0.004
Currently using periodic abstinence	0.046	0.005	1769	1670	1.088	0.119	0.035	0.056
Currently using withdrawal	0.019	0.004	1769	1670	1.325	0.227	0.010	0.028
Using public sector source	0.401	0.035	365	356	1.349	0.086	0.332	0.471
Want no more children/sterilised	0.243	0.016	1769	1670	1.611	0.068	0.211	0.276
Want to delay at least 2 years	0.262	0.015	1769	1670	1.398	0.056	0.233	0.291
Ideal number of children	5.325	0.092	2252	2111	1.853	0.017	5.141	5.508
Mothers received tetanus injection	0.737	0.024	1039	984	1.596	0.032	0.690	0.784
Mothers received medical care at birth	0.579	0.035	1039	984	2.047	0.060	0.509	0.649
Had diarrhoea in the last 2 weeks	0.139	0.013	948	896	1.155	0.097	0.112	0.166
Treated with ORS packets	0.430	0.064	134	124	1.419	0.149	0.302	0.558
Having health card, seen	0.281	0.029	332	310	1.181	0.104	0.223	0.340
Received BCG vaccination	0.750	0.036	332	310	1.524	0.049	0.677	0.823
Received DPT vaccination (3 doses)	0.447	0.036	332	310	1.279	0.080	0.375	0.519
Received polio vaccination (3 doses)	0.418	0.031	332	310	1.124	0.075	0.356	0.481
Received measles vaccination	0.615	0.037	332	310	1.348	0.060	0.542	0.689
Fully immunised	0.317	0.029	332	310	1.112	0.093	0.258	0.376
Weight-for-height (below -2 SD)	0.114	0.015	431	417	0.982	0.131	0.084	0.144
Height-for-age (below -2 SD)	0.416	0.026	431	417	1.092	0.063	0.364	0.469
Weight-for-age (below -2 SD)	0.267	0.024	431	417	1.123	0.090	0.219	0.315
Total fertility rate (5 years)	4.497	0.199	NA	11249	1.698	0.044	4.099	4.895
Neonatal mortality rate (0-9 years)	36.174	4.493	1847	1738	1.121	0.124	27.188	45.161
Postneonatal mortality rate (0-9 years)	23.128	2.767	1850	1741	0.936	0.120	17.593	28.662
Infant mortality rate (0-9 years)	59.302	5.509	1852	1743	1.175	0.093	48.285	70.320
Child mortality rate (0-9 years)	51.576	6.432	1877	1767	1.117	0.125	38.712	64.441
Under-five mortality rate (0-9 years)	107.820	9.445	1884	1774	1.277	0.088	88.931	126.709

NA = Not applicable

Table B.4 Sampling errors: Rural sample, Nigeria 1999

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.000	0.000	5502	5666	NA	NA	0.000	0.000
No education	0.475	0.017	5502	5666	2.467	0.035	0.442	0.508
With secondary education or higher	0.290	0.013	5502	5666	2.086	0.044	0.264	0.315
Never married	0.239	0.008	5502	5666	1.424	0.034	0.223	0.255
Currently married/in union	0.721	0.009	5502	5666	1.519	0.013	0.703	0.740
Married before age 20	0.661	0.011	4294	4423	1.588	0.017	0.638	0.684
Sex before age 18	0.556	0.011	4294	4423	1.477	0.020	0.533	0.578
Children ever born	2.991	0.048	5502	5666	1.201	0.016	2.895	3.088
Children ever born to women over 40	6.322	0.117	858	885	1.139	0.019	6.088	6.556
Children surviving	2.521	0.041	5502	5666	1.207	0.016	2.440	2.603
Knowing any contraceptive method	0.567	0.016	3986	4087	2.101	0.029	0.534	0.600
Knowing any modern contraceptive method	0.537	0.017	3986	4087	2.142	0.032	0.503	0.571
Ever used any contraceptive method	0.230	0.011	3986	4087	1.626	0.047	0.208	0.252
Currently using any method	0.120	0.007	3986	4087	1.331	0.057	0.107	0.134
Currently using a modern method	0.056	0.006	3986	4087	1.656	0.107	0.044	0.068
Currently using pill	0.012	0.002	3986	4087	1.104	0.159	0.008	0.016
Currently using IUD	0.012	0.002	3986	4087	1.184	0.169	0.008	0.016
Currently using injectables	0.021	0.003	3986	4087	1.468	0.158	0.014	0.028
Currently using implants	0.000	0.000	3986	4087	NA	NA	0.000	0.000
Currently using condom	0.007	0.001	3986	4087	1.111	0.206	0.004	0.010
Currently using female sterilisation	0.003	0.001	3986	4087	0.947	0.272	0.001	0.005
Currently using periodic abstinence	0.046	0.004	3986	4087	1.150	0.083	0.038	0.054
Currently using withdrawal	0.010	0.002	3986	4087	1.090	0.174	0.006	0.013
Using public sector source	0.456	0.030	355	372	1.136	0.066	0.396	0.516
Want no more children/sterilised	0.172	0.009	3986	4087	1.482	0.051	0.154	0.190
Want to delay at least 2 years	0.293	0.009	3986	4087	1.255	0.031	0.275	0.311
Ideal number of children	6.547	0.083	4501	4645	1.815	0.013	6.380	6.714
Mothers received tetanus injection	0.484	0.021	2510	2563	1.892	0.043	0.442	0.526
Mothers received medical care at birth	0.353	0.018	2510	2563	1.651	0.050	0.318	0.388
Had diarrhoea in the last 2 weeks	0.158	0.008	2260	2310	1.023	0.051	0.142	0.174
Treated with ORS packets	0.313	0.027	357	365	1.091	0.087	0.259	0.367
Having health card, seen	0.163	0.017	834	850	1.338	0.106	0.128	0.198
Received BCG vaccination	0.461	0.026	834	850	1.475	0.056	0.409	0.513
Received DPT vaccination (3 doses)	0.196	0.020	834	850	1.417	0.101	0.156	0.235
Received polio vaccination (3 doses)	0.185	0.019	834	850	1.401	0.103	0.147	0.224
Received measles vaccination	0.328	0.023	834	850	1.408	0.071	0.281	0.374
Fully immunised	0.113	0.015	834	850	1.313	0.129	0.084	0.142
Weight-for-height (below -2 SD)	0.128	0.010	1025	1056	0.961	0.079	0.108	0.148
Height-for-age (below -2 SD)	0.470	0.018	1025	1056	1.136	0.039	0.433	0.506
Weight-for-age (below -2 SD)	0.275	0.016	1025	1056	1.148	0.059	0.242	0.307
Total fertility rate (5 years)	5.436	0.133	NA	25002	1.439	0.024	5.171	5.701
Neonatal mortality rate (0-9 years)	34.568	2.540	4632	4741	1.145	0.073	29.488	39.648
Postneonatal mortality rate (0-9 years)	40.327	2.917	4653	4762	1.082	0.072	34.493	46.161
Infant mortality rate (0-9 years)	74.895	4.335	4655	4764	1.151	0.058	66.225	83.566
Child mortality rate (0-9 years)	73.429	4.731	4737	4845	1.215	0.064	63.967	82.892
Under-five mortality rate (0-9 years)	142.825	7.021	4762	4870	1.319	0.049	128.783	156.866

NA = Not applicable

Table B.5 Sampling errors: Northeast region sample, Nigeria 1999

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.290	0.039	1304	1292	3.127	0.136	0.211	0.368
No education	0.769	0.033	1304	1292	2.822	0.043	0.703	0.835
With secondary education or higher	0.142	0.025	1304	1292	2.569	0.175	0.092	0.191
Never married	0.096	0.014	1304	1292	1.669	0.142	0.068	0.123
Currently married/in union	0.880	0.015	1304	1292	1.686	0.017	0.850	0.911
Married before age 20	0.851	0.018	1034	1023	1.596	0.021	0.816	0.887
Sex before age 18	0.700	0.021	1034	1023	1.494	0.030	0.658	0.743
Children ever born	3.375	0.080	1304	1292	0.972	0.024	3.215	3.534
Children ever born to women over 40	6.370	0.322	164	163	1.245	0.050	5.727	7.014
Children surviving	2.733	0.061	1304	1292	0.926	0.022	2.611	2.856
Knowing any contraceptive method	0.354	0.029	1145	1137	2.082	0.083	0.295	0.413
Knowing any modern contraceptive method	0.346	0.030	1145	1137	2.105	0.086	0.286	0.405
Ever used any contraceptive method	0.070	0.013	1145	1137	1.663	0.180	0.045	0.095
Currently using any method	0.031	0.007	1145	1137	1.371	0.228	0.017	0.044
Currently using a modern method	0.022	0.006	1145	1137	1.308	0.255	0.011	0.034
Currently using pill	0.014	0.005	1145	1137	1.516	0.377	0.003	0.024
Currently using IUD	0.001	0.001	1145	1137	1.041	1.044	0.000	0.003
Currently using injectables	0.007	0.003	1145	1137	1.202	0.430	0.001	0.013
Currently using implants	0.000	0.000	1145	1137	NA	NA	0.000	0.000
Currently using condom	0.001	0.001	1145	1137	1.041	1.044	0.000	0.003
Currently using female sterilisation	0.000	0.000	1145	1137	NA	NA	0.000	0.000
Currently using periodic abstinence	0.005	0.002	1145	1137	1.178	0.502	0.000	0.010
Currently using withdrawal	0.003	0.002	1145	1137	1.643	0.959	0.000	0.007
Using public sector source	0.357	0.060	29	29	0.663	0.168	0.236	0.477
Want no more children/sterilised	0.069	0.012	1145	1137	1.651	0.180	0.044	0.094
Want to delay at least 2 years	0.292	0.023	1145	1137	1.685	0.078	0.247	0.338
Ideal number of children	8.179	0.311	733	715	1.946	0.038	7.557	8.800
Mothers received tetanus injection	0.313	0.032	789	788	1.793	0.104	0.248	0.378
Mothers received medical care at birth	0.127	0.024	789	788	1.848	0.189	0.079	0.175
Had diarrhoea in the last 2 weeks	0.223	0.017	685	684	1.038	0.075	0.190	0.257
Treated with ORS packets	0.240	0.049	153	153	1.379	0.203	0.142	0.337
Having health card, seen	0.072	0.018	242	241	1.084	0.249	0.036	0.108
Received BCG vaccination	0.260	0.031	242	241	1.109	0.120	0.197	0.322
Received DPT vaccination (3 doses)	0.121	0.027	242	241	1.273	0.221	0.067	0.174
Received polio vaccination (3 doses)	0.111	0.024	242	241	1.198	0.218	0.062	0.159
Received measles vaccination	0.197	0.033	242	241	1.306	0.170	0.130	0.264
Fully immunised	0.075	0.025	242	241	1.501	0.338	0.024	0.126
Weight-for-height (below -2 SD)	0.163	0.022	302	302	1.039	0.137	0.119	0.208
Height-for-age (below -2 SD)	0.552	0.031	302	302	1.069	0.056	0.490	0.613
Weight-for-age (below -2 SD)	0.380	0.036	302	302	1.306	0.096	0.307	0.453
Total fertility rate (5 years)	6.785	0.232	NA	5745	1.081	0.034	6.322	7.249
Neonatal mortality rate (0-9 years)	44.518	6.023	1422	1417	1.058	0.135	32.473	56.564
Postneonatal mortality rate (0-9 years)	34.869	3.875	1427	1422	0.969	0.111	27.120	42.619
Infant mortality rate (0-9 years)	79.388	7.597	1428	1423	1.004	0.096	64.194	94.582
Child mortality rate (0-9 years)	104.102	11.085	1467	1461	1.164	0.106	81.931	126.272
Under-five mortality rate (0-9 years)	175.225	14.172	1474	1468	1.152	0.081	146.881	203.570

NA = Not applicable

Table B.6 Sampling errors: Northwest region sample, Nigeria 1999

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.164	0.020	1162	1087	1.888	0.125	0.123	0.205
No education	0.823	0.025	1162	1087	2.196	0.030	0.774	0.872
With secondary education or higher	0.096	0.019	1162	1087	2.223	0.200	0.057	0.134
Never married	0.063	0.012	1162	1087	1.630	0.184	0.040	0.087
Currently married/in union	0.907	0.015	1162	1087	1.742	0.016	0.878	0.937
Married before age 20	0.885	0.014	948	887	1.352	0.016	0.857	0.913
Sex before age 18	0.792	0.018	948	887	1.375	0.023	0.756	0.828
Children ever born	3.191	0.091	1162	1087	1.083	0.029	3.008	3.373
Children ever born to women over 40	5.640	0.341	151	141	1.174	0.060	4.959	6.322
Children surviving	2.515	0.062	1162	1087	0.956	0.025	2.390	2.640
Knowing any contraceptive method	0.422	0.036	1052	986	2.332	0.084	0.351	0.493
Knowing any modern contraceptive method	0.391	0.036	1052	986	2.421	0.093	0.318	0.464
Ever used any contraceptive method	0.077	0.011	1052	986	1.330	0.142	0.055	0.099
Currently using any method	0.032	0.007	1052	986	1.370	0.231	0.017	0.047
Currently using a modern method	0.025	0.006	1052	986	1.302	0.252	0.012	0.037
Currently using pill	0.011	0.004	1052	986	1.198	0.349	0.003	0.019
Currently using IUD	0.002	0.001	1052	986	0.558	0.346	0.001	0.004
Currently using injectables	0.009	0.004	1052	986	1.196	0.377	0.002	0.017
Currently using implants	0.000	0.000	1052	986	NA	NA	0.000	0.000
Currently using condom	0.001	0.001	1052	986	0.953	1.014	0.000	0.003
Currently using female sterilisation	0.001	0.001	1052	986	1.031	1.004	0.000	0.003
Currently using periodic abstinence	0.001	0.001	1052	986	0.933	1.006	0.000	0.002
Currently using withdrawal	0.001	0.001	1052	986	0.967	0.981	0.000	0.003
Using public sector source	0.585	0.097	33	30	1.111	0.165	0.392	0.779
Want no more children/sterilised	0.073	0.010	1052	986	1.192	0.131	0.054	0.093
Want to delay at least 2 years	0.320	0.014	1052	986	0.953	0.043	0.292	0.347
Ideal number of children	8.158	0.149	921	860	1.352	0.018	7.860	8.457
Mothers received tetanus injection	0.261	0.036	669	629	1.972	0.136	0.190	0.333
Mothers received medical care at birth	0.080	0.017	669	629	1.584	0.217	0.045	0.115
Had diarrhoea in the last 2 weeks	0.179	0.017	608	572	1.074	0.093	0.145	0.212
Treated with ORS packets	0.162	0.034	109	102	0.949	0.206	0.095	0.229
Having health card, seen	0.082	0.021	259	245	1.237	0.256	0.040	0.124
Received BCG vaccination	0.216	0.038	259	245	1.478	0.174	0.141	0.292
Received DPT vaccination (3 doses)	0.092	0.026	259	245	1.466	0.284	0.040	0.145
Received polio vaccination (3 doses)	0.102	0.026	259	245	1.405	0.258	0.049	0.154
Received measles vaccination	0.199	0.032	259	245	1.302	0.162	0.135	0.264
Fully immunised	0.043	0.014	259	245	1.078	0.315	0.016	0.070
Weight-for-height (below -2 SD)	0.229	0.039	116	108	1.007	0.172	0.150	0.308
Height-for-age (below -2 SD)	0.570	0.047	116	108	0.976	0.082	0.477	0.664
Weight-for-age (below -2 SD)	0.452	0.044	116	108	0.925	0.097	0.365	0.540
Total fertility rate (5 years)	6.452	0.291	NA	4911	1.083	0.045	5.870	7.034
Neonatal mortality rate (0-9 years)	25.122	4.550	1860	1184	1.301	0.181	16.023	34.222
Postneonatal mortality rate (0-9 years)	57.500	8.201	1270	1194	1.269	0.143	41.098	73.902
Infant mortality rate (0-9 years)	82.622	10.344	1270	1199	1.286	0.125	61.935	103.309
Child mortality rate (0-9 years)	115.094	12.063	1297	1219	1.311	0.105	90.967	139.220
Under-five mortality rate (0-9 years)	188.207	18.152	1307	1229	1.573	0.096	151.902	224.511

NA = Not applicable

Table B.7 Sampling errors: Southeast region sample, Nigeria 1999

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.185	0.025	1895	1886	2.765	0.133	0.136	0.234
No education	0.110	0.013	1895	1886	1.788	0.117	0.084	0.135
With secondary education or higher	0.529	0.017	1895	1886	1.453	0.032	0.495	0.562
Never married	0.425	0.012	1895	1886	1.092	0.029	0.400	0.450
Currently married/in union	0.501	0.013	1895	1886	1.114	0.026	0.476	0.527
Married before age 20	0.434	0.013	1407	1404	0.985	0.030	0.408	0.460
Sex before age 18	0.410	0.018	1407	1404	1.369	0.044	0.374	0.446
Children ever born	2.685	0.101	1895	1886	1.377	0.038	2.483	2.887
Children ever born to women over 40	6.918	0.189	300	300	1.202	0.027	6.540	7.296
Children surviving	2.291	0.083	1895	1886	1.326	0.036	2.126	2.457
Knowing any contraceptive method	0.816	0.015	943	946	1.157	0.018	0.786	0.845
Knowing any modern contraceptive method	0.790	0.017	943	946	1.244	0.021	0.757	0.823
Ever used any contraceptive method	0.455	0.020	943	946	1.254	0.045	0.414	0.495
Currently using any method	0.235	0.014	943	946	0.981	0.058	0.208	0.262
Currently using a modern method	0.091	0.010	943	946	1.051	0.108	0.072	0.111
Currently using pill	0.019	0.005	943	946	1.192	0.278	0.009	0.030
Currently using IUD	0.015	0.004	943	946	0.925	0.246	0.007	0.022
Currently using injectables	0.031	0.006	943	946	1.049	0.191	0.019	0.043
Currently using implants	0.000	0.000	943	946	NA	NA	0.000	0.000
Currently using condom	0.019	0.005	943	946	1.139	0.266	0.009	0.029
Currently using female sterilisation	0.005	0.002	943	946	0.965	0.433	0.001	0.010
Currently using periodic abstinence	0.094	0.007	943	946	0.765	0.077	0.080	0.109
Currently using withdrawal	0.034	0.007	943	946	1.221	0.211	0.020	0.049
Using public sector source	0.450	0.040	188	187	1.112	0.090	0.370	0.531
Want no more children/sterilised	0.299	0.025	943	946	1.644	0.082	0.250	0.348
Want to delay at least 2 years	0.265	0.018	943	946	1.280	0.069	0.228	0.302
Ideal number of children	5.834	0.106	1722	1712	1.923	0.018	5.621	6.047
Mothers received tetanus injection	0.722	0.022	651	649	1.119	0.031	0.677	0.766
Mothers received medical care at birth	0.654	0.033	651	649	1.575	0.050	0.589	0.719
Had diarrhoea in the last 2 weeks	0.150	0.016	588	586	1.069	0.109	0.118	0.183
Treated with ORS packets	0.384	0.057	85	88	1.078	0.149	0.270	0.498
Having health card, seen	0.277	0.035	197	194	1.075	0.125	0.208	0.346
Received BCG vaccination	0.733	0.036	197	194	1.097	0.049	0.662	0.804
Received DPT vaccination (3 doses)	0.407	0.039	197	194	1.075	0.096	0.328	0.485
Received polio vaccination (3 doses)	0.367	0.040	197	194	1.122	0.109	0.287	0.446
Received measles vaccination	0.543	0.037	197	194	1.034	0.068	0.469	0.618
Fully immunised	0.249	0.038	197	194	1.166	0.151	0.174	0.325
Weight-for-height (below -2 SD)	0.080	0.013	366	368	0.908	0.160	0.054	0.106
Height-for-age (below -2 SD)	0.353	0.024	366	368	0.918	0.067	0.305	0.400
Weight-for-age (below -2 SD)	0.183	0.023	366	368	1.088	0.124	0.137	0.228
Total fertility rate (5 years)	4.640	0.196	NA	8115	1.246	0.042	4.248	5.031
Neonatal mortality rate (0-9 years)	37.255	4.178	1181	1185	1.042	0.112	28.898	45.611
Postneonatal mortality rate (0-9 years)	37.073	4.306	1185	1189	1.048	0.116	28.462	45.685
Infant mortality rate (0-9 years)	74.328	6.718	1187	1191	1.143	0.090	60.892	87.764
Child mortality rate (0-9 years)	65.596	5.185	1208	1212	0.855	0.079	55.226	75.966
Under-five mortality rate (0-9 years)	135.048	8.277	1216	1220	1.038	0.061	118.494	151.602

NA = Not applicable

Table B.8 Sampling errors: Southwest region sample, Nigeria 1999

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.524	0.029	2002	2080	2.594	0.055	0.466	0.582
No education	0.198	0.013	2002	2080	1.504	0.068	0.171	0.225
With secondary education or higher	0.535	0.019	2002	2080	1.743	0.036	0.496	0.574
Never married	0.315	0.010	2002	2080	0.941	0.031	0.296	0.335
Currently married/in union	0.657	0.011	2002	2080	1.022	0.017	0.635	0.679
Married before age 20	0.445	0.017	1571	1631	1.335	0.038	0.412	0.479
Sex before age 18	0.349	0.015	1571	1631	1.256	0.043	0.319	0.379
Children ever born	2.585	0.065	2002	2080	1.093	0.025	2.455	2.716
Children ever born to women over 40	5.793	0.193	368	383	1.451	0.033	5.408	6.178
Children surviving	2.314	0.062	2002	2080	1.163	0.027	2.190	2.438
Knowing any contraceptive method	0.872	0.012	1318	1367	1.293	0.014	0.849	0.896
Knowing any modern contraceptive method	0.837	0.013	1318	1367	1.255	0.015	0.812	0.863
Ever used any contraceptive method	0.476	0.018	1318	1367	1.318	0.038	0.440	0.512
Currently using any method	0.262	0.016	1318	1367	1.298	0.060	0.231	0.293
Currently using a modern method	0.155	0.013	1318	1367	1.276	0.082	0.130	0.181
Currently using pill	0.042	0.005	1318	1367	0.996	0.132	0.031	0.053
Currently using IUD	0.052	0.006	1318	1367	1.027	0.121	0.039	0.064
Currently using injectables	0.026	0.005	1318	1367	1.194	0.202	0.015	0.036
Currently using implants	0.002	0.001	1318	1367	0.988	0.575	0.000	0.005
Currently using condom	0.029	0.004	1318	1367	0.824	0.132	0.021	0.036
Currently using female sterilisation	0.002	0.001	1318	1367	1.002	0.582	0.000	0.005
Currently using periodic abstinence	0.071	0.009	1318	1367	1.218	0.121	0.054	0.089
Currently using withdrawal	0.019	0.004	1318	1367	1.167	0.228	0.011	0.028
Using public sector source	0.344	0.035	282	292	1.223	0.101	0.275	0.413
Want no more children/sterilised	0.310	0.014	1318	1367	1.119	0.046	0.282	0.339
Want to delay at least 2 years	0.293	0.014	1318	1367	1.100	0.047	0.265	0.321
Ideal number of children	5.111	0.069	1794	1867	1.497	0.013	4.973	5.248
Mothers received tetanus injection	0.785	0.018	745	777	1.123	0.023	0.749	0.822
Mothers received medical care at birth	0.732	0.024	745	777	1.352	0.033	0.684	0.780
Had diarrhoea in the last 2 weeks	0.071	0.013	685	714	1.219	0.177	0.046	0.097
Treated with ORS packets	0.594	0.085	49	51	1.141	0.143	0.424	0.763
Having health card, seen	0.325	0.037	246	256	1.219	0.114	0.251	0.399
Received BCG vaccination	0.837	0.025	246	256	1.053	0.030	0.788	0.887
Received DPT vaccination (3 doses)	0.408	0.037	246	256	1.158	0.091	0.334	0.481
Received polio vaccination (3 doses)	0.413	0.035	246	256	1.099	0.085	0.343	0.483
Received measles vaccination	0.648	0.040	246	256	1.309	0.062	0.567	0.729
Fully immunised	0.286	0.029	246	256	0.993	0.102	0.228	0.345
Weight-for-height (below -2 SD)	0.124	0.015	389	404	0.916	0.123	0.093	0.155
Height-for-age (below -2 SD)	0.389	0.033	389	404	1.325	0.085	0.323	0.455
Weight-for-age (below -2 SD)	0.251	0.026	389	404	1.153	0.102	0.199	0.302
Total fertility rate (5 years)	4.501	0.184	NA	9166	1.296	0.041	4.132	4.869
Neonatal mortality rate (0-9 years)	42.628	4.873	1318	1373	1.140	0.114	32.881	52.375
Postneonatal mortality rate (0-9 years)	27.289	4.508	1320	1375	1.023	0.165	18.272	36.305
Infant mortality rate (0-9 years)	69.917	7.762	1320	1375	1.197	0.111	54.392	85.442
Child mortality rate (0-9 years)	33.939	4.398	1334	1389	1.194	0.130	25.143	42.735
Under-five mortality rate (0-9 years)	101.483	9.784	1336	1391	1.325	0.096	81.914	121.052

NA = Not applicable

Table B.9 Sampling errors: Central region sample, Nigeria 1999

Variable	Value (R)	Standard error (SE)	Number of cases: Un-weighted (N)	Number of cases: Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits: R-2SE	Confidence limits: R+2SE
Urban	0.295	0.038	1836	1861	3.581	0.129	0.219	0.372
No education	0.439	0.029	1836	1861	2.462	0.065	0.382	0.496
With secondary education or higher	0.331	0.025	1836	1861	2.245	0.074	0.282	0.381
Never married	0.258	0.011	1836	1861	1.103	0.044	0.235	0.280
Currently married/in union	0.710	0.011	1836	1861	1.060	0.016	0.688	0.732
Married before age 20	0.634	0.021	1465	1486	1.677	0.033	0.592	0.676
Sex before age 18	0.466	0.018	1465	1486	1.369	0.038	0.430	0.502
Children ever born	2.741	0.069	1836	1861	1.086	0.025	2.604	2.878
Children ever born to women over 40	5.811	0.177	268	277	1.085	0.031	5.456	6.166
Children surviving	2.453	0.060	1836	1861	1.072	0.025	2.333	2.574
Knowing any contraceptive method	0.700	0.025	1297	1321	1.996	0.036	0.650	0.751
Knowing any modern contraceptive method	0.677	0.026	1297	1321	2.018	0.039	0.624	0.729
Ever used any contraceptive method	0.316	0.021	1297	1321	1.630	0.067	0.274	0.358
Currently using any method	0.178	0.016	1297	1321	1.542	0.092	0.145	0.211
Currently using a modern method	0.109	0.017	1297	1321	2.010	0.160	0.074	0.144
Currently using pill	0.029	0.007	1297	1321	1.508	0.244	0.015	0.043
Currently using IUD	0.021	0.005	1297	1321	1.267	0.239	0.011	0.031
Currently using injectables	0.042	0.009	1297	1321	1.578	0.210	0.024	0.059
Currently using implants	0.001	0.001	1297	1321	0.823	1.005	0.000	0.002
Currently using condom	0.010	0.003	1297	1321	0.982	0.278	0.004	0.015
Currently using female sterilisation	0.005	0.002	1297	1321	0.906	0.363	0.001	0.008
Currently using periodic abstinence	0.054	0.007	1297	1321	1.190	0.138	0.039	0.069
Currently using withdrawal	0.006	0.002	1297	1321	1.096	0.379	0.002	0.011
Using public sector source	0.526	0.047	188	190	1.298	0.090	0.431	0.621
Want no more children/sterilised	0.191	0.016	1297	1321	1.445	0.083	0.160	0.223
Want to delay at least 2 years	0.255	0.015	1297	1321	1.223	0.058	0.225	0.284
Ideal number of children	5.779	0.111	1583	1602	1.762	0.019	5.558	6.001
Mothers received tetanus injection	0.677	0.032	695	704	1.692	0.047	0.613	0.741
Mothers received medical care at birth	0.470	0.028	695	704	1.374	0.060	0.413	0.526
Had diarrhoea in the last 2 weeks	0.146	0.014	642	649	0.986	0.095	0.119	0.174
Treated with ORS packets	0.529	0.051	95	95	0.979	0.096	0.427	0.631
Having health card, seen	0.230	0.034	222	224	1.196	0.148	0.162	0.298
Received BCG vaccination	0.679	0.041	222	224	1.291	0.060	0.597	0.760
Received DPT vaccination (3 doses)	0.312	0.049	222	224	1.558	0.157	0.214	0.411
Received polio vaccination (3 doses)	0.263	0.041	222	224	1.357	0.155	0.182	0.344
Received measles vaccination	0.453	0.043	222	224	1.273	0.095	0.367	0.539
Fully immunised	0.196	0.035	222	224	1.287	0.178	0.127	0.266
Weight-for-height (below -2 SD)	0.100	0.018	283	291	0.992	0.174	0.065	0.135
Height-for-age (below -2 SD)	0.531	0.038	283	291	1.253	0.071	0.456	0.606
Weight-for-age (below -2 SD)	0.239	0.027	283	291	1.047	0.112	0.185	0.292
Total fertility rate (5 years)	4.492	0.190	NA	8314	1.584	0.042	4.112	4.871
Neonatal mortality rate (0-9 years)	23.815	3.850	1298	1320	1.095	0.162	16.115	31.515
Postneonatal mortality rate (0-9 years)	26.478	4.170	NA	NA	NA	0.157	18.139	34.818
Infant mortality rate (0-9 years)	50.293	6.437	1302	1324	1.176	0.128	37.420	63.166
Child mortality rate (0-9 years)	35.511	5.052	1308	1330	1.100	0.142	25.407	45.615
Under-five mortality rate (0-9 years)	84.018	9.037	1313	1336	1.230	0.108	65.943	102.093

NA = Not applicable

APPENDIX C

ANALYSIS OF DATA QUALITY

APPENDIX C

ANALYSIS OF DATA QUALITY

This Appendix provides an assessment of the quality of the 1999 Nigeria Demographic and Health Survey data. For this purpose, information on the age and sex distribution of the household members is assessed, as are data concerning the extent of missing values, data on fertility levels and trends, and the reporting of childhood mortality.

C.1 Age and Sex Distribution

Table C.1 presents the distribution of the household population in single years of age according to sex. As was mentioned in Chapter 2, the data show a high level of "heaping" on ages ending in "0" and "5", particularly among women. For example, the number of men and women reported as being age 30 is more than 6 times the number reported as being age 31 (see Figure 2.2 in Chapter 2). Such heaping is common in developing countries where many people do not know their ages. Also, ages of household members were often reported by another member who may not know the ages of all people listed and may have rounded ages up or down.

Somewhat more disconcerting than the high level of heaping is the large number of women reported as being age 9 (877 versus 372 age 10). This is almost certainly due to the fact that women age 10-49 were eligible for individual interviews, which often require making call-backs to the household if the girl is not at home. A likely explanation is that some interviewers intentionally displaced women age 10, 11, 12, etc. to younger ages so as to avoid having to do the extra interviewing This explanation gains credence from the fact that the number of 10-year-old boys is considerably higher than the number of 10-year-old girls and the number of boys age 9 is considerably lower than the number of girls age 9.[1] The fact that for all ages between 10 and 14, there are many more men than women implies that some young girls may have been omitted from the household roster altogether in order to reduce the interviewer's workload. Although this distorts the age distribution, especially for young women (see Figure 2.1 in Chapter 2), it probably does not affect many of the indicators covered in this report, since women under age 15 are unlikely to have borne a child or to be using contraception. In fact, the very nature of the questions asked may have contributed to the incentive for interviewers to reduce the number of girls age 10-14, since it is sometimes awkward to ask girls about their sexual behaviour, fertility, and contraceptive use.

Table C.2 shows the age distribution of the population listed in the household and of women interviewed individually. Not only is the proportion of women age 10-14 listed in the household low, but also the percentage of these women who were successfully interviewed is low (88 percent).

Figure C.1 shows the age distribution of women respondents from the 1990 and 1999 NDHS surveys. On the whole, the 1999 survey has a better age distribution, especially for age group 15-19. It seems that interviewing 10- to 14-year-old girls may have "protected" the 15- to 19-year-olds from age transference. There is still approximately the same number of women in the 20-24 and 25-29 age groups, which is likely due to age mistatement.

[1] The age range for eligibility for interviewing with the Men's Questionnaire was 15-64 and only men living in every third household were eligible.

Table C.1 Household age distribution

Single-year age distribution of the de facto household population by sex (weighted), Nigeria 1999

	Males		Females			Males		Females	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
0	549	2.9	544	2.9	38	176	0.9	194	1.0
1	570	3.0	549	2.9	39	94	0.5	108	0.6
2	528	2.8	496	2.7	40	533	2.8	435	2.3
3	575	3.0	534	2.9	41	68	0.4	41	0.2
4	731	3.9	639	3.4	42	126	0.7	125	0.7
5	718	3.8	647	3.5	43	65	0.3	68	0.4
6	657	3.5	619	3.3	44	46	0.2	59	0.3
7	668	3.5	654	3.5	45	356	1.9	264	1.4
8	617	3.3	647	3.5	46	58	0.3	75	0.4
9	538	2.8	877	4.7	47	78	0.4	73	0.4
10	699	3.7	372	2.0	48	90	0.5	107	0.6
11	392	2.1	257	1.4	49	71	0.4	80	0.4
12	605	3.2	429	2.3	50	356	1.9	358	1.9
13	480	2.5	382	2.0	51	34	0.2	75	0.4
14	487	2.6	376	2.0	52	84	0.4	136	0.7
15	502	2.6	463	2.5	53	54	0.3	68	0.4
16	336	1.8	336	1.8	54	42	0.2	55	0.3
17	362	1.9	353	1.9	55	198	1.0	180	1.0
18	439	2.3	458	2.5	56	52	0.3	57	0.3
19	266	1.4	307	1.6	57	46	0.2	27	0.1
20	448	2.4	638	3.4	58	49	0.3	44	0.2
21	179	0.9	231	1.2	59	29	0.2	23	0.1
22	245	1.3	300	1.6	60	244	1.3	264	1.4
23	201	1.1	234	1.3	61	17	0.1	18	0.1
24	175	0.9	218	1.2	62	53	0.3	40	0.2
25	508	2.7	636	3.4	63	36	0.2	21	0.1
26	180	1.0	245	1.3	64	24	0.1	14	0.1
27	212	1.1	239	1.3	65	160	0.8	116	0.6
28	238	1.3	303	1.6	66	46	0.2	13	0.1
29	139	0.7	150	0.8	67	49	0.3	22	0.1
30	567	3.0	656	3.5	68	38	0.2	32	0.2
31	87	0.5	109	0.6	69	23	0.1	14	0.1
32	181	1.0	222	1.2	70+	531	2.8	358	1.9
33	117	0.6	124	0.7	Don't know/				
34	98	0.5	118	0.6	Missing	26	0.1	28	0.1
35	477	2.5	462	2.5					
36	109	0.6	153	0.8	Total	18,932	100.0	18,683	100.0
37	98	0.5	109	0.6					

Note: The de facto population includes all residents and nonresidents who slept in the household the night before the interview.

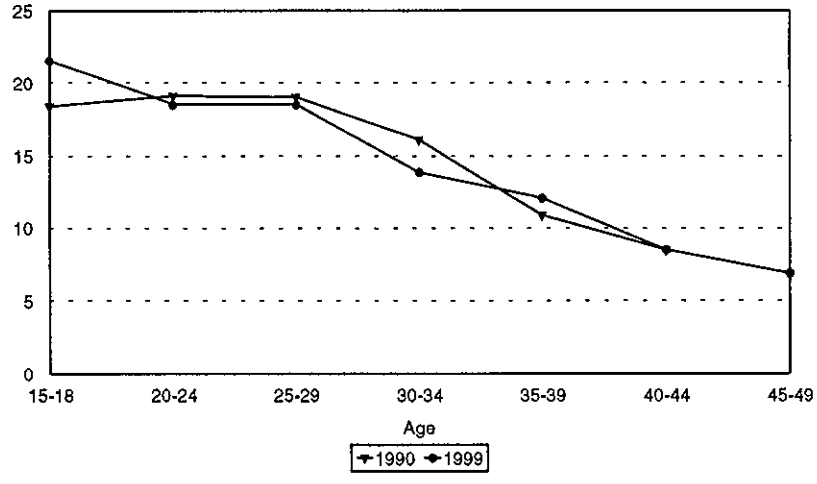
Table C.2 Age distribution of eligible and interviewed women

Percent distribution of the de facto household population of women age 5-54, and of interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted) by five-year age groups, Nigeria 1999

Age	Household population		Interviewed women		Percentage of eligible women interviewed (weighted)
	Number	Percent	Number	Percent	
5-9	3,445	NA	NA	NA	NA
10-14	1,817	17.3	1,605	16.4	88.3
15-19	1,918	18.2	1,769	18.1	92.3
20-24	1,622	15.4	1,533	15.6	94.5
25-29	1,573	15.0	1,501	15.3	95.4
30-34	1,228	11.7	1,171	12.0	95.3
35-39	1,027	9.8	959	9.8	93.4
40-44	728	6.9	691	7.1	94.9
45-49	599	5.7	570	5.8	95.2
50-54	693	NA	NA	NA	NA
10-49	10,513	NA	9,800	NA	93.2

Note: The de facto population includes all residents and nonresidents who slept in the household the night before interview.
NA = Not applicable

Figure C.1
Percent Distribution of Women 15-49 by Age Group, Nigeria 1990 and 1999



C.2 Completeness of Reporting

Table C.3 presents data on the percentage of cases with missing values for certain key indicators. For example, for all births recorded in the birth history section of the Women's Questionnaires as having occurred in the 15 years prior to the survey, 16 percent were missing a month of birth, while 1 percent were missing both month and year. Most variables have moderate levels of missing values. An exception is the variable concerning children's size at birth, which was missing for the vast majority of births in the three years preceding the survey. Although height and weight information was missing for only 8 percent of children under five, the anthropometric data were deemed to be implausible for a much larger proportion (42 percent) of children under three (not shown).

Table C.3 Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Nigeria 1999

Subject	Reference group	Percentage missing information	Number of cases
Birth date	Births in last 15 years		
Month only		16.0	16,910
Month and year		1.4	16,910
Age at death	Deaths to births in last 15 years	3.9	2,212
Age/date at first union[1]	Ever-married women	4.5	6,129
Respondent's education	All women	0.3	9,810
Child's size at birth	Births in last 59 months	57.5	1,193
Anthropometry[2]	Children under age 3		
Height missing		7.6	3,208
Weight missing		7.5	3,208
Height or weight missing		8.1	3,208
Diarrhoea in last 2 weeks	Children under 3 years	2.7	3,208

[1] Both year and age missing
[2] Child not measured

C.3 Fertility Data

An important measure of data quality is the completeness and accuracy of information on births. Table C.4 shows births by calendar year and survival status for the 1999 NDHS. Figure C.2 shows the same data graphically, as well as a smoothed average number of births by year. The data show an unexpected drop in the number of births recorded for 1996 (1,122) and 1997 (1,150), relative to 1995 (1,430) and 1994 (1,361). This is no doubt due to either birth transference (i.e., interviewers deliberately misrecording dates of birth in order to avoid having to ask the questions in the lengthy health section which are aimed at births occurring since January 1996) or birth omission (also to avoid asking the questions in the health section). Birth transference across a cut-off date results in a characteristic spike in births in the year or two prior to the cut-off and a deep trough just after the cut-off date. The data from the 1999 NDHS do not show the spike, but rather only a trough in births for 1996 and 1997, a pattern that is more consistent with omission of births.

Table C.4 Births by calendar years

Distribution of births by Western calendar years for living (L), dead (D), and all (T) children, according to reporting completeness, sex ratio at birth, and ratio of births by calendar year, Nigeria 1999

	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar ratio[3]			Male			Female		
Year	L	D	T	L	D	T	L	D	T	L	D	T	L	D	T	L	D	T
99	415	25	440	98.9	91.6	98.5	89.3	84.7	89.0	NA	NA	NA	196	11	207	219	13	233
98	1,322	114	1,436	94.0	77.1	92.7	101.1	85.7	99.8	185.3	139.5	180.6	665	52	717	658	61	719
97	1,012	138	1,150	89.7	77.6	88.2	117.2	124.0	118.0	87.5	113.0	89.9	546	76	622	466	62	528
96	992	131	1,122	89.8	70.3	87.5	102.5	123.2	104.7	88.5	77.5	87.0	502	72	574	490	59	548
95	1,230	199	1,430	87.6	64.3	84.3	107.5	94.4	105.6	113.5	126.5	115.1	637	97	734	593	103	695
94	1,176	185	1,361	83.9	75.8	82.8	122.3	79.6	115.4	98.5	98.8	98.6	647	82	729	529	103	632
93	1,158	174	1,332	83.5	77.3	82.7	105.0	130.9	108.1	99.3	96.4	98.9	593	99	692	565	75	640
92	1,155	177	1,332	85.8	68.4	83.5	100.8	149.2	106.1	107.1	110.6	107.6	580	106	686	575	71	646
91	999	146	1,145	82.8	64.0	80.4	102.3	118.3	104.2	92.3	84.6	91.3	505	79	584	494	67	560
90	1,008	168	1,176	85.1	60.8	81.6	89.9	110.9	92.7	NA	NA	NA	477	88	565	531	80	610
95-99	4,971	607	5,578	91.1	72.2	89.0	105.0	104.0	104.8	NA	NA	NA	2,546	309	2,855	2,426	297	2,723
90-94	5,496	849	6,345	84.2	69.6	82.3	104.1	114.7	105.4	NA	NA	NA	2,802	454	3,256	2,693	396	3,089
85-89	3,899	703	4,601	83.1	67.5	80.7	116.7	113.7	116.3	NA	NA	NA	2,100	374	2,474	1,799	329	2,128
80-84	2,901	582	3,484	82.9	62.8	79.6	116.9	114.0	116.4	NA	NA	NA	1,564	310	1,874	1,338	272	1,610
< 80	2,701	665	3,366	81.0	63.4	77.5	115.2	129.8	118.0	NA	NA	NA	1,446	376	1,822	1,255	289	1,544
All	19,968	3,406	23,375	85.1	67.3	82.5	110.0	115.1	110.7	NA	NA	NA	10,458	1,823	12,281	9,510	1,583	11,094

NA = Not applicable

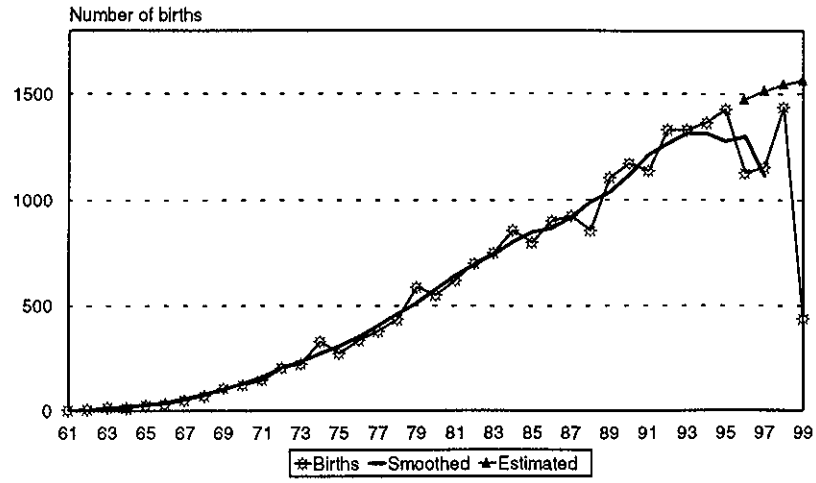
[1] Both year and month of birth given

[2] $(B_m/B_f)*100$, where B_m and B_f are the numbers of male and female births, respectively

[3] $[2B_x/(B_{x-1}+B_{x+1})]*100$, where B_x is the number of births in calendar year x

Figure C.2 also shows the estimated number of births for 1996 through 1999. The estimation was by artificially increasing the number of births each year to extend the smoothed line.[2] Comparing the total number of estimated births for these years with the reported number (after inflating the partial-year 1999 figure to a full 12-month period) gives about 22 percent more estimated births than recorded births. For the five-year period before the survey (the period for which fertility rates were calculated in this report), the difference between the estimated number and the reported number is about 17 percent. Adjusting the reported total fertility rate of 5.2 for the five years before the survey by this amount would give an adjusted rate of 6.0.

Figure C.2
Births per Calendar Year, Nigeria DHS 1999



Another way to assess fertility data is to compare results from two survey for the same time period. A comparison between the total fertility rate for the five-year period prior to 1990 (1986-1990) based on the 1990 and 1999 NDHS data gives approximately the same values—5.9 and 6.0, respectively. This test indicates that the 1990 survey probably gave approximately correct values of the total fertility rate for the period immediately preceding the survey and that the 1999 survey does not under-represent births for the more distant past.

A final comparison can be made using a model developed by Bongaarts (1978). Using data on the factors that determine the level of fertility, like contraceptive use, age at marriage, etc., along with a hypothetical level of "natural" fertility, it is possible to calculate an implied level of fertility. Application of the model to data from the 1990 NDHS gives an implied level of fertility that is very close to the actual reported level. For the 1999 NDHS, however, the difference between the implied and actual level of fertility is 16 percent—6.0 compared with 5.2. While the Bongaarts model is not applicable in all situations,

[2] Since the increase in the smoothed number of births between 1992 and 1993 was 51, 50 births were added to the number of births in 1995 to get the estimated number of births in 1996, to which were added 40 births to get the estimated number of births in 1997, to which were added 30 births to get the estimated number for 1998, to which were added 20 to get the estimated number for 1999.

particularly those in which women have a set goal for the number of children, it is likely to be applicable to Nigeria where contraception is used mostly before the first birth and for spacing.

In conclusion, there is a shortfall in the number of recent births reported in the 1999 NDHS. This shortfall results in an underestimate of current fertility of about 16-17 percent. A more likely estimate of the total fertility rate for the 5-year period preceding the survey is 6.0 births per woman.

C.4 Data on Childhood Mortality

A comparison of the under-five mortality estimates for 5-year time periods immediately preceding the 1990 and 1999 NDHSs indicates a substantial mortality decline, from 190 deaths per 1,000 births to 140 per 1,000. The implied rapid mortality decline over a 9-year period could be interpreted as an indication that health conditions are improving in Nigeria. Such an interpretation is valid only if the mortality data collected in the 1999 NDHS are reliable.

Structure of the Survey Instruments

One perspective from which to assess the data quality is to consider whether the structure of the 1999 survey instruments could have encouraged underreporting of events. In this regard, two sections of the Women's Questionnaire require comment—Reproduction (Section 2) and Health (Section 4). All live births are to be recorded in the birth history of the Reproduction Section, including information such as: name, month and year of birth, sex and survival status. The Health Section includes a substantial number of questions that are asked about each birth occurring in January 1996 or later.

The Reproduction and Health Sections of the 1999 Women's Questionnaire are quite similar to those of the 1990 NDHS with the exception of the addition of a cause of death module asked of mothers for all deceased children born since January 1996. The added burden of these new questions could create motivation for underreporting of events in the 1999 survey. While the cause of death module consists of about 25 questions, because of skips in the questionnaire, only 10 or 15 questions are asked about any deceased child. Nevertheless, respondents might underreport deceased children in order to avoid discussing those painful events. This is possible especially in rural areas where the content of the questionnaire will be quickly known throughout a village. It is also possible that interviewers would purposely fail to record the births of deceased children in the birth history so as to avoid having to ask the unpleasant questions in the Health Section.

Internal Data Consistency in the 1999 NDHS

Another means of assessing data quality is to apply standard tests of the internal data consistency to detect data defects (i.e., misreporting of dates of birth and ages at death).

Shortfall in Births

As discussed above (C.3 Fertility Data), there appears to be a shortfall in the number of births reported as occurring in the few years prior to the survey. At issue here is whether or not the shortfall affects infant mortality estimates. Mortality rates in this report are estimated for five-year time periods preceding the survey, the first of which approximately covers the period March 1994 -March 1999. Thus, to the extent that the birth shortfall in 1996 and 1997 is due to transfer of events to 1995 and 1994, but not to earlier years, it will have little or no impact on the estimation of mortality. On the other hand, to the extent the birth dearth is due to omission that is selective for the survivorship status of a child rather than to birth transference, this would tend to negatively bias mortality estimates.

Misreporting of Age at Death

Misreporting of age at death can result in overestimation or underestimation of mortality rates for specific ages. In particular, if late infant deaths are reported as deaths at age one as a result of rounding to the nearest year, this would result in underestimates of infant mortality and overestimates of mortality at age one. The occurrence of such rounding can be avoided (and detected if it occurs) by requiring that age of death be recorded in terms of months of age.

To minimise 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 ensure that they actually occurred at 12 months. Table C.5 shows the distribution of deaths under one month old by the age at death in days. There is evidence of some heaping on 7 days and to a lesser extent, on 14 days. 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, 70 percent for the period 0-4 years before the survey. The fact that the proportion declines the further back in time is an indication that early neonatal deaths occurring longer before the survey may have been omitted.

Table C.6 shows the distribution of deceased children by reported age at death in months. In these distributions, rounding up late infant deaths to age one would be evident as a shortage of deaths at months 9, 10 and 11 and a peak of deaths at 12 months of age. Table C.6 does indicate a greater number of deaths at 12 months of age than in months of late infancy but, to the extent that this is due to misreporting of age, the problem is not severe.

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 (unweighted), Nigeria 1999

Age at death (in days)	Number of years preceding the survey				Total
	0-4	5-9	10-14	15-19	0-19
<1	46	52	29	15	142
1	45	28	31	20	124
2	11	9	9	5	34
3	15	15	12	12	54
4	16	6	6	5	33
5	15	10	10	7	42
6	5	12	5	7	29
7	17	20	12	10	59
8	11	4	4	10	29
9	11	7	3	3	24
10	4	8	3	2	17
11	2	1	0	2	5
12	2	2	0	0	4
13	0	1	1	1	3
14	3	9	7	8	27
15	2	1	0	4	7
16	0	2	2	0	4
17	0	0	0	1	1
18	1	1	1	0	3
19	1	1	1	0	3
20	4	0	1	4	9
21	3	3	3	1	10
22	0	0	0	1	1
23	0	1	0	0	1
24	0	2	1	1	4
25	1	0	1	0	2
27	0	1	0	0	1
28	0	1	1	1	3
29	0	1	0	0	1
30	2	0	1	0	4
31+	1	5	4	0	10
Missing	0	0	3	0	3
Total 0-30[1]	217	198	145	122	682
Percent early neonatal[2]	70.4	66.5	70.7	58.5	67.2

[1] Includes cases for which age at death (in exact days) is not known
[2] (0-6 days/0-30 days) * 100

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 ages under one month, for five-year periods preceding the survey (unweighted), Nigeria 1999

Age at death (in months)	Number of years preceding the survey				Total
	0-4	5-9	10-14	15-19	0-19
<1[a]	218	198	148	125	689
1	24	27	21	13	85
2	27	29	22	18	97
3	25	26	19	15	85
4	15	6	11	8	40
5	19	6	11	12	47
6	19	27	11	13	70
7	16	26	20	14	76
8	20	18	13	13	63
9	18	17	18	6	60
10	8	13	15	5	40
11	10	5	7	4	26
12	16	14	16	12	58
13	3	3	4	3	13
14	6	9	1	2	19
15	4	5	7	2	18
16	4	3	5	4	16
17	4	5	1	2	13
18	8	12	6	6	32
19	1	0	4	1	6
20	3	5	3	1	12
21	1	0	1	0	2
23	2	1	0	0	3
24+	2	5	5	4	16
Missing	3	3	1	0	7
1 year	68	82	49	47	246
Total 0-11[b]	418	398	315	246	1,377
Percent neonatal[c]	52.2	49.7	47.0	50.7	50.0

[a] Includes deaths under 1 month reported in days
[b] Includes cases for which age at death (in exact months) is not known
[c] (under 1 month/under 1 year) * 100

A more important problem with the age at death data is the substantial number of deaths that are reported at one year of age (i.e., deaths that should have been reported in month of age). Indeed, for the period immediately prior to the survey, more deaths are reported at age one (68) than in terms of months 12-23 (52). This is unfortunate because it is not possible to determine if these deaths are the result of rounding of age at death to the nearest year or if these events occurred at one year of age. It should be noted that the field supervisors had instructions to check questionnaires for this error. The routine practice by interviewers of recording deaths at one year of age (rather than in terms of months) indicates that little or no attention was paid to this editing rule by the supervisors of interviewing teams.

Inconsistency of Mortality Levels and Health Status by Region

It is reasonable to assume that differentials in mortality levels would correspond with differentials in child health indicators. However, the rankings of the regions in terms of mortality levels and health

indicators are not consistent. For example, under-five mortality in the Southeast (149) and Southwest (102) Regions is higher than in Central Region (91)—fully 50 percent higher in the case of Southeast. However, both Southeast and Southwest rank higher than the Central Region for health indicators like antenatal care coverage (82 percent in Southeast and 89 percent in Southwest vs.76 percent in Central) and delivery in a health facility (55 percent of births in Southeast, 67 percent in Southwest, and 44 percent in Central). Tetanus toxoid coverage for pregnant women, the percentage of births assisted by health professionals and the percentage of children fully immunised are all higher in Southeast and Southwest than in Central Region.

Comparison with External Data

The most straightforward procedure for evaluating the quality of the mortality estimates from the 1999 NDHS is by comparison with estimates from an external source such as the 1990 NDHS. The 1990 NDHS is a particularly appropriate reference because the data collection and estimation methodology is similar to that of the 1999 NDHS (i.e., direct calculation of mortality rates is possible in both surveys). On the assumption that respondents do not overreport deceased children in surveys, the mortality rates from the 1990 NDHS are considered minimum estimates.

Table C.7 shows mortality estimates from the 1990 and 1999 NDHS for the latter part of the decade of the 1980s. For this comparison, respondents to the 1999 survey were required to recall events over a longer retrospective period than were respondents to the 1990 survey so that estimates from 1999 survey are more susceptible to respondent recall error. The estimates from the 1999 survey are consistently lower than those from the 1990 survey—by 11 percent for infant mortality, 39 percent for child mortality and 26 percent for under-five mortality.

Table C.7 Childhood mortality rates for the late 1980s

Childhood mortality rates for the late 1980s as estimated from the 1990 and 1999 NDHSs, according to region

Country/ Region	Source	Time period	Neonatal mortality	Post-neonatal mortality	Infant mortality	Child mortality	Under-five mortality
Northeast	1990 NDHS	1995-90	30.0	35.6	65.6	163.9	218.9
	1999 NDHS	1994-99	49.6	46.7	96.3	96.9	183.9
		% difference	65	31	47	-41	-16
Northwest	1990 NDHS	1985-90	50.0	65.9	115.8	208.5	300.2
	1999 NDHS	1994-99	25.6	68.9	94.5	151.9	232.1
		% difference	-49	5	-18	-27	-23
Southeast	1990 NDHS	1985-90	37.1	43.7	80.8	75.9	150.6
	1999 NDHS	1994-99	38.1	41.7	79.8	45.2	121.4
		% difference	3	-5	-1	-40	-19
Southwest	1990 NDHS	1985-90	41.7	32.9	74.7	88.4	156.4
	1999 NDHS	1994-99	42.3	44.3	86.7	47.0	129.8
		% difference	1	35	16	-47	-17
Central	1990 NDHS	1985-90	39.9	46.5	96.5	71.2	160.8
	1999 NDHS	1994-99	25.6	27.7	53.4	53.7	104.2
		% difference	-36	-40	-45	-25	-35
Nigeria	1990 NDHS	1985-90	42.2	45.2	87.4	115.5	192.8
	1999 NDHS	1994-99	36.4	41.2	77.6	70.7	142.8
		% difference	-14	-9	-11	-39	-26

Table C.7 also shows mortality estimates by region.[3] Disaggregation of the estimates in this manner can be useful in revealing specific areas in which data defects exist. The sampling variance associated with regional estimates for 5-year time periods is large but it was decided to show 5-year rather than ten-year rates so that the analysis of this note would be organised in a consistent fashion. In Northeast, Northwest, Southeast and Southwest Regions, under-five mortality estimates from the 1999 survey are lower than those from the 1990 survey by 16-23 percent. In Central Region the under-five estimate is lower by 35 percent.

There is no doubt that the 1999 survey underestimates mortality at the national and regional levels for the time period 1984-89. In addition, underestimation appears to have occurred in all regions but is most pronounced in Central Region. Of course, underestimation of mortality for the 1984-89 time period does not necessarily imply underestimation of mortality for more recent time periods.

Table C.8 shows the differences in mortality estimates for the five-year periods immediately prior to the 1990 and 1999 surveys (i.e., for 1985-90 in the case of the 1990 NDHS and for 1994-99 in the case of the 1999 NDHS). The implied trends indicate substantial mortality declines over a nine-year period—a 14 percent decline for infant mortality, 39 percent for child mortality and 27 percent for under-five

Table C.8 Trends in childhood mortality by region

Childhood mortality rates for the five years before the 1990 and 1999 NDHS, according to region

Country/ Region	Source	Time period	Neonatal mortality	Post-neonatal mortality	Infant mortality	Child mortality	Under-five mortality
Northeast	1990 NDHS	1985-90	30.0	35.6	65.6	163.9	218.9
	1999 NDHS	1994-99	50.9	36.7	87.6	114.4	192.0
		% difference	70	3	34	-30	-12
Northwest	1990 NDHS	1985-90	50.0	65.9	115.8	208.5	300.2
	1999 NDHS	1994-99	22.7	55.4	78.2	101.1	171.3
		% difference	-55	-16	-32	-52	-43
Southeast	1990 NDHS	1985-90	37.1	43.7	80.8	75.9	150.6
	1999 NDHS	1994-99	38.4	42.7	81.1	74.3	149.4
		% difference	4	-2	0	-2	-1
Southwest	1990 NDHS	1985-90	41.7	32.9	74.7	88.4	156.4
	1999 NDHS	1994-99	39.8	32.8	72.7	31.7	102.1
		% difference	-5	0	-3	-64	-35
Central	1990 NDHS	1985-90	39.9	46.5	96.5	71.2	160.8
	1999 NDHS	1994-99	29.9	26.1	56.0	36.9	90.8
		% difference	-25	-44	-42	-48	-44
Nigeria	1990 NDHS	1995-90	42.2	45.2	87.4	115.5	192.8
	1999 NDHS	1994-99	38.8	38.2	75.1	70.3	140.1
		% difference	-8	-15	-14	-39	-27

[3] For this analysis the data from the 1990 survey are presented for the five regions of Nigeria existing at the time of the 1999 survey. The 21 states and F.C.T. Abuja that existed at the time of the 1990 survey map unambiguously into the five regions existing at the time of the 1999 survey. That mapping is as follows:

Northeast: Bauchi. Borno, Kano
Northwest: Kaduna, Katsina, Sokoto
Southeast: Anambra, Akwa Ibom, Cross River, Imo, Rivers
Southwest: Bendel, Lagos, Ogun, Ondo, Oyo
Central: Benue, F.C.T. Abuja, Gongola, Kwara, Niger, Plateau

mortality.[4] Mortality declines of this magnitude are rare but not without precedent in high-mortality African countries. Declines of a similar magnitude (on the order of 30 percent) and structure (concentrated between exact ages 1 to 5) have occurred over ten-year periods in Ghana, Cameroon, Senegal and Rwanda (Bicego and Ahmad, 1996).

However, substantial mortality declines are usually accompanied by improvements in socioeconomic or health conditions. For example, substantial improvements occurred in the percentage of children who were fully immunised in Ghana and Senegal. Not only is there no such improvement in Nigeria, but the percentage of children fully immunised actually declined in Nigeria from 30 to 17 percent, hardly the kind of change in health care that is associated with a mortality decline.

Table C.8 also shows implied mortality trends by region. The Southeast Region is distinctive in that little change exists between the estimates for the 1990 and the 1999 surveys. The remaining four regions show mortality declines; the Northwest and Central Regions standing out with declines in under-five mortality in excess of 40 percent. The Northwest Region indicates a substantial decline in neonatal mortality (55 percent) which strains credibility. As a result, the level of neonatal mortality in Northwest (23) appears to be inconsistent with the observed postneonatal rate (55) and is the lowest of all the regions.

Indirect Mortality Estimates

It might be thought that any problems that exist in the 1999 mortality data could be overcome by using indirect mortality estimation techniques. The earlier analysis suggests that the primary problem with the 1999 data is underreporting of infant and child deaths, which results in the appearance of a substantial decline in mortality between the 1990 and 1999 surveys (a 27 percent decline in the case of under-five mortality). However, the indirect techniques cannot in any way compensate for underreporting of events. This will be demonstrated by comparing indirect estimates calculated from the 1990 and 1999 surveys.

Table C.9 shows indirect estimates of infant and under five mortality from the two surveys. Two points are worth noting. First, the declines in mortality between surveys, as measured by either infant or under-five mortality are of the same order of magnitude as is the case with the direct under-five mortality estimates (20-30 percent over a nine-year period). Thus, the appearance of a substantial intersurvey decline in mortality is unmitigated when mortality rates are calculated by indirect techniques for both surveys.

The second point is that the indirect estimates of infant mortality are much greater than the corresponding direct estimates. For example, the direct rate from the 1999 survey (75 per 1,000) is 22 percent less than the indirect estimate, based on women 20-24 (95 per 1,000). This is due to modeling error resulting when the indirect procedure is used for Nigeria, a country in which the assumptions of the model are not fully met. Thus, the indirect infant mortality estimate from the 1999 survey cannot be compared to the direct estimate from the 1990 survey.

[4] The trend of the mortality estimates from the 1999 survey between 1985-90 and 1994-99 is essentially flat.

Table C.9 Indirect mortality estimates

Indirect estimates of infant and under-five mortality, 1990 and 1999 EDHS

	Proportion of Children Deceased by Age					
	1990 NDHS			1999 NDHS		
Age group of women	Children ever born	Children surviving	Proportion dead	Children ever born	Children surviving	Proportion dead
15-19	0.311	0.262	.158	0.250	0.220	.120
20-24	1.443	1.187	.177	1.120	0.980	.125
25-29	2.966	2.441	.177	2.510	2.180	.131
30-34	4.578	3.772	.176	3.940	3.400	.137
35-39	5.529	4.338	.215	5.240	4.470	.147

	Indirect Mortality Estimates					
	Infant mortality rate (per 1,000 births)			Under-five mortality per 1,000 births		
Age group of women	1990 NDHS	1999 NDHS	Percent change	1990 NDHS	1999 NDHS	Percent change
20-24	131	95	-27	221	156	-29
25-29	115	90	-23	192	145	-24
30-34	106	86	-19	175	139	-21
35-39	118	85	-28	197	139	-29

Note: Estimates are based on the UN North Model Life Tables.

Summary

Any assessment of the quality of survey-based data will find internal and external inconsistencies. Sampling variability can contribute to such findings especially when considering data at the regional as opposed to the national level. So, a data quality assessment often requires a judgement as to whether the degree of the inconsistency indicates acceptable departures from expected patterns or severe data problems.

There are a number of problems with the data of the 1999 NDHS. There is clear evidence of underreporting of events for the time period 1984-89. The magnitude of the mortality decline implied by the estimates from the 1990 and 1999 surveys ranks among the largest observed in high-mortality African countries. Yet, the health indicators for Nigeria indicate a deterioration of immunisation coverage for children over the last decade. The neonatal mortality rate for the Northeast Region is unrealistically low and inconsistent with the postneonatal mortality rate. Both the mortality and the fertility data for the Central Region appear particularly flawed.

The weight of evidence indicates that the mortality rates based on the data are most probably underestimates. Moreover, the nature and scope of the data defects leading to this conclusion suggest that the possibility of repairing these data so that they would form the basis for reliable mortality estimates for Nigeria is not good. This review is useful because of the implications for future surveys that attempt to estimate mortality in the Nigerian setting. It is not the purpose here to specify the design parameters that are necessary to ensure that reliable data are collected. Such design features are well known and it should be a high priority of the next survey to put them in place.

APPENDIX D

PERSONS INVOLVED IN THE 1999 NIGERIA DEMOGRAPHIC AND HEALTH SURVEY

APPENDIX D

PERSONS INVOLVED IN THE 1999 NIGERIA DEMOGRAPHIC AND HEALTH SURVEY

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APPENDIX E

QUESTIONNAIRES

FEDERAL REPUBLIC OF NIGERIA
NATIONAL POPULATION COMMISSION
1999 NIGERIA DEMOGRAPHIC AND HEALTH SURVEY
SERVICE AVAILABILITY QUESTIONNAIRE

NDHS 01

IDENTIFICATION	
STATE NAME	
LOCAL GOVT.. AREA	
LOCALITY NAME	
ENUMERATION AREA	
*URBAN/RURAL	
**LARGE TOWN/MEDIUM TOWN/SMALL TOWN/VILLAGE	

DATE OF VISIT _____	DAY	
	MONTH	
	YEAR	
INTERVIEWER'S NAME _____	NAME	
RESULT	RESULT	

RESULT CODES:

1 COMPLETED

2 UNABLE TO COMPLETE SPECIFY, REASON BELOW

_____

(SPECIFY)

SUPERVISOR		FIELD EDITOR	
NAME		NAME	
DATE		DATE	
OFFICE EDITOR		**KEYED BY**	
NAME		NAME	
DATE		DATE	

* Urban = 1, Rural = 2
** (Large Town = 1, Medium Town = 2, Small Town = 3, Village = 4)
*** The questionnaire solicits information on the services available and nearest to the majority of the people in the community.

SECTION 1A. COMMUNITY CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	Type of Locality in which the EA is Located	LARGE TOWN ..... 1 MEDIUM TOWN ..... 2 SMALL TOWN ..... 3 VILLAGE 4	→ 106
102	What is the name of the nearest urban centre?		
103	How far is it in kilometers to the nearest urban centre?	KM. TO NEAREST URBAN CENTRE	
104	What are the most commonly used types of transportation to go the nearest urban centre? (CIRCLE ALL APPLICABLE)	MOTORIZED ..... A ANIMAL ..... B WALKING ..... C CYCLING ..... D OTHER ..... X _____ (SPECIFY)	
105	What is the main access route to this (COMMUNITY)	ALL WEATHER ROAD ..... 1 SEASONAL ROAD ..... 2 OTHER (RIVER/RAILWAY) ..... 3 PATH ..... 4 OTHER _____ X (SPECIFY)	
106	What are the major economic activities of the (COMMUNITY) inhabitants?	AGRICULTURE ..... A LIVESTOCK ..... B FISHING ..... C TRADING/MARKETING ..... D MANUFACTURING ..... E MINING ..... F COTTAGE INDUSTRY ..... G OTHER _____ X (SPECIFY)	
107	Is there telephone service in the (COMMUNITY)	YES ..... 1 NO 2	
108	Are the following things in the (COMMUNITY)?	KILOMETERS	
	Is there a primary School here?	PRIMARY	
	Is there a Secondary School here?	SECONDARY SCHOOL	
	Is there a Post Office here?	POST OFFICE	
	Is there a Local Market here?	LOCAL MARKET	
	Is there a Cinema here?	CINEMA	
	Is there a Bank here?	BANK	
	Is there a Health Centre/Hospital here?	HEALTH CENTRE/HOSPITAL	
	Is there a transportation here?	PUBLIC TRANSPORTATION	
	If in Locality write "00". If not, write distance in kilometres, if you do not know, write "98". If more than 95 kms write "95"		

SECTION 1C: HEALTH AND FAMILY PLANNING PROGRAM IN THE COMMUNITY

109	Does a community based family planning health Program cover this (COMMUNITY)?	YES ..... 1 NO 2	→110
109a	Are the following methods* available from the community based distribution centre? a: Pill? b: Condom? c: Vaginals?	PILL: YES ..... 1 NO ..... 2 CONDOM: YES ..... 1 NO ..... 2 VAGINALS: YES ..... 1 NO 2	
110	Does a family planning service provider (Nurse) visit this Community?	YES ..... 1 NO 2	→111
110a	How often does the family planning service provider (Nurse) visit this community?	NO. Of TIMES ☐☐ PER (MONTH) .... 1 (YEAR) 2	
110b	Does a family planning service provider (Nurse) make available family planning counselling?	YES ..... 1 NO 2	
110c	Are the following methods available from the family service provider (Nurse)? a: Pill? b: Condom? c: Vaginals?	PILL: YES ..... 1 NO ..... 2 CONDOM: YES ..... 1 NO ..... 2 VAGINALS: YES ..... 1 NO 2	
110d	How many family planning service provider (Nurse) in this Community?	TOTAL NO. OF FP PROVIDERS(WORKERS) .. ☐☐ NO. OF GOVERNMENT WORKERS ... ☐☐ NO. OF NON-GOVT. WORKERS ..... ☐☐	
111	Is the Community visited regularly by a mobile family planning clinic?	YES ..... 1 NO 2	→112
111a	How often does the mobile family planning clinic visit this Community?	NO. Of TIMES ☐☐ PER (MONTH) .... 1 (YEAR) 2	

111b	Are the following methods available from the mobile family planning clinic)? a: Pill? b: IUD? c: Female Sterilization? d: Injectables?	PILL: YES ..... 1 NO ..... 2 IUD: YES ..... 1 NO ..... 2 FEMALE STERILIZATION: YES ..... 1 NO ..... 2 INJECTABLES: YES ..... 1 NO 2	
112	Have there been any family planning campaigns in the (COMMUNITY) in the last year?	YES ..... 1 NO ..... 2 → 113	
112a	What specifically was this campaign promoting? (CIRCLE ALL APPLICABLE)	CHILD SPACING ..... A BENEFITS OF BIRTH CONTROL ..... B USE OF FAMILY PLANNING ..... C BREAST FEEDING ..... D SPECIFY (METHOD(S) PROMOTION ..... E WHERE METHODS ARE AVAILABLE ..... F OTHER _____ X (SPECIFY)	

NO.	QUESTIONS	CODING CATEGORIES	SKIP
113	Where do most women give birth	AT HOME ..... 1 AT HEALTH CENTRE/HOSPITAL 2	
114	Is there a traditional birth attendant available to women here who regularly assists during delivery?	YES ..... 1 NO ..... 2 → 115	
114a	Does the traditional birth attendant provide Iron supplements?	YES ..... 1 NO 2	
114b	Has the traditional birth attendant had any special training from the Government or Ministry of Health or other organization?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
115	Is the Community covered by a trained midwife?	YES ..... 1 NO 2	
115a	Does the trained midwife provide iron supplements?	YES ..... 1 NO 2	
116	Is the Community covered by a Health worker?	YES ..... 1 NO ..... 2 → 117	
116a	Does the health worker provide? a: Basic medication e.g for fever etc?	BASIC MEDICATIONS: YES ..... 1 NO 2	
	b: ORT Instruction or ORS packets?	ORT/ORS: YES ..... 1 NO 2	
	c: Vitamin A capsules?	VITAMIN A: YES ..... 1 NO 2	
	d: Growth Monitoring and promotion	GROWTH MONITORING AND PROMOTION: YES ..... 1 NO 2	
	e: Iron tablets?	IRON TABLETS: YES ..... 1 NO 2	
	f: Iodized Oil capsules/injections?	IODIZED OIL: YES ..... 1 NO 2	
	g: Antenatal care?	ANTENATAL CARE: YES ..... 1 NO 2	
	h: Immunizations?	IMMUNIZATIONS: YES ..... 1 NO 2	
	f: Family planning services?	FAMILY PLANNING? YES ..... 1 NO 2	
116b	How often does the health worker visit?	NO. OF TIMES [ ][ ] PER (MONTH) .... 1 (YEAR) 2	
117	Have there been any health campaigns in the (COMMUNITY)?	YES ..... 1 NO ..... 2 → 201	
117a	What was the health campaign promoting? (CIRCLE ALL APPLICABLE)	BENEFITS OF BREAST-FEEDING ..... A IMMUNIZATION ..... B DIARRHOEA DISEASE CONTROL ..... C AIDS ..... D DRUG ABUSE ..... E GROWTH MONITORING AND PROMOTION F VITAMIN A ..... G IODINE DEFICIENCY ..... H SANITATION ..... I OTHER _____ X (SPECIFY)	

SECTION 2: **FACILITY IDENTIFICATION SECTION**

A. What is the name of the nearest doctor with a private clinic to this community?

B. What is the name of the nearest pharmacy/patent medicine store (PMS) to this community?

C. What is the name of the nearest health centre providing general health services to this community?

D. What is the name of the nearest clinic providing general health services to this community?

E. What is the name of the nearest hospital providing general health services to this community?

A: PRIVATE DOCTOR

NO.	QUESTIONS	CODING CATEGORIES	SKIP TO
A201	NAME OF PRIVATE DOCTOR	PRIVATE DOCTOR'S NAME _____ _____ NOT APPLICABLE 000	→B201
A202	How far is the Doctor (in km) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
A203	What is the most common type of transport to the Doctor's clinic?	MOTORIZED (E.G. BUS) ..... 1 CYCLING ..... 2 ANIMAL ..... 3 WALKING ..... 4 OTHER 6 (SPECIFY)	
A204	How long does it take to get from here to (PRIVATE DOCTOR'S, NAME) using most common type of transport	HOURS ..... MINUTES	
A205	Does this private doctor provide antenatal care? delivery care? child immunization? family planning services?	YES NO DK ANTENATAL CARE? ..... 1 2 8 DELIVERY CARE? ..... 1 2 8 CHILD IMMUNIZATION? ... 1 2 8 FAMILY PLANNING? 1 2 8	→A210
A206	Who is the nearest doctor with a private practice who provide family planning services to this community?	PRIVATE DOCTORS'S NAME _____ _____ NOT APPLICABLE ..... 000 DON'T KNOW 98	→A210 →A210
A207	How far is the private Doctor's clinic (in kms) from here? (WRITE IN "00" IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN "95".)	KILOMETERS	
A208	What is the most common type of transport to the Doctor's practice?	MOTORIZED (E.G. BUS) ..... 1 CYCLING ..... 2 ANIMAL ..... 3 WALKING ..... 4 OTHER 6 (SPECIFY)	
A209	How long does it take to get from here to (PRIVATE DOCTOR'S, NAME) using most common type of transport?	HOURS ..... MINUTES	
A210	How many practicing private Doctors are there within 30 kilometers?	NO. OF PRIVATE DOCTORS WITHIN 30 KM	

B: PHARMACY/PATENT MEDICINE STORES

NO.	QUESTIONS	CODING CATEGORIES	SKIP TO
B201	NAME OF PHARMACY PATENT MEDICINE STORES	PHARMACY /PATENT MEDICINE STORES NAME _____ _____ NOT APPLICABLE 000	→C201
B2O2	Is that a government pharmacy/patent medicine stores or is it operated by a private organisation?	GOVERNMENT ..... 1 PRIVATE 2	
B203	How far is the doctor (in km) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
B204	What is the most common type of transport to the pharmacy/patent medicine stores?	MOTORIZED (E.G. BUS) ..... 1 CYCLING ..... 2 ANIMAL ..... 3 WALKING ..... 4 OTHER 6 (SPECIFY)	
B205	How long does it take to get from here to (PHARMACY/PATENT MEDICINE STORES) using most common type of transport?	HOURS ..... MINUTES	
B206	Does this pharmacy/patent medicine stores sell family planning supplies?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→B212
B207	What is the name of the nearest pharmacy/patient medicine stores which sells family planning supplies to the community?	PHARMACY /PATENT MEDICINE STORES NAME _____ _____ NOT APPLICABLE ..... 000 DON'T KNOW 98	→B212 →B212
B2O8	Is that a government pharmacy/patent medicine stores or is it operated by private Organization?	GOVERNMENT ..... 1 PRIVATE 2	
B209	How far is it doctor (in km) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
B210	What is the most common type of transport to the pharmacy/patent medicine stores?	MOTORIZED (E.G. BUS) ..... 1 CYCLING ..... 2 ANIMAL ..... 3 WALKING ..... 4 OTHER 6 (SPECIFY)	
B211	How long does it take to get from here to (PHARMACY/PATENT MEDICINE STORES) using most common type of transport?	HOURS ..... MINUTES	
B212	How many pharmacies/patent medicine stores in total are there within 30 kilometers?	NO. OF PHARMACIES/PMS WITHIN 30 KM	

* Patent medicine store => PMS

C: HEALTH CENTRE/POST

NO.	QUESTIONS	CODING CATEGORIES	SKIP TO
C201	NAME OF HEALTH CENTRE/POST	HEALTH CENTRE/POST NAME _____ _____ NOT APPLICABLE 000	→D201
C2O2	Is that a government health centre/ post or is it operated by private organization?	GOVERNMENT ..... 1 PRIVATE 2	
C203	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
C204	What is the most common type of transport to the health centre/post?	MOTORIZED (E.G. BUS) ..... 1 CYCLING ..... 2 ANIMAL ..... 3 WALKING ..... 4 OTHER 6 (SPECIFY)	
C205	How long does it take to get from here to (HEALTH CENTRE/POST) using most common type of transport?	HOURS ..... MINUTES	
C206	Does this health centre/post antenatal care? delivery care? growth monitoring and promotion? child immunization? family planning services?	YES NO DK ANTENATAL CARE? ..... 1 2 8 DELIVERY CARE? ..... 1 2 8 GROWTH MONITORING AND PROMOTION ..... 1 2 8 CHILD IMMUNIZATION? ..... 1 2 8 FAMILY PLANNING 1 2 8	→C213
C207	What is the name of the nearest health centre/post providing family planning service to this community?	HEALTH CENTRE/POST NAME _____ _____	
C2O8	Is that a government health centre/post or is it operated by private Organization?	GOVERNMENT ..... 1 PRIVATE 2	
C209	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
C210	What is the most common type of transport to the health centre/post?	MOTORIZED (E.G. BUS) ..... 1 CYCLING ..... 2 ANIMAL ..... 3 WALKING ..... 4 OTHER 6 (SPECIFY)	
C211	How long does it take to get from here to (HEALTH CENTRE/POST) using most common type of transport?	HOURS ..... MINUTES	
C212	Does this health centre/post antenatal care? delivery care? growth monitoring and promotion? child immunization? family planning services?	YES NO DK ANTENATAL CARE? ..... 1 2 8 DELIVERY CARE? ..... 1 2 8 GROWTH MONITORING AND PROMOTION ..... 1 2 8 CHILD IMMUNIZATION? ..... 1 2 8 FAMILY PLANNING 1 2 8	
C213	How many health centres/posts in total are there within 30 kilometers?	NO. OF HEALTH CENTRES/POSTS WITHIN 30 KM	

D: CLINIC

NO.	QUESTIONS	CODING CATEGORIES	SKIP TO
D201	NAME OF CLINIC	CLINIC NAME _____ _____ NOT APPLICABLE 000	→E201
D202	Is that a government clinic or is it operated by a private organization?	GOVERNMENT ..... 1 PRIVATE 2	
D203	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
D204	What is the most common type of transport to the clinic?	MOTORIZED (E.G. BUS) ..... 1 CYCLING ..... 2 ANIMAL ..... 3 WALKING ..... 4 OTHER 6 (SPECIFY)	
D205	How long does it take to get from here to (CLINIC NAME) using most common type of transport?	HOURS ..... MINUTES	
D206	Does this clinic provide?.	YES NO DK	
	antenatal care?	ANTENATAL CARE? 1 2 8	
	delivery care?	DELIVERY CARE? 1 2 8	
	growth monitoring and promotion?	GROWTH MONITORING AND PROMOTION 1 2 8	
	child immunization?	CHILD IMMUNIZATION? 1 2 8	
	family planning services?	FAMILY PLANNING 1 2 8	→D213
D207	What is the name of the nearest clinic providing family planning service to this community?	CLINIC NAME _____ _____	
D208	Is that a government clinic or is it operated by private Organization?	GOVERNMENT ..... 1 PRIVATE 2	
D209	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
D210	What is the most common type of transport to the clinic?	MOTORIZED (E.G. BUS) ..... 1 CYCLING ..... 2 ANIMAL ..... 3 WALKING ..... 4 OTHER 6 (SPECIFY)	
D211	How long does it take to get from here to (CLINIC NAME) using most common type of transport?	HOURS ..... MINUTES	
D212	Does this clinic provide?.	YES NO DK	
	antenatal care?	ANTENATAL CARE? 1 2 8	
	delivery care?	DELIVERY CARE? 1 2 8	
	growth monitoring and promotion?	GROWTH MONITORING AND PROMOTION 1 2 8	
	child immunization?	CHILD IMMUNIZATION? 1 2 8	
	family planning services?	FAMILY PLANNING 1 2 8	
D213	How many clinics in total are there within 30 kilometers?	NO. OF CLINICS WITHIN 30 KM	

E: HOSPITAL

NO.	QUESTIONS	CODING CATEGORIES	SKIP TO
E201	NAME OF HOSPITAL	HOSPITAL NAME _____ _____ NOT APPLICABLE 000	→214
E202	Is that a government hospital or is it operated by a private Organization?	GOVERNMENT ..... 1 PRIVATE 2	
E203	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
E204	What is the most common type of transport to the hospital?	MOTORIZED (E.G. BUS) ..... 1 CYCLING ..... 2 ANIMAL ..... 3 WALKING ..... 4 OTHER 6 (SPECIFY)	
E205	How long does it take to get from here to (HOSPITAL NAME) using most common type of transport?	HOURS ..... MINUTES	
E206	Does this hospital provide?	YES NO DK	
	antenatal care?	ANTENATAL CARE? 1 2 8	
	delivery care?	DELIVERY CARE? 1 2 8	
	growth monitoring and promotion?	GROWTH MONITORING AND PROMOTION 1 2 8	
	child immunization?	CHILD IMMUNIZATION? 1 2 8	
	family planning services?	FAMILY PLANNING 1 2 8	→E213
E207	What is the name of the nearest hospital providing family planning service to this community?	HOSPITAL NAME _____ _____	
E208	Is that a government hospital or is it operated by a private Organization?	GOVERNMENT ..... 1 PRIVATE 2	
E209	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
E210	What is the most common type of transport to the hospital?	MOTORIZED (E.G. BUS) ..... 1 CYCLING ..... 2 ANIMAL ..... 3 WALKING ..... 4 OTHER 6 (SPECIFY)	
E211	How long does it take to get from here to (HOSPITAL NAME) using most common type of transport?	HOURS ..... MINUTES	
E212	Does this hospital provide?	YES NO DK	
	antenatal care?	ANTENATAL CARE? 1 2 8	
	delivery care?	DELIVERY CARE? 1 2 8	
	growth monitoring and promotion?	GROWTH MONITORING AND PROMOTION 1 2 8	
	child immunization?	CHILD IMMUNIZATION? 1 2 8	
	family planning services?	FAMILY PLANNING 1 2 8	
E213	How many hospitals in total are there within 30 kilometers?	NO. OF HOSPITALS WITHIN 30 KM	

CONTRACEPTIVE METHOD AND HEALTH SERVICES IDENTIFICATION

NO.	QUESTIONS	CODING CATEGORIES	SKIP TO
214	What is the name of the nearest place where birth control (child-spacing) pill can be obtained?	NEAREST PILL PROVIDER NAME NAME _____	
215	How far is it (in kms) from here? (WRITE IN '00 IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE IN DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95'	KILOMETERS	
216	What is the name of the nearest place or provider to this community where condoms/femidom can be obtained	NEAREST CONDOM/FEMIDOM PROVIDER NAME _____	
217	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
218	What is the name of the nearest place to this community where family planning injection can be obtained?	NEAREST INJECTION PROVIDER NAME _____	
219	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
220	What is the name of the nearest facility or provider to this community where IUDs can be inserted?	NEAREST IUD PROVIDER NAME _____	
221	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
222	What is the name of the nearest facility or provider to this community where female sterilization can be obtained?	NEAREST STERILIZATION PROVIDER NAME _____	
222A	What is the name of the nearest facility or provider to this community where male sterilization can be obtained?	NEAREST STERILIZATION PROVIDER NAME _____	
223	How far is the female sterilization (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
223A	How far is the male sterilization (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
224	What is name of the nearest place to this community where immunizations for children can be obtained?	NEAREST IMMUNIZATION PROVIDER _____	
225	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
226	What is the name of the nearest place to this community where oral rehydration solution (ORS) packets can be obtained?	NEAREST ORS PLACE NAME _____	
227	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS	
228	If child is sick with cough (respiratory disease), what is the name of the nearest place where treatment can be obtained	NEAREST RESP. DISEASE TREATMENT PLACE _____	

NO.	QUESTIONS	CODING CATEGORIES	SKIP TO
229	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. *IF 95 KILOMETERS OR MORE, WRITE IN '95')*	KILOMETERS ..... ▒▒	
230	What is the name of the nearest place to this community where antenatal care can be obtained	NEAREST ANTENATAL PROVIDER NAME _____	
231	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. IF 95 KILOMETERS OR MORE, WRITE IN '95')	KILOMETERS ..... ▒▒	
232	If a woman has a complication in delivery, what is the name of the nearest place she can be treated?	NEAREST DELIVER PLACE NAME _____	
233	How far is it (in kms) from here? (WRITE IN '00' IF LESS THAN 1 KILOMETER. IF 1 TO 94 KILOMETERS, WRITE DISTANCE IN KMS. *IF 95 KILOMETERS OR MORE, WRITE IN '95')*	KILOMETERS ..... ▒▒	

234.	*COMMUNITY INFORMANT(S)*	
	NAME	POSITION/TITLE/OCCUPATION
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
235.	TOTAL NUMBER OF INFORMANT(S) IN THE COMMUNITY ..... ▒▒	

FEDERAL REPUBLIC OF NIGERIA
NATIONAL POPULATION COMMISSION
1999 NIGERIA DEMOGRAPHIC AND HEALTH SURVEY
HOUSEHOLD SCHEDULE

NDHS 02

IDENTIFICATION	
STATE NAME	
LOCAL GOVT. AREA	
LOCALITY NAME	
ENUMERATION AREA	
*URBAN/RURAL	
BUILDING NUMBER	
HOUSEHOLD NAME/NUMBER	
**LARGE TOWN/MEDIUM TOWN/SMALL TOWN/VILLAGE	

INTERVIEWER'S VISITS				
	1	2	3	FINAL VISIT
DATE				DAY / MONTH / YEAR
INTERVIEWER'S NAME				NAME
RESULT				RESULT
NEXT VISIT: DATE				TOTAL NO. OF VISITS
TIME				

RESULT CODES:

1 COMPLETED
2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT
3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME
4 POSTPONED
5 REFUSED
6 DWELLING VACANT
7 DWELLING DESTROYED
8 OTHER _____ (SPECIFY)

TOTAL IN HOUSEHOLD

TOTAL ELIGIBLE WOMEN

TOTAL ELIGIBLE MEN

LINE NO. OF RESPONDENTS TO HOUSEHOLD SCHEDULE

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

* (Urban = 1, Rural = 2)
** (Large Town = 1, Medium Town = 2, Small Town = 3, Village = 4)

HOUSEHOLD SCHEDULE

Now we would like to have some information about the people who usually live in this household or who are staying with you now.

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD*	RESIDENCE		SEX	AGE	EDUCATION				PARENTAL SURVIVORSHIP AND RESIDENCE FOR PERSONS LESS THAN 15 YEARS OLD***				ELIGIBILITY	
							IF AGE 6 YEARS OR OLDER									
	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?	Does (NAME) usually live here?	Did (NAME) stay here last night?	Is (NAME) male or female?	How old is (NAME)? as at last birthday	Can (NAME) read and write in any language with understanding?	Has (NAME) ever been to school?	IF ATTENDED SCHOOL: What is the highest level of school (NAME) attended? What is the highest grade (NAME) completed at that level?**	IF ATTENDED SCHOOL: Is (NAME) still in school? (For Age less than 25 Years)	Is (NAME)'s natural mother alive?	IF ALIVE: Does (NAME)'s natural mother live in this household? IF YES: What is her name? RECORD MOTHER'S LINE NUMBER	Is (NAME)'s natural father alive?	IF ALIVE: Does (NAME)'s natural father live in this household? IF YES: What is his name? RECORD FATHER'S LINE NUMBER	CIRCLE LINE NUMBER OF ALL WOMEN AGED 10-49	CIRCLE LINE NUMBER OF ALL MEN AGED 15-64
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
			YES NO	YES NO	M F	IN YEARS	YES NO	YES NO	LEVEL GRADE	YES NO	YES NO DK		YES NO DK			
01			1 2	1 2	1 2		1 2	1 2		1 2	1 2 8		1 2 8		01	01
02			1 2	1 2	1 2		1 2	1 2		1 2	1 2 8		1 2 8		02	02
03			1 2	1 2	1 2		1 2	1 2		1 2	1 2 8		1 2 8		03	03
04			1 2	1 2	1 2		1 2	1 2		1 2	1 2 8		1 2 8		04	04
05			1 2	1 2	1 2		1 2	1 2		1 2	1 2 8		1 2 8		05	05
06			1 2	1 2	1 2		1 2	1 2		1 2	1 2 8		1 2 8		06	06
07			1 2	1 2	1 2		1 2	1 2		1 2	1 2 8		1 2 8		07	07

LINE NO.	USUAL RESIDENTS AND VISITORS	RELATIONSHIP TO HEAD OF HOUSEHOLD*	RESIDENCE		SEX	AGE	EDUCATION				PARENTAL SURVIVORSHIP AND RESIDENCE FOR PERSONS LESS THAN 15 YEARS OLD***				ELIGIBILITY	
08			1 2	1 2	1 2		1 2	1 2		1 2	1 2 8		1 2 8		08	08
09			1 2	1 2	1 2		1 2	1 2		1 2	1 2 8		1 2 8		09	09
10			1 2	1 2	1 2		1 2	1 2		1 2	1 2 8		1 2 8		10	10
11			1 2	1 2	1 2		1 2	1 2		1 2	1 2 8		1 2 8		11	11
12			1 2	1 2	1 2		1 2	1 2		1 2	1 2 8		1 2 8		12	12
13			1 2	1 2	1 2		1 2	1 2		1 2	1 2 8		1 2 8		13	13
14			1 2	1 2	1 2		1 2	1 2		1 2	1 2 8		1 2 8		14	14

TICK HERE IF CONTINUATION SHEET USED ☐ Tick if Household has more than 14 persons ☐ ☐

Just to make sure that I have a complete listing:

1) Are there any other persons such as small children or infants that we have not listed? YES ☐ → ENTER EACH IN TABLE NO ☐

2) In addition, are there any other people who may not be members of your family, such as domestic servants, lodgers or friends who usually live here? YES ☐ → ENTER EACH IN TABLE NO ☐

3) Are there any guests or temporary visitors staying here, or anyone else who slept here last night that have not been listed? YES ☐ → ENTER EACH IN TABLE NO ☐

*CODES FOR Q.3
RELATIONSHIP TO HEAD OF HOUSEHOLD:
01 = HEAD
02 = WIFE OR HUSBAND
03 = SON OR DAUGHTER
04 = SON-IN-LAW OR DAUGHTER-IN-LAW
05 = GRANDCHILD
06 = PARENT
07 = PARENT-IN-LAW
08 = BROTHER OR SISTER
09 = BROTHER OR SISTER-IN-LAW
10 = OTHER RELATIVE
11 = ADOPTED/FOSTER/STEP CHILD
12 = NOT RELATED
98 = DON'T KNOW

** CODES FOR Q.10
EDUCATION LEVEL:
1 = PRIMARY
2 = SECONDARY
3 = HIGHER
8 = DON'T KNOW

EDUCATION GRADE
00 = LESS THAN 1 YEAR COMPLETED
01 = 1 YEAR COMPLETED
02 = 2 YEARS COMPLETED
03 = 3 YEARS COMPLETED
04 = 4 YEARS COMPLETED
05 = 5 YEARS COMPLETED
06 = 6 YEARS COMPLETED
98 = DON'T KNOW

*** Q.12 THROUGH Q.15:
These questions refer to the biological parents of the child. Record 00 if parent not member of household.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
18	What is the main source of drinking water for members of your household?	PIPED WATER PIPED INTO RESIDENCE/YARD/PLOT ..... 11 → 20 PUBLIC TAP ..... 12 WELL WATER WELL IN RESIDENCE/YARD/PLOT 21 → 20 PUBLIC WELL ..... 22 SURFACE WATER SPRING ..... 31 RIVER/STREAM ..... 32 POND/LAKE ..... 33 DAM ..... 34 RAINWATER ..... 41 → 20 TANKER (TRUCK) ..... 51 → 20 TANKER VENDOR ..... 52 → 20 BOTTLED WATER ..... 61 BOREHOLE ..... 71 OTHER _____ 96 → 20 (SPECIFY)	
19	How long does it take you to go there, get water, and come back?	MINUTES ..... ▒▒▒ ON PREMISES 996	
20	What kind of toilet facility does your household have?	FLUSH TOILET (W.C) OWN WATER CLOSET ..... 11 SHARED FLUSH TOILET (W.C) ..... 12 PIT TOILET/LATRINE TRADITIONAL PIT TOILET ..... 21 VENTILATED IMPROVED PIT (VIP) LATRINE ..... 22 BUCKET TOILET ..... 23 NO FACILITY/BUSH/FIELD/RIVER ..... 31 OTHER _____ 96 (SPECIFY)	
21	Does your household have:	YES NO	
	Electricity?	ELECTRICITY 1 2	
	A radio?	RADIO 1 2	
	A television?	TELEVISION 1 2	
	A telephone?	TELEPHONE 1 2	
	A refrigerator?	REFRIGERATOR 1 2	
	A Gas Cooker?	GAS COOKER 1 2	
	An Electric Iron?	ELECTRIC IRON 1 2	
	An Electric Fan?	ELECTRIC FAN 1 2	
22	How many rooms are in your household?	ROOMS ..... ▒▒	
22B	How many rooms are used for sleeping in your household?	ROOMS ..... ▒▒	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
23	MAIN MATERIAL OF THE FLOOR. RECORD OBSERVATION.	NATURAL FLOOR EARTH/SAND ..... 11 DUNG ..... 12 RUDIMENTARY FLOOR WOOD PLANKS ..... 21 PALM/BAMBOO 22 FINISHED FLOOR PARQUET OR POLISHED WOOD ... 31 VINYL OR ASPHALT STRIPS ..... 32 CERAMIC TILES ..... 33 CEMENT ..... 34 TERRAZZO/MARBLE ..... 35 CARPET ..... 36 OTHER _____ 96 (SPECIFY)	
24	Does any member of your household own: A bicycle? A motorcycle? A car? A Donkey/Horse/Camel? A Canoe/Boat/Ship?	YES NO BICYCLE ..... 1 2 MOTORCYCLE ..... 1 2 CAR ..... 1 2 DONKEY/HORSE/CAMEL ... 1 2 CANOE/BOAT/SHIP 1 2	
25	What type of salt is usually used for cooking in your household? (ASK TO SEE SALT PACKAGE).	LOCAL SALT ..... 01 PACKAGED SALT (IODIZED) ..... 02 PACKAGED SALT (NOT IODIZED) ..... 03 SALT FOR ANIMALS ..... 04 LOOSE SALT ..... 05 OTHER _____ 96 (SPECIFY)	
26	How do you hold this accommodation?	RENT ..... 01 OWNER OCCUPIER ..... 02 NOT OWNER, BUT RENT FREE ..... 03 HOUSED BY EMPLOYER ..... 04 OTHER _____ 96 (SPECIFY)	
27	If you rent it or if it is rent-free, who owns this accommodation?	PRIVATE INDIVIDUAL ..... 01 PUBLIC OWNERSHIP ..... 02 EMPLOYER ..... 03 PRIVATE MORTGAGE COMPANY ..... 04 OTHER _____ 96 (SPECIFY)	
28	MAIN MATERIAL USED FOR OUTER WALLS RECORD OBSERVATION	CEMENT BLOCKS ..... 01 CONCRETE ..... 02 BAKED BRICKS ..... 03 UNBAKED BRICK, MUD OR EARTH .... 04 TERRAZZO/MARBLE/HEWN STONE ... 05 PLANK/WOOD/BAMBOO MATERIAL ... 06 THATCH/MAT/LEAVES/STRAW ..... 07 CORRUGATED IRON SHEETS/ZINC .... 08 OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
29	MAIN MATERIAL USED FOR ROOF RECORD OBSERVATION	HARD CONCRETE (CEMENT) ..... 01 CORRUGATED METAL SHEET/ASBESTOS TILES ..... 02 WOODEN TILES/PLANKS ..... 03 EARTH/MUD ..... 04 THATCH/MAT/LEAVES ..... 05 OTHER _____ 96 (SPECIFY)	
30	MAIN SOURCE OF LIGHT	ELECTRICITY ..... 01 PRESSURE LAMP ..... 02 KEROSINE LAMPS WITH GLASS SHADES ..... 03 KEROSINE/OIL LAMPS WITHOUT GLASS SHADES ..... 04 OTHER _____ 96 (SPECIFY)	
31	TYPE OF KITCHEN FACILITY	SEPARATE ROOM IN THE BUILDING FOR EXCLUSIVE USE OF HOUSEHOLD ..... 01 SEPARATE ROOM IN THE BUILDING FOR USE OF THIS AND OTHER HOUSEHOLDS ..... 02 ENCLOSURE WITHOUT ROOF ..... 03 OPEN SPACE WITHIN/AROUND BUILDING 04 OTHER _____ 96 (SPECIFY)	
32	TYPE OF BATHING FACILITY	SEPARATE ROOM IN THE BUILDING FOR EXCLUSIVE USE OF HOUSEHOLD ..... 01 SEPARATE ROOM IN THE BUILDING FOR ALL OCCUPANTS ..... 02 ENCLOSURE IN THE BUILDING BUT WITHOUT ROOF ..... 03 PUBLIC BATHROOM/STREAM/ RIVER ..... 04 OTHER _____ 96 (SPECIFY)	

FEDERAL REPUBLIC OF NIGERIA NDHS03
NATIONAL POPULATION COMMISSION
1999 NIGERIA DEMOGRAPHIC AND HEALTH SURVEY
INDIVIDUAL QUESTIONNAIRE FOR WOMEN

IDENTIFICATION	
STATE NAME	
LOCAL GOVT. AREA	
LOCALITY NAME	
ENUMERATION AREA	
*URBAN/RURAL	
**LARGE TOWN/MEDIUM TOWN/SMALL TOWN/VILLAGE	
BUILDING NUMBER	
HOUSEHOLD NAME/NUMBER	
NAME AND LINE NUMBER OF WOMAN IN HOUSEHOLD SCHEDULE	

INTERVIEWER'S VISITS				
	1	2	3	FINAL VISIT
DATE				DAY / MONTH / YEAR
INTERVIEWER'S NAME				NAME
RESULT				RESULT
NEXT VISIT: DATE				TOTAL NO. OF VISITS
TIME				

RESULT CODES:

1	COMPLETED	5	PARTLY COMPLETED
2	NOT AT HOME	6	INCAPACITATED
3	POSTPONED	7	DWELLING DESTROYED
4	REFUSED	8	OTHER _____ (SPECIFY)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____ DATE _____	NAME _____ DATE _____		

* (Urban = 1, Rural = 2)
** (Large Town=1, Medium Town=2, Small Town=3, Village=4)

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME. (START OF INTERVIEW)	HOUR ..... ☐☐ MINUTES ..... ☐☐	
102	First I would like to ask some questions about you and your household. For most of the time until you were 10 years old, did you live in a large town, medium town, small town or in the village?	LARGE TOWN ..... 1 MEDIUM TOWN ..... 2 SMALL TOWN ..... 3 VILLAGE 4	
103	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)?	YEARS ..... ☐☐ ALWAYS ..... 95 VISITOR 96	 →105 →105
104	Just before you moved here, did you live in a large town, medium town, small town, or in the village?	LARGE TOWN ..... 1 MEDIUM TOWN ..... 2 SMALL TOWN ..... 3 VILLAGE 4	
105	In what month and year were you born?	MONTH ..... ☐☐ DON'T KNOW MONTH ..... 98 YEAR ..... ☐☐☐☐ DON'T KNOW YEAR 9998	
106	How old were you at your last birthday? COMPARE AND CORRECT 105 AND/OR 106 IF INCONSISTENT.	AGE IN COMPLETED YEARS ..... ☐☐	
107	Have you ever attended school?	YES ..... 1 NO 2	 →114
108	What is the highest level of school you attended: primary, secondary, or higher?	PRIMARY ..... 1 SECONDARY ..... 2 HIGHER 3	
109	What is the highest (grade/form/year) you completed at that level?	GRADE (YEAR) ..... ☐☐	
110	CHECK 106: AGE 24 OR BELOW ☐ ▼ AGE 25 OR ABOVE ☐		→113
111	Are you currently attending school?	YES ..... 1 NO 2	→113
112	What was the main reason you stopped attending school?	GOT PREGNANT ..... 01 GOT MARRIED ..... 02 TO CARE FOR YOUNGER CHILDREN .. 03 FAMILY NEEDED HELP ON FARM OR IN BUSINESS ..... 04 COULD NOT PAY SCHOOL FEES ..... 05 NEEDED TO EARN MONEY ..... 06 GRADUATED/HAD ENOUGH SCHOOLING ..... 07 DID NOT PASS ENTRANCE EXAMS .... 08 DID NOT LIKE SCHOOL ..... 09 SCHOOL NOT ACCESSIBLE/ TOO FAR ..... 10 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
113	CHECK 108: PRIMARY ☐ ▼ SECONDARY OR HIGHER ☐		→115
114	Can you read and understand a letter or newspaper easily, with difficulty, or not at all?	EASILY ..... 1 WITH DIFFICULTY ..... 2 NOT AT ALL 3	→116
115	*Do you usually read a newspaper or magazine at least once a week?*	*YES* ..... 1 NO 2	
116	Do you usually listen to radio every day?	YES ..... 1 NO 2	
117	Do you usually watch television at least once a week?	YES ..... 1 NO 2	
118	What is your religion?	CATHOLIC ..... 1 PROTESTANT ..... 2 OTHER CHRISTIAN ..... 3 ISLAM ..... 4 TRADITIONALIST ..... 5 OTHER _____ 6 (SPECIFY)	
119	What is your ethnic group?	.....	
120	CHECK Q.4 IN THE HOUSEHOLD QUESTIONNAIRE THE WOMAN INTERVIEWED IS NOT A USUAL RESIDENT ☐ ▼ RESIDENT THE WOMAN INTERVIEWED IS A USUAL ☐		→201
121	Now I would like to ask about the place in which you usually live. What is the name of the place in which you usually live? _____ (NAME OF PLACE) Is that a large, medium, small town, or village?	LARGE TOWN ..... 1 MEDIUM TOWN ..... 2 SMALL TOWN ..... 3 VILLAGE 4	
122	In which [STATE] is that located?	STATE	
123	Now I would like to ask about the household in which you usually live. What is the main source of drinking water for members of your household?	PIPED WATER PIPED INTO RESIDENCE/YARD/PLOT ..... 11 PUBLIC TAP ..... 12 WELL WATER WELL IN RESIDENCE/YARD/PLOT . 21 PUBLIC WELL ..... 22 SURFACE WATER SPRING ..... 31 RIVER/STREAM ..... 32 POND/LAKE ..... 33 DAM ..... 34 RAINWATER ..... 41 WATER TANKER (TRUCK) ..... 51 WATER VENDOR ..... 52 BOTTLED WATER ..... 61 BOREHOLE ..... 71 OTHER _____ 96 (SPECIFY)	→125 →125 →125 →125 →125
124	How long does it take to go there, get water, and come back?	MINUTES ..... ON PREMISES 996	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
125	What kind of toilet facility does your household have?	FLUSH TOILET OWN FLUSH TOILET ..... 11 SHARED FLUSH TOILET ..... 12 PIT TOILET/LATRINE TRADITIONAL PIT TOILET/BUCKET 21 VENTILATED IMPROVED PIT (VIP) LATRINE ..... 22 NO FACILITY/BUSH/FIELD/RIVERSIDE . 31 OTHER _____ 96 (SPECIFY)	
126	Does your household have: Electricity? A Radio? A Television? A Telephone? A Refrigerator? A Gas Cooker? An Electric Fan? An Electric Iron?	YES NO ELECTRICITY ..... 1 2 RADIO 1 2 TELEVISION ..... 1 2 TELEPHONE ..... 1 2 REFRIGERATOR ..... 1 2 GAS COOKER ..... 1 2 ELECTRIC FAN ..... 1 2 ELECTRIC IRON 1 2	
127	Could you describe the main material of the floor of your home?	NATURAL FLOOR EARTH/SAND ..... 11 DUNG ..... 12 RUDIMENTARY FLOOR WOOD PLANKS ..... 21 PALM/BAMBOO ..... 22 FINISHED FLOOR PARQUET OR POLISHED WOOD ... 31 VINYL OR ASPHALT STRIPS ..... 32 CERAMIC TILES ..... 33 CEMENT ..... 34 CARPET ..... 35 OTHER _____ 96 (SPECIFY)	
128	Does any member of your household own: A bicycle? A motorcycle? A car? A Donkey/Horse/Camel? A Canoe/Boat/Ship?	YES NO BICYCLE ..... 1 2 MOTORCYCLE ..... 1 2 CAR ..... 1 2 DONKEY/HORSE/CAMEL ..... 1 2 CANOE/BOAT/SHIP 1 2	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES ..... 1 NO 2	→206
202	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES ..... 1 NO 2	→204
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME ..... DAUGHTERS AT HOME	
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES ..... 1 NO 2	→206
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE ..... DAUGHTERS ELSEWHERE	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but survived only a few hours or days?	YES ..... 1 NO 2	→208
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	*BOYS DEAD* ..... GIRLS DEAD	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL ____ births during your life. Is that correct? YES ☐ NO ☐→ PROBE AND CORRECT 201-208 AS NECESSARY.		
210	CHECK 208: ONE OR MORE BIRTHS ☐ NO BIRTHS ☐		→226A

211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.

RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.

212 What name was given to your (first/next) baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday? OR: In what season was he/she born?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF DEAD: How old was (NAME) when he/she died? IF '1 YR.', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	220 FROM YEAR OF BIRTH OF (NAME) SUBTRACT YEAR OF PREVIOUS BIRTH. IS THE DIFFERENCE 2 OR MORE?	221 Were there any other liv births between (NAME OF PREVIOUS BIRTH) and (NAME)?
01	SING . 1 MULT 2	BOY . 1 GIRL 2	MONTH ... YEAR	YES .. 1 NO ... 2 → 219	AGE IN YEARS	YES ... 1 NO .... 2 (NEXT BIRTH)	DAYS ..... 1 MONTHS .... 2 YEARS 3		
02	SING . 1 MULT 2	BOY . 1 GIRL 2	MONTH ... YEAR	YES .. 1 NO ... 2 → 219	AGE IN YEARS	YES ... 1 NO .... 2 (GO TO 220)	DAYS ..... 1 MONTHS .... 2 YEARS 3	YES ..... 1 NO ..... 2 → (NEXT BIRTH)	YES ..... NO .....
03	SING . 1 MULT 2	BOY . 1 GIRL 2	MONTH ... YEAR	YES .. 1 NO ... 2 → 219	AGE IN YEARS	YES ... 1 NO .... 2 (GO TO 220)	DAYS ..... 1 MONTHS .... 2 YEARS 3	YES ..... 1 NO ..... 2 → (NEXT (BIRTH)	YES ..... NO .....
04	SING . 1 MULT 2	BOY . 1 GIRL 2	MONTH ... YEAR	YES .. 1 NO ... 2 → 219	AGE IN YEARS	YES ... 1 NO .... 2 (GO TO 220)	DAYS ..... 1 MONTHS .... 2 YEARS 3	YES ..... 1 NO ..... 2 → (NEXT (BIRTH)	YES ..... NO .....
05	SING . 1 MULT 2	BOY . 1 GIRL 2	MONTH ... YEAR	YES .. 1 NO ... 2 → 219	AGE IN YEARS	YES ... 1 NO .... 2 (GO TO 220)	DAYS ..... 1 MONTHS .... 2 YEARS 3	YES ..... 1 NO ..... 2 → (NEXT (BIRTH)	YES ..... NO .....

211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.

RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.

212 What name was given to your (first/next) baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday? OR: In what season was he/she born?	216 Is (NAME) still alive?	217 *IF ALIVE:* How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS.	218 *IF ALIVE:* Is (NAME) living with you?	219 *IF DEAD:* How old was (NAME) when he/she died? IF '1 YR.', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	220 FROM YEAR OF BIRTH OF (NAME) SUBTRACT YEAR OF PREVIOUS BIRTH. IS THE DIFFERENCE 2 OR MORE?	221 Were there any other liv births between (NAME OF PREVIOUS BIRTH) and (NAME)?
06	SING . 1 MULT 2	BOY . 1 GIRL 2	MONTH ... YEAR	YES .. 1 NO ... 2 219	AGE IN YEARS	YES ... 1 NO .... 2 (GO TO 220)	DAYS ..... 1 MONTHS .... 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT (BIRTH)	YES ..... NO .....
07	SING . 1 MULT 2	BOY . 1 GIRL 2	MONTH ... YEAR	YES .. 1 NO ... 2 219	AGE IN YEARS	YES ... 1 NO .... 2 (GO TO 220)	DAYS ..... 1 MONTHS .... 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT (BIRTH)	YES ..... NO .....
08	SING . 1 MULT 2	BOY . 1 GIRL 2	MONTH ... YEAR	YES . 1 NO .. 2 219	AGE IN YEARS	YES ... 1 NO .... 2 (GO TO 220)	DAYS ..... 1 MONTHS .... 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT (BIRTH)	YES ..... NO .....
09	SING . 1 MULT 2	BOY . 1 GIRL 2	MONTH ... YEAR	YES . 1 NO .. 2 219	AGE IN YEARS	YES ... 1 NO .... 2 (GO TO 220)	DAYS ..... 1 MONTHS .... 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT (BIRTH)	YES ..... NO .....
10	SING . 1 MULT 2	BOY . 1 GIRL 2	MONTH ... YEAR	YES . 1 NO .. 2 219	AGE IN YEARS	YES ... 1 NO .... 2 (GO TO 220)	DAYS ..... 1 MONTHS .... 2 YEARS 3	YES ..... 1 NO ..... 2 (NEXT (BIRTH)	YES ..... NO .....

211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had.

RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE LINES.

212 What name was given to your (first/next) baby? (NAME)	213 Were any of these births twins?	214 Is (NAME) a boy or a girl?	215 In what month and year was (NAME) born? PROBE: What is his/her birthday? OR: In what season was he/she born?	216 Is (NAME) still alive?	217 IF ALIVE: How old was (NAME) at his/her last birthday? RECORD AGE IN COMPLETED YEARS.	218 IF ALIVE: Is (NAME) living with you?	219 IF DEAD: How old was (NAME) when he/she died? IF '1 YR.', PROBE: How many months old was (NAME)? RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.	220 FROM YEAR OF BIRTH OF (NAME) SUBTRACT YEAR OF PREVIOUS BIRTH. IS THE DIFFERENCE 2 OR MORE?	221 Were there any other liv births between (NAME OF PREVIOUS BIRTH) and (NAME)?
11	SING . 1 MULT 2	BOY . 1 GIRL 2	MONTH ... ▒▒ YEAR ..... ▒▒▒▒	YES . 1 NO .. 2 → 219	AGE IN YEARS ▒▒	YES ... 1 NO .... 2 (GO TO 220)	DAYS ..... 1 ▒▒ MONTHS .... 2 ▒▒ YEARS ..... 3 ▒▒	YES ..... 1 NO ..... 2 (NEXT (BIRTH)	YES ..... NO .....
12	SING . 1 MULT 2	BOY . 1 GIRL 2	MONTH ... ▒▒ YEAR ..... ▒▒▒▒	YES . 1 NO .. 2 → 219	AGE IN YEARS ▒▒	YES ... 1 NO .... 2 (GO TO 220)	DAYS ..... 1 ▒▒ MONTHS .... 2 ▒▒ YEARS ..... 3 ▒▒	YES ..... 1 NO ..... 2 (NEXT (BIRTH)	YES ..... NO .....
13	SING . 1 MULT 2	BOY . 1 GIRL 2	MONTH ... ▒▒ YEAR ..... ▒▒▒▒	YES . 1 NO .. 2 → 219	AGE IN YEARS ▒▒	YES ... 1 NO .... 2 (GO TO 220)	DAYS ..... 1 ▒▒ MONTHS .... 2 ▒▒ YEARS ..... 3 ▒▒	YES ..... 1 NO ..... 2 (NEXT (BIRTH)	YES ..... NO .....
14	SING . 1 MULT 2	BOY . 1 GIRL 2	MONTH ... ▒▒ YEAR ..... ▒▒▒▒	YES . 1 NO .. 2 → 219	AGE IN YEARS ▒▒	YES ... 1 NO .... 2 (GO TO 220)	DAYS ..... 1 ▒▒ MONTHS .... 2 ▒▒ YEARS ..... 3 ▒▒	YES ..... 1 NO ..... 2 (NEXT (BIRTH)	YES ..... NO .....
15	SING . 1 MULT 2	BOY . 1 GIRL 2	MONTH ... ▒▒ YEAR ..... ▒▒▒▒	YES . 1 NO .. 2 → 219	AGE IN YEARS ▒▒	YES ... 1 NO .... 2 (GO TO 220)	DAYS ..... 1 ▒▒ MONTHS .... 2 ▒▒ YEARS ..... 3 ▒▒	YES ..... 1 NO ..... 2 (NEXT (BIRTH)	YES ..... NO .....

222	FROM YEAR OF INTERVIEW SUBTRACT YEAR OF LAST BIRTH. IS THE DIFFERENCE 2 YEARS OR MORE?	YES ..... 1 NO 2	→223 →224
223	Have you had any live births since the birth of (NAME OF LAST BIRTH)?	YES ..... 1 NO 2	
224	COMPARE 208 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND MARK: NUMBERS ARE SAME ☐ NUMBERS ARE DIFFERENT ☐→ (PROBE AND RECONCILE) CHECK: FOR EACH BIRTH: YEAR OF BIRTH IS RECORDED. FOR EACH LIVING CHILD: CURRENT AGE IS RECORDED. FOR EACH DEAD CHILD: AGE AT DEATH IS RECORDED. FOR AGE AT DEATH 12 MONTHS OR 1 YR.: PROBE TO DETERMINE EXACT NUMBER OF MONTHS.		
225	CHECK 215 AND ENTER THE NUMBER OF BIRTHS SINCE JANUARY 1996. IF NONE, RECORD '0'.		
225A	CHECK 219 AND ENTER THE NUMBER OF DEATHS SINCE JANUARY 1996. *IF NONE, RECORD '0'.*		
226A	(In addition to pregnancies which ended in live births) have you had any (other) pregnancy which ended in a stillbirth, miscarriage or an abortion?	YES ..... 1 NO 2	→227
226B	How many pregnancies ended in stillbirths? IF NONE, ENTER "00"	STILLBIRTHS	
226C	How many pregnancies ended in miscarriages or abortions? IF NONE, ENTER "00"	MISCARRIAGE OR ABORTIONS	
227	Are you pregnant now?	YES ..... 1 NO ..... 2 UNSURE 8	→236
228	How many months pregnant are you? RECORD NUMBER OF COMPLETED MONTHS.	MONTHS	
229	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 ..... 1 LATER ..... 2 NOT WANT MORE CHILDREN 3	
236	When did your last menstrual period start? _____ (DATE, IF GIVEN)	DAYS AGO ..... 1 WEEKS AGO ..... 2 MONTHS AGO ..... 3 YEARS AGO ..... 4 IN MENOPAUSE ..... 994 BEFORE LAST BIRTH ..... 995 NEVER MENSTRUATED 996	
237	Between the first day of a woman's period and the first day of her next period, are there certain times when she has a greater chance of becoming pregnant than other times?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→301
238	During which times of the monthly cycle does a woman have the greatest chance of becoming pregnant?	DURING HER PERIOD ..... 01 RIGHT AFTER HER PERIOD HAS ENDED . 02 IN THE MIDDLE OF THE CYCLE ..... 03 JUST BEFORE HER PERIOD BEGINS ..... 04 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	

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 302, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 2 IF METHOD IS RECOGNIZED, AND CODE 3 IF NOT RECOGNIZED.
THEN, FOR EACH METHOD WITH CODE 1 OR 2 CIRCLED IN 301 OR 302, ASK 303.

301	Which ways or methods have you heard about?	302 Have you ever heard of (METHOD)? SPONTANEOUS YES	PROBED YES	NO	303 Have you ever used (METHOD)?
01	PILL Women can take a pill every day.	1	2	3	YES ..... 1 NO 2
02	IUD Women can have a loop or coil placed inside them by a doctor or a nurse.	1	2	3	YES ..... 1 NO 2
03	INJECTABLES Women can have an injection by a doctor or nurse which stops them from becoming pregnant for several months.	1	2	3	YES ..... 1 NO 2
04	IMPLANTS Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for several years.	1	2	3	YES ..... 1 NO 2
05	DIAPHRAGM, FOAM, JELLY Women can place a sponge, suppository, diaphragm, jelly, or cream inside themselves before intercourse.	1	2	3	YES ..... 1 NO 2
06	CONDOM Men can put a rubber sheath on their penis for sexual intercourse.	1	2	3	YES ..... 1 NO 2
07	FEMALE STERILIZATION Women can have an operation to avoid having any more children.	1	2	3	Have you ever had an operation to avoid having any more children? YES ..... 1 NO 2
08	MALE STERILIZATION Men can have an operation to avoid having any more children.	1	2	3	Have you ever had a partner who had an operation to avoid having children? YES ..... 1 NO 2
09	RHYTHM, PERIODIC ABSTINENCE Every month that a woman is sexually active she can avoid having sexual intercourse on the days of the month she is most likely to get pregnant.	1	2	3	YES ..... 1 NO 2
10	WITHDRAWAL Men can be careful and pull out before climax.	1	2	3	YES ..... 1 NO 2
11	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	1 _____ (SPECIFY) _____ (SPECIFY)		3	YES ..... 1 NO ..... 2 YES ..... 1 NO 2

	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 302, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 2 IF METHOD IS RECOGNIZED, AND CODE 3 IF NOT RECOGNIZED. *THEN, FOR EACH METHOD WITH CODE 1 OR 2 CIRCLED IN 301 OR 302, ASK 303.*		
304	CHECK 303: NOT A SINGLE "YES" (NEVER USED) ▼ AT LEAST ONE "YES" (EVER USED) → SKIP TO 309		
305	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES ..... 1 NO ..... 2 → 331	
307	What have you used or done? CORRECT 303 AND 304 (AND 302 IF NECESSARY).		
309	Now I would like to ask you about the first time that you did something or used a method to avoid getting pregnant. How many living children did you have at that time, if any? IF NONE, RECORD '00'.	NUMBER OF CHILDREN	
310	When you first used family planning, did you want to have another child but at a later time, or did you not want to have another child at all?	WANTED CHILD LATER ..... 1 DID NOT WANT ANOTHER CHILD ..... 2 OTHER _____ 96 (SPECIFY)	
311	CHECK 303: WOMAN NOT STERILIZED ▼ WOMAN STERILIZED → 314A		
312	CHECK 227: NOT PREGNANT OR UNSURE ▼ PREGNANT → 332		
313	Are you currently doing something or using any method to delay or avoid getting pregnant?	YES ..... 1 NO ..... 2 → 331	
314 314A	*Which method are you using?* CIRCLE '07' FOR FEMALE STERILIZATION.	*PILL* ..... 01 IUD ..... 02 INJECTABLES ..... 03 IMPLANTS ..... 04 → 326 DIAPHRAGM/FOAM/JELLY ..... 05 CONDOM ..... 06 FEMALE STERILIZATION ..... 07 MALE STERILIZATION ..... 08 → 318 PERIODIC ABSTINENCE ..... 09 → 323 WITHDRAWAL ..... 10 OTHER _____ 96 → 326 (SPECIFY)	
315	May I see the package of pills you are now using? RECORD NAME OF BRAND IF PACKAGE IS SEEN.	PACKAGE SEEN ..... 1 BRAND NAME _____ → 317 PACKAGE NOT SEEN 2	
316	Do you know the brand name of the pills you are now using? RECORD NAME OF BRAND.	BRAND NAME ..... DOES NOT KNOW 98	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
317	How much does one packet (cycle) of pills cost you?	COST (₦) ..... FREE ..... 9996 DOES NOT KNOW 9998	→326
318	Where did the sterilization take place? 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. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL ..... 11 GOVERNMENT HEALTH CENTER ..... 12 FAMILY PLANNING CLINIC ..... 13 MOBILE CLINIC ..... 14 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PRIVATE DOCTOR ..... 23 MOBILE CLINIC ..... 24 NON-GOVERNMENT ORGANISATION ..... 25 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
319	Do you regret that (you/your husband) had the operation not to have any (more) children?	YES ..... 1 NO 2	→321
320	Why do you regret the operation?	RESPONDENT WANTS ANOTHER CHILD ..... 01 HUSBAND WANTS ANOTHER CHILD ..... 02 SIDE EFFECTS ..... 03 HEALTH REASONS ASSOCIATED WITH THE OPERATION ..... 04 MARITAL STATUS HAS CHANGED ..... 05 OPERATION FAILED ..... 06 CHILD DIED ..... 07 OTHER _____ 96 (SPECIFY)	
321	In what month and year was the sterilization performed?	MONTH ..... YEAR	→327
323	How do you determine which days of your monthly cycle not to have sexual relations?	BASED ON CALENDAR ..... 01 BASED ON BODY TEMPERATURE ..... 02 BASED ON CERVICAL MUCUS (BILLINGS METHOD) ..... 03 BASED ON BODY TEMPERATURE AND CERVICAL MUCUS ..... 04 NO SPECIFIC SYSTEM ..... 05 OTHER _____ 96 (SPECIFY)	
326	For how many months have you been using (METHOD) continuously? IF LESS THAN 1 MONTH, RECORD '00'	MONTH ..... 8 YEARS OR LONGER 96	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
327	CHECK 314: CIRCLE METHOD CODE:	NOT ASKED ..... 00 PILL ..... 01 IUD ..... 02 INJECTABLES ..... 03 IMPLANTS ..... 04 DIAPHRAGM/FOAM/JELLY ..... 05 CONDOM/FEMIDOM ..... 06 FEMALE STERILIZATION ..... 07 MALE STERILIZATION ..... 08 *PERIODIC ABSTINENCE* ..... 09 WITHDRAWAL ..... 10 OTHER METHOD 96	→331 →329A →332
328	Where did you obtain (METHOD) the last time? 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. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL ..... 11 GOVERNMENT HEALTH CENTER ..... 12 FAMILY PLANNING CLINIC ..... 13 MOBILE CLINIC ..... 14 COMMUNITY HEALTH WORKER ..... 15 *OTHER PUBLIC* _____ *16* (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PHARMACY/PATENT MEDICINE STORE .. 22 PRIVATE DOCTOR ..... 23 MOBILE CLINIC ..... 24 COMMUNITY HEALTH WORKER ..... 25 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) OTHER SOURCE SHOP ..... 31 CHURCH ..... 32 FRIEND/RELATIVE ..... 33 NON-GOVERNMENT ORGANISATION ..... 34 OTHER _____ 36 (SPECIFY)	
329	Do you know another place where you could have obtained (METHOD) the last time?	YES ..... 1 NO 2	→330 →334
329A	At the time of the sterilization operation, did you know another place where you could have received the operation?	YES ..... 1 *NO* 2	 →334

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
330	People select the place where they get family planning services for various reasons. What was the main reason you went to (NAME OF PLACE IN Q.328 or Q.318) instead of some other place you know about? RECORD RESPONSE AND CIRCLE CODE. _____	ACCESS-RELATED REASONS CLOSER TO HOME ..... 11 CLOSER TO MARKET/WORK ..... 12 AVAILABILITY OF TRANSPORT ..... 13 SERVICE-RELATED REASONS STAFF MORE COMPETENT/ FRIENDLY ... 21 CLEANER FACILITY ..... 22 OFFERS MORE PRIVACY ..... 23 SHORTER WAITING TIME ..... 24 LONGER HRS. OF SERVICE ..... 25 USE OTHER SERVICES AT THE FACILITY 26 LOWER COST/CHEAPER ..... 31 WANTED ANONYMITY ..... 41 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→334
331	What is the main reason you are not using a method of contraception to avoid pregnancy?	NOT MARRIED ..... 11 FERTILITY-RELATED REASONS NOT HAVING SEX ..... 21 INFREQUENT SEX ..... 22 MENOPAUSAL/HYSTERECTOMY ..... 23 SUBFECUND/INFECUND ..... 24 POSTPARTUM/BREASTFEEDING ..... 25 WANTS (MORE) CHILDREN ..... 26 OPPOSITION TO USE RESPONDENT OPPOSED ..... 31 HUSBAND OPPOSED ..... 32 OTHERS OPPOSED ..... 33 RELIGIOUS PROHIBITION ..... 34 LACK OF KNOWLEDGE KNOWS NO METHOD ..... 41 KNOWS NO SOURCE ..... 42 METHOD-RELATED REASONS HEALTH CONCERNS ..... 51 FEAR OF SIDE EFFECTS ..... 52 LACK OF ACCESS/TOO FAR ..... 53 COST TOO MUCH ..... 54 INCONVENIENT TO USE ..... 55 INTERFERES WITH BODY'S NATURAL PROCESSES ..... 56 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→334
332	Do you know of a place where you can obtain a method of family planning?	YES ..... 1 NO 2	→334

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
333	Where is that? 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. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL ..... 11 GOVERNMENT HEALTH CENTER ..... 12 *FAMILY PLANNING CLINIC* ..... 13 MOBILE CLINIC ..... 14 COMMUNITY HEALTH WORKER ..... 15 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PHARMACY/PMS ..... 22 PRIVATE DOCTOR ..... 23 MOBILE CLINIC ..... 24 COMMUNITY HEALTH WORKER ..... 25 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) OTHER SOURCE SHOP ..... 31 CHURCH ..... 32 FRIENDS/RELATIVES ..... 33 NGO ..... 34 OTHER _____ 36 (SPECIFY)	
334	Were you visited by a family planning service provider in the last 12 months?	YES ..... 1 NO 2	
335	Have you visited a health facility for any reason in the last 12 months?	YES ..... 1 NO 2	→337
336	Did any staff member at the health facility speak to you about family planning methods?	YES ..... 1 NO 2	
337	Do you think that breastfeeding can affect a woman's chance of becoming pregnant?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→401
338	Do you think a woman's chance of becoming pregnant is increased or decreased by breastfeeding?	INCREASED ..... 1 DECREASED ..... 2 DEPENDS ..... 3 DON'T KNOW 8	→401
339	CHECK 210: ONE OR MORE BIRTHS ☐ ▼ NO BIRTH ☐ _____		→401
340	Have you ever relied on breastfeeding as a method of avoiding pregnancy?	YES ..... 1 NO 2	→401
341	CHECK 227 AND 311: NOT PREGNANT OR UNSURE AND NOT STERILIZED ☐ ▼ EITHER PREGNANT OR STERILIZED ☐ _____		→401
342	Are you currently relying on breastfeeding to avoid getting pregnant?	YES ..... 1 NO 2	

SECTION 4A. PREGNANCY AND BREASTFEEDING

401	CHECK 225: ONE OR MORE BIRTHS SINCE JAN. 1996 ☐	NO BIRTH SINCE JAN. 1996 ☐ → (SKIP TO 465)		
402	ENTER THE NAME, LINE NUMBER, AND SURVIVAL STATUS OF EACH BIRTH SINCE JANUARY 1996 IN THE TABLE. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. Now I would like to ask you some questions about the health of all your children born in the last three years. (We will talk about one child at a time.)			
403	LINE NUMBER FROM Q212	LAST BIRTH LINE NUMBER .... ☐☐	NEXT-TO-LAST BIRTH LINE NUMBER .... ☐☐	SECOND-FROM-LAST BIRTH LINE NUMBER .... ☐☐
404	FROM Q212 AND Q216	NAME ____________ ALIVE ☐ DEAD ☐	NAME ____________ ALIVE ☐ DEAD ☐	NAME ____________ ALIVE ☐ DEAD ☐
405	At the time you became pregnant with (NAME), did you want to become pregnant <u>then</u>, did you want to wait until <u>later</u>, or did you want <u>no (more)</u> children at all?	THEN .... 1 (SKIP TO 407)← LATER .... 2 NO MORE .... 3 (SKIP TO 407)←	THEN .... 1 (SKIP TO 407)← LATER .... 2 NO MORE .... 3 (SKIP TO 407)←	THEN .... 1 (SKIP TO 407)← LATER .... 2 NO MORE .... 3 (SKIP TQ 407)←
406	How much longer would you like to have waited?	MONTHS .... 1 ☐☐ YEARS .... 2 ☐☐ DON'T KNOW 998	MONTHS .... 1 ☐☐ YEARS .... 2 ☐☐ DON'T KNOW 998	MONTHS .... 1 ☐☐ YEARS .... 2 ☐☐ DON'T KNOW 998
407	When you were pregnant with (NAME), did you see anyone for antenatal care for this pregnancy? IF YES: Whom did you see? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS SEEN.	HEALTH PROFESSIONAL DOCTOR .... A NURSE/MIDWIFE .... B AUXILIARY MIDWIFE .... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT .... D OTHER ____________ X (SPECIFY) NO ONE .... Y (SKIP TO 410)←	HEALTH PROFESSIONAL DOCTOR .... A NURSE/MIDWIFE .... B AUXILIARY MIDWIFE .... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT .... D OTHER ____________ X (SPECIFY) NO ONE .... Y (SKIP TO 410)←	HEALTH PROFESSIONAL DOCTOR .... A NURSE/MIDWIFE .... B AUXILIARY MIDWIFE .... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT .... D OTHER ____________ X (SPECIFY) NO ONE .... Y (SKIP TO 410)←
408	How many months pregnant were you when you first received antenatal care?	MONTHS .... ☐☐ DON'T KNOW 98	MONTHS .... ☐☐ DON'T KNOW 98	MONTHS .... ☐☐ DON'T KNOW 98
409	How many times did you receive antenatal care during this pregnancy?	NO. OF TIMES .... ☐☐ DON'T KNOW 98	NO. OF TIMES .... ☐☐ DON'T KNOW 98	NO. OF TIMES .... ☐☐ DON'T KNOW 98
410	When you were pregnant with (NAME) were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth?	YES .... 1 NO .... 2 (SKIP TO 412)← DON'T KNOW 8	YES .... 1 NO .... 2 (SKIP TO 412)← DON'T KNOW 8	YES .... 1 NO .... 2 (SKIP TO 412)← DON'T KNOW 8

401	CHECK 225: ONE OR MORE BIRTHS SINCE JAN. 1996 ☐ ▼	NO BIRTH SINCE JAN. 1996 ☐ → (SKIP TO 465)		
		LAST BIRTH NAME ________	NEXT-TO-LAST BIRTH NAME ________	SECOND-FROM -LAST BIRTH NAME ________
411	During this pregnancy, how many times did you get this injection?	TIMES .... ☐ DON'T KNOW 8	TIMES .... ☐ DON'T KNOW 8	TIMES .... ☐ DON'T KNOW 8
412	Where did you give birth to (NAME)?	HOME YOUR HOME .... 11 OTHER HOME .... 12 PUBLIC SECTOR GOVT. HOSPITAL .... 21 GOVT. HEALTH CENTER ... 22 GOVT. HEALTH POST ...... 23 OTHER PUBLIC ________ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... 31 OTHER PRIVATE MEDICAL ________ 36 (SPECIFY) OTHER ________ 96 (SPECIFY)	HOME YOUR HOME .... 11 OTHER HOME .... 12 PUBLIC SECTOR GOVT. HOSPITAL .... 21 GOVT. HEALTH CENTER ... 22 GOVT. HEALTH POST ...... 23 OTHER PUBLIC ________ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... 31 OTHER PRIVATE MEDICAL ________ 36 (SPECIFY) OTHER ________ 96 (SPECIFY)	HOME YOUR HOME .... 11 OTHER HOME .... 12 PUBLIC SECTOR GOVT. HOSPITAL .... 21 GOVT. HEALTH CENTER .... 22 GOVT. HEALTH POST .... 23 OTHER PUBLIC ________ 26 (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ...... 31 OTHER PRIVATE MEDICAL ________ 36 (SPECIFY) OTHER ________ 96 (SPECIFY)
413	Who assisted with the delivery of (NAME)? Anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS ASSISTING.	HEALTH PROFESSIONAL DOCTOR .... A NURSE/MIDWIFE .... B AUXILIARY MIDWIFE .... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT .... D RELATIVE/FRIEND .... E OTHER ________ X (SPECIFY) NO ONE .... Y	HEALTH PROFESSIONAL DOCTOR .... A NURSE/MIDWIFE .... B AUXILIARY MIDWIFE .... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT .... D RELATIVE/FRIEND .... E OTHER ________ X (SPECIFY) NO ONE .... Y	HEALTH PROFESSIONAL DOCTOR .... A NURSE/MIDWIFE .... B AUXILIARY MIDWIFE .... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT .... D RELATIVE/FRIEND .... E OTHER ________ X (SPECIFY) NO ONE .... Y
414	Around the time of the birth of (NAME), did you have any of the following problems:	YES NO	YES NO	YES NO
	Long labor, that is, did your regular contractions last more than 12 hours?	LABOR MORE THAN 12 HOURS 1 2	LABOR MORE THAN 12 HOURS 1 2	LABOR MORE THAN 12 HOURS 1 2
	Excessive bleeding that was so much that you feared it was life threatening?	EXCESSIVE BLEEDING 1 2	EXCESSIVE BLEEDING 1 2	EXCESSIVE BLEEDING 1 2
	A high fever with bad smelling vaginal discharge?	FEVER/BAD SMELLING VAG. DISCHARGE 1 2	FEVER/BAD SMELLING VAG. DISCHARGE 1 2	FEVER/BAD SMELLING VAG. DISCHARGE 1 2
	Convulsions not caused by a fever?	CONVULSIONS 1 2	CONVULSIONS 1 2	CONVULSIONS 1 2
415	Was (NAME) delivered by caesarian section?	YES .... 1 NO 2	YES .... 1 NO 2	YES .... 1 NO 2
416	When (NAME) was born, was he/she: very large, larger than average, average, smaller than average, or very small?	VERY LARGE .... 1 LARGER THAN AVERAGE .... 2 AVERAGE .... 3 SMALLER THAN AVERAGE ...... 4 VERY SMALL .... 5 DON'T KNOW 8	VERY LARGE .... 1 LARGER THAN AVERAGE .... 2 AVERAGE .... 3 SMALLER THAN AVERAGE ...... 4 VERY SMALL .... 5 DON'T KNOW 8	VERY LARGE .... 1 LARGER THAN AVERAGE .... 2 AVERAGE .... 3 SMALLER THAN AVERAGE .... 4 VERY SMALL .... 5 DON'T KNOW 8

401	CHECK 225: ONE OR MORE BIRTHS SINCE JAN. 1996 ☐ ▼ NO BIRTH SINCE JAN. 1996 ☐ → (SKIP TO 465)			
		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM -LAST BIRTH NAME _____
417	Was (NAME) weighed at birth?	YES ..... 1 NO ..... 2 (SKIP TO 419)	YES ..... 1 NO ..... 2 (SKIP TO 420)	YES ..... 1 NO ..... 2 (SKIP TO 420)
418	How much did (NAME) weigh? RECORD WEIGHT FROM HEALTH CARD, IF AVAILABLE.	GRAMS FROM CARD ..... 1 ☐☐☐☐ GRAMS FROM RECALL ..... 2 ☐☐☐☐ DON'T KNOW 99998	GRAMS FROM CARD ..... 1 ☐☐☐☐ GRAMS FROM RECALL ..... 2 ☐☐☐☐ DON'T KNOW 99998	GRAMS FROM CARD ..... 1 ☐☐☐☐ GRAMS FROM RECALL ..... 2 ☐☐☐☐ DON'T KNOW 99998
419	Has your period returned since the birth of (NAME)?	YES ..... 1 (SKIP TO 421) NO ..... 2 (SKIP TO 422)		
420	Did your period return between the birth of (NAME) and your next pregnancy?		YES ..... 1 NO ..... 2 (SKIP TO 424)	YES ..... 1 NO ..... 2 (SKIP TO 424)
421	For how many months after the birth of (NAME) did you not have a period?	MONTHS ..... ☐☐ DON'T KNOW 98	MONTHS ..... ☐☐ DON'T KNOW 98	MONTHS ..... ☐☐ DON'T KNOW 98
422	CHECK 227: RESPONDENT PREGNANT?	NOT PREG-NANT ☐ ▼ PREGNANT OR UNSURE ☐ (SKIP TO 424)		
423	Have you resumed sexual relations since the birth of (NAME)?	YES ..... 1 NO ..... 2 (SKIP TO 425)		
424	For how many months after the birth of (NAME) did you not have sexual relations?	MONTHS ..... ☐☐ DON'T KNOW 98	MONTHS ..... ☐☐ DON'T KNOW 98	MONTHS ..... ☐☐ DON'T KNOW 98
425	Did you ever breastfeed (NAME)?	YES ..... 1 NO ..... 2 (SKIP TO 427)	YES ..... 1 NO ..... 2 (SKIP TO 427)	YES ..... 1 NO ..... 2 (SKIP TO 427)
425A	Did you feed (NAME) colostrum from the breast or wait until colostrum had passed?	FED COLOSTRUM ..... 1 (SKIP TO 426) WAITED ..... 2 DON'T KNOW ..... 8 (SKIP TO 426)		
425B	While you waited for colostrum to pass, what did you feed (NAME)?	PLAIN WATER ..... 1 SUGAR/GLUCOSE WATER ..... 2 BABY FORMULA ..... 3 FRESH MILK ..... 4 SOYA MILK ..... 5 OTHER_____ 6 (SPECIFY)		
426	How long after birth did you first put (NAME) to the breast? IF LESS THAN 1 HOUR, RECORD '00' HOURS. IF LESS THAN 24 HOURS, RECORD HOURS. OTHERWISE, RECORD DAYS.	IMMEDIATELY ..... 000 HOURS ..... 1 ☐☐ DAYS ..... 2 ☐☐	IMMEDIATELY ..... 000 HOURS ..... 1 ☐☐ DAYS ..... 2 ☐☐	IMMEDIATELY ..... 000 HOURS ..... 1 ☐☐ DAYS ..... 2 ☐☐

401	CHECK 225: ONE OR MORE BIRTHS SINCE JAN. 1996 ☐ ▼ NO BIRTH SINCE JAN. 1996 ☐ → (SKIP TO 465)			
427	CHECK 404: CHILD ALIVE?	ALIVE ☐ ▼ DEAD ☐ (SKIP TO 429)	ALIVE ☐ ▼ DEAD ☐ (SKIP TO 429)	ALIVE ☐ ▼ DEAD ☐ (SKIP TO 429)
		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM -LAST BIRTH NAME _____
428	Are you still breastfeeding (NAME)?	YES ..... 1 (SKIP TO 431B) NO 2	YES ..... 1 (SKIP TO 431B) NO 2	YES ..... 1 (SKIP TO 431B) NO 2
429	For how many months did you breastfeed (NAME)?	MONTHS ..... ☐☐ UNTIL DIED ..... 95 (SKIP TO 431B) DON'T KNOW 98	MONTHS ..... ☐☐ UNTIL DIED ..... 95 (SKIP TO 431B) DON'T KNOW 98	MONTHS ..... ☐☐ UNTIL DIED ..... 95 (SKIP TO 431B) DON'T KNOW 98
430	Why did you stop breastfeeding (NAME)?	MOTHER ILL/WEAK ..... 01 CHILD ILL/WEAK ..... 02 CHILD DIED ..... 03 NIPPLE/BREAST PROBLEM ..... 04 NOT ENOUGH MILK ..... 05 MOTHER WORKING ..... 06 CHILD REFUSED ..... 07 WEANING AGE/AGE TO STOP ... 08 BECAME PREGNANT ..... 09 STARTED USING CONTRACEPTION ..... 10 OTHER _____ 96 (SPECIFY)	MOTHER ILL/WEAK ..... 01 CHILD ILL/WEAK ..... 02 CHILD DIED ..... 03 NIPPLE/BREAST PROBLEM ..... 04 NOT ENOUGH MILK ..... 05 MOTHER WORKING ..... 06 CHILD REFUSED ..... 07 WEANING AGE/AGE TO STOP ... 08 BECAME PREGNANT ..... 09 STARTED USING CONTRACEPTION ..... 10 OTHER _____ 96 (SPECIFY)	MOTHER ILL/WEAK ..... 01 CHILD ILL/WEAK ..... 02 CHILD DIED ..... 03 NIPPLE/BREAST PROBLEM ..... 04 NOT ENOUGH MILK ..... 05 MOTHER WORKING ..... 06 CHILD REFUSED ..... 07 WEANING AGE/AGE TO STOP .... 08 BECAME PREGNANT ..... 09 STARTED USING CONTRACEPTION ..... 10 OTHER _____ 96 (SPECIFY)
431	CHECK 404: CHILD ALIVE?	ALIVE ☐ ▼ DEAD ☐ ▼ (SKIP TO 431B)	ALIVE ☐ ▼ DEAD ☐ ▼ (SKIP TO 431B)	ALIVE ☐ ▼ DEAD ☐ ▼ (SKIP TO 431B)
431A	Was (Name) ever given any water, or something-else to drink or eat (other than breastmilk)?	YES ..... 1 NO ..... 2 (SKIP TO 431C)	YES ..... 1 NO ..... 2 (SKIP TO 431C)	YES ..... 1 NO ..... 2 (SKIP TO 431C)
431B	How many months old was (Name) when you started giving the following on a regular basis?			
	Formula or milk other than breastmilk, such as soya milk?	AGE IN MONTHS ..... ☐☐ NOT GIVEN 96	AGE IN MONTHS ..... ☐☐ NOT GIVEN 96	AGE IN MONTHS ..... ☐☐ NOT GIVEN 96
	Water or other liquids?	AGE IN MONTHS ..... ☐☐ NOT GIVEN 96	AGE IN MONTHS ..... ☐☐ NOT GIVEN 96	AGE IN MONTHS ..... ☐☐ NOT GIVEN 96
	Any solid or mashy food, such as mashed banana or mashed grain?	AGE IN MONTHS ..... ☐☐ NOT GIVEN 96	AGE IN MONTHS ..... ☐☐ NOT GIVEN 96	AGE IN MONTHS ..... ☐☐ NOT GIVEN 96
431C	Have you ever heard about exclusive breastfeeding?	YES ..... 1 NO ..... 2 (SKIP TO 432)		

401	CHECK 225: ONE OR MORE BIRTHS SINCE JAN. 1996 ☐ NO BIRTH SINCE JAN. 1996 ☐ → (SKIP TO 465)			
		LAST BIRTH NAME ________	NEXT-TO-LAST BIRTH NAME ________	SECOND-FROM -LAST BIRTH NAME ________
431D	From which source of information have you ever heard about exclusive breastfeeding?	RADIO .... A TELEVISION .... B NEWSPAPERS/MAGAZINES .... C PAMPHLETS/POSTERS .... D HEALTH WORKERS .... E MOSQUES/CHURCHES .... F SCHOOLS/TEACHERS .... G COMMUNITY MEETINGS .... H FRIENDS/RELATIVES .... I WORK PLACE .... J OTHER ________ X (SPECIFY)		
431E	CHECK 404: CHILD ALIVE?	ALIVE ☐ (STILL BREASTFEEDING, ELSE GO TO 440) DEAD ☐ (GO BACK TO 405 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 440)	ALIVE ☐ (STILL BREASTFEEDING, ELSE GO TO 440) DEAD ☐ (GO BACK TO 405 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 440)	ALIVE ☐ (STILL BREASTFEEDING, ELSE GO TO 440) DEAD ☐ (GO BACK TO 405 IN NEXT COLUMN OR, IF NO MORE BIRTHS, GO TO 440)
432	How many times did you breastfeed (NAME) last night between sunset and sunrise? IF ANSWER IS NOT NUMERIC PROBE FOR APPROXIMATE NUMBER	NUMBER OF NIGHTTIME FEEDINGS .... ☐☐		
433	How many times did you breastfeed yesterday during the daylight hours? IF ANSWER IS NOT NUMERIC PROBE FOR APPROXIMATE NUMBER.	NUMBER OF DAYLIGHT FEEDINGS .... ☐☐		
434	Did (NAME) drink anything from a bottle with a nipple yesterday or last night?	YES .... 1 NO .... 2 DON'T KNOW 8		
435	At any time yesterday or last night, was (NAME) given any of the following: Plain water? Sugar water? Juice? Herbal tea? Baby formula? Tinned or powdered milk? Fresh milk? Any other liquid? Any food made from [WHEAT, MAIZE, RICE, SORGHUM or LOCAL GRAIN] such as [PORRIDGE, BREAD, or NOODLES]? Any food made from [CASSAVA, PLANTAIN, YAMS, or LOCAL TUBER]? Eggs, fish or poultry? Meat? Any other solid or semi-solid foods?	YES NO DK PLAIN WATER .... 1 2 8 SUGAR WATER .... 1 2 8 JUICE .... 1 2 8 HERBAL TEA .... 1 2 8 BABY FORMULA .... 1 2 8 TINNED/ POWDERED MILK .... 1 2 8 FRESH MILK .... 1 2 8 OTHER LIQUIDS .... 1 2 8 FOOD MADE FROM [GRAIN] .... 1 2 8 FOOD MADE FROM [TUBER] .... 1 2 8 EGGS/FISH/POULTRY .... 1 2 8 MEAT .... 1 2 8 OTHER SOLID/SEMI-SOLID FOODS 1 2 8		

401	CHECK 225: ONE OR MORE BIRTHS SINCE JAN. 1996 ☐ ▼ NO BIRTH SINCE JAN. 1996 ☐ → (SKIP TO 465)			
		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
436	CHECK 435: FOOD OR LIQUID GIVEN YESTERDAY?	"YES" TO ONE OR MORE ☐ ▼ "NO/DK" TO ALL ☐ ▼ (SKIP TO 438)	"YES" TO ONE OR MORE ☐ ▼ "NO/DK" TO ALL ☐ ▼ (SKIP TO 438)	"YES" TO ONE OR MORE ☐ ▼ "NO/DK" TO ALL ☐ ▼ (SKIP TO 438)
437	(Aside from breastfeeding,) how many times did (NAME) eat yesterday, including both meals and snacks? IF 7 OR MORE TIMES, RECORD '7'.	NUMBER OF TIMES ..... ▒▒ DON'T KNOW 8		
438	On how many days during the last seven days was (NAME) given any of the following: Plain water? Any kind of milk (other than breast milk)? Liquids other than plain water or milk? Food made from [WHEAT, MAIZE, RICE, SORGHUM, or LOCAL GRAIN]? Food made from [CASSAVA, PLANTAIN, YAMS, or LOCAL TUBER]? Eggs, fish, or poultry? Meat? Any other solid or semi-solid foods? IF DON'T KNOW, RECORD '8'.	RECORD THE NUMBER OF DAYS. PLAIN WATER ..... ▒▒ MILK ..... ▒▒ OTHER LIQUIDS ..... ▒▒ FOOD MADE FROM ..... [GRAIN] ▒▒ FOOD MADE FROM ..... [TUBER] ▒▒ EGGS/FISH/POULTRY ..... ▒▒ MEAT ..... ▒▒ OTHER SOLID/SEMI-SOLID FOODS ..... ▒▒		
439		GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 440.	GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 440.	GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 440.

SECTION 4B. IMMUNIZATION AND HEALTH

440	ENTER THE NAME, LINE NUMBER, AND SURVIVAL STATUS OF EACH BIRTH SINCE JANUARY 1996 IN THE TABLE. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH.			
441	LINE NUMBER FROM Q212	LAST BIRTH LINE NUMBER .... ☐☐	NEXT-TO-LAST BIRTH LINE NUMBER .... ☐☐	SECOND -FROM-LAST BIRTH LINE NUMBER .... ☐☐
442	FROM Q212 AND Q216	NAME ____________ ALIVE ☐ DEAD ☐	NAME ____________ ALIVE ☐ DEAD ☐	NAME ____________ ALIVE ☐ DEAD ☐
443	Do you have a card where (NAME'S) vaccinations are written down? IF YES: May I see it please?	YES, SEEN .... 1 (SKIP TO 445) YES, NOT SEEN .... 2 (SKIP TO 447) NO CARD 3	YES, SEEN .... 1 (SKIP TO 445) YES, NOT SEEN .... 2 (SKIP TO 447) NO CARD 3	YES, SEEN .... 1 (SKIP TO 445) YES, NOT SEEN .... 2 (SKIP TO 447) NO CARD 3
444	Did you ever have a vaccination card for (NAME)?	YES .... 1 (SKIP TO 447) NO 2	YES .... 1 (SKIP TO 447) NO 2	YES .... 1 (SKIP TO 447) NO 2
445	(1) COPY VACCINATION DATE FOR EACH VACCINE FROM THE CARD. (2) WRITE '44' IN 'DAY' COLUMN IF CARD SHOWS THAT A VACCINATION WAS GIVEN, BUT NO DATE IS RECORDED. BCG Polio 0 Polio 1 Polio 2 Polio 3 DPT 1 DPT 2 DPT 3 Measles	DAY MONTH YEAR BCG .... ☐☐ ☐☐ ☐☐☐☐ P0 .... ☐☐ ☐☐ ☐☐☐☐ P1 .... ☐☐ ☐☐ ☐☐☐☐ P2 .... ☐☐ ☐☐ ☐☐☐☐ P3 .... ☐☐ ☐☐ ☐☐☐☐ D1 .... ☐☐ ☐☐ ☐☐☐☐ D2 .... ☐☐ ☐☐ ☐☐☐☐ D3 .... ☐☐ ☐☐ ☐☐☐☐ MEA .... ☐☐ ☐☐ ☐☐☐☐	DAY MONTH YEAR BCG .... ☐☐ ☐☐ ☐☐☐☐ P0 .... ☐☐ ☐☐ ☐☐☐☐ P1 .... ☐☐ ☐☐ ☐☐☐☐ P2 .... ☐☐ ☐☐ ☐☐☐☐ P3 .... ☐☐ ☐☐ ☐☐☐☐ D1 .... ☐☐ ☐☐ ☐☐☐☐ D2 .... ☐☐ ☐☐ ☐☐☐☐ D3 .... ☐☐ ☐☐ ☐☐☐☐ MEA .... ☐☐ ☐☐ ☐☐☐☐	DAY MONTH YEAR BCG .... ☐☐ ☐☐ ☐☐☐☐ P0 .... ☐☐ ☐☐ ☐☐☐☐ P1 .... ☐☐ ☐☐ ☐☐☐☐ P2 .... ☐☐ ☐☐ ☐☐☐☐ P3 .... ☐☐ ☐☐ ☐☐☐☐ D1 .... ☐☐ ☐☐ ☐☐☐☐ D2 .... ☐☐ ☐☐ ☐☐☐☐ D3 .... ☐☐ ☐☐ ☐☐☐☐ MEA .... ☐☐ ☐☐ ☐☐☐☐
446	Has (NAME) received any vaccinations that are not recorded on this card? RECORD 'YES' ONLY IF RESPONDENT MENTIONS BCG, POLIO 1-3, DPT 1-3, AND/OR MEASLES VACCINE(S).	YES .... 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 445) .... (SKIP TO 449) NO .... 2 (SKIP TO 449) DON'T KNOW 8	YES .... 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 445) .... (SKIP TO 449) NO .... 2 (SKIP TO 449) DON'T KNOW 8	YES .... 1 (PROBE FOR VACCINATIONS AND WRITE '66' IN THE CORRESPONDING DAY COLUMN IN 445) .... (SKIP TO 449) NO .... 2 (SKIP TO 449) DON'T KNOW 8

440	ENTER THE NAME, LINE NUMBER, AND SURVIVAL STATUS OF EACH BIRTH SINCE JANUARY 1996 IN THE TABLE. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH.			
		LAST BIRTH *NAME* _____	NEXT-TO-LAST BIRTH *NAME* _____	SECOND-FROM-LAST BIRTH *NAME* _____
447	Did (NAME) ever receive any vaccinations to prevent him/her from getting diseases?	YES ..... 1 NO ..... 2 (SKIP TO 449) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 449) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 449) DON'T KNOW 8
448	Please tell me if (NAME) received any of the following vaccinations:			
448A	A BCG vaccination against tuberculosis, that is, an injection in the left arm or shoulder that caused a scar?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
448B	Polio vaccine, that is, drops in the mouth?	YES ..... 1 NO ..... 2 (SKIP TO 448E) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 448E) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 448E) DON'T KNOW 8
448C	How many times?	*NUMBER OF TIMES*	*NUMBER OF TIMES*	*NUMBER OF TIMES* .....
448D	When was the first polio vaccine given, just after birth or later?	JUST AFTER BIRTH ..... 1 LATER 2	JUST AFTER BIRTH ..... 1 LATER 2	JUST AFTER BIRTH ..... 1 LATER 2
448E	DPT vaccination, that is, an injection usually given at the same time as polio drops?	YES ..... 1 NO ..... 2 (SKIP TO 448G) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 448G) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 448G) DON'T KNOW 8
448F	How many times?	NUMBER OF TIMES	NUMBER OF TIMES	NUMBER OF TIMES .....
448G	An injection to prevent measles?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
448H	CHECK 216: CHILD ALIVE	ALIVE DEAD GO BACK TO Q.443 FOR NEXT BIRTH; OR IF NO BIRTHS (SKIP TO 465)	ALIVE DEAD GO BACK TO Q.443 FOR NEXT BIRTH; OR IF NO BIRTHS (SKIP TO 465)	ALIVE DEAD GO BACK TO Q.443 FOR NEXT BIRTH; OR IF NO BIRTHS (SKIP TO 465)
449	Has (NAME) been ill with a fever at any time in the last 2 weeks?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
449A	Did you seek for medical advice or treatment for the fever?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
450	Has (NAME) been ill with a cough at any time in the last 2 weeks?	YES ..... 1 NO ..... 2 (SKIP TO 454) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 454) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 454) DON'T KNOW 8
451	When (NAME) was ill with a cough, *did he/she breathe more rapidly than usual with short, fast breaths?*	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
452	Did you seek advice or treatment for the cough?	YES ..... 1 NO ..... 2 (SKIP TO 454)	YES ..... 1 NO ..... 2 (SKIP TO 454)	YES ..... 1 NO ..... 2 (SKIP TO 454)

440	ENTER THE NAME, LINE NUMBER, AND SURVIVAL STATUS OF EACH BIRTH SINCE JANUARY 1996 IN THE TABLE. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH.			
		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
453	Where did you seek advice or treatment? Anywhere else? RECORD ALL MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH POST ..... C MOBILE CLINIC ..... D COMM. HEALTH WORKER ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... G PHARMACY/PMS ..... H PRIVATE DOCTOR ..... I MOBILE CLINIC ..... J COMM. HEALTH WORKER ..... K OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER SOURCE SHOP ..... M TRAD. PRACTITIONER ..... N SPIRITUAL HEALER ..... P OTHER_____ X (SPECIFY)	PUBLIC SECTOR GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH POST ..... C MOBILE CLINIC ..... D COMM. HEALTH WORKER ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... G PHARMACY/PMS ..... H PRIVATE DOCTOR ..... I MOBILE CLINIC ..... J COMM. HEALTH WORKER ..... K OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER SOURCE SHOP ..... M TRAD. PRACTITIONER ..... N SPIRITUAL HEALERS ..... P OTHER_____ X (SPECIFY)	PUBLIC SECTOR GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH POST ..... C MOBILE CLINIC ..... D COMM. HEALTH WORKER ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... G PHARMACY/PMS ..... H PRIVATE DOCTOR ..... I MOBILE CLINIC ..... J COMM. HEALTH WORKER ..... K OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER SOURCE SHOP ..... M TRAD. PRACTITIONER ..... N SPIRITUAL HEALERS ..... P OTHER_____ X (SPECIFY)
454	Has (NAME) had diarrhoea in the last 2 weeks?	YES ..... 1 NO ..... 2 (SKIP TO 464) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 464) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 464) DON'T KNOW 8
455	Was there any blood in the stools?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
456	On the worst day of the diarrhoea, how many bowel movements did (NAME) have?	NUMBER OF BOWEL MOVEMENTS(STOOLING) ..... ▒▒ DON'T KNOW 98	NUMBER OF BOWEL MOVEMENTS(STOOLING) ..... ▒▒ DON'T KNOW 98	NUMBER OF BOWEL MOVEMENTS(STOOLING) ... ▒▒ DON'T KNOW 98
457	Was he/she given the same amount of fluid to drink as before the diarrhoea, or more, or less?	SAME ..... 1 MORE ..... 2 LESS ..... 3 DON'T KNOW 8	SAME ..... 1 MORE ..... 2 LESS ..... 3 DON'T KNOW 8	SAME ..... 1 MORE ..... 2 LESS ..... 3 DON'T KNOW 8
458	Was he/she given the same amount of food to eat as before the diarrhoea, or more, or less?	SAME ..... 1 MORE ..... 2 LESS ..... 3 DON'T KNOW 8	SAME ..... 1 MORE ..... 2 LESS ..... 3 DON'T KNOW 8	SAME ..... 1 MORE ..... 2 LESS ..... 3 DON'T KNOW 8
459	When (NAME) had diarrhoea, was he/she given any of the following to drink:	YES NO DK	YES NO DK	YES NO DK
	A fluid, made from a special packet called "ORT"?	FLUID FROM ORS PKT 1 2 8	FLUID FROM ORS PKT 1 2 8	FLUID FROM ORS PKT ... 1 2 8
	Thin watery gruel made from [RICE OR OTHER LOCAL GRAIN, TUBER, PLANTAIN]?	THIN WATERY GRUEL 1 2 8	THIN WATERY GRUEL 1 2 8	THIN WATERY GRUEL .. 1 2 8
	Soup?	SOUP 1 2 8	SOUP 1 2 8	SOUP 1 2 8
	Home-made sugar-salt-water solution?	SUG.-SALT-WAT. SOL..... 1 2 8	SUG.-SALT-WAT. SOL..... 1 2 8	SUG.-SALT-WAT. SOL... 1 2 8
	Milk or infant formula?	MILK/INFANT FORM. 1 2 8	MILK/INFANT FORM. 1 2 8	MILK/INFANT FORM. 1 2 8
	Yoghurt-based drink?	YOGHURT-BASED DR. 1 2 8	YOGHURT-BASED DR. 1 2 8	YOGHURT-BASED DR. ... 1 2 8
	Water?	WATER 1 2 8	WATER 1 2 8	WATER 1 2 8
	Any other liquid?	OTHER LIQUID 1 2 8	OTHER LIQUID 1 2 8	OTHER LIQUID 1 2 8

440	ENTER THE NAME, LINE NUMBER, AND SURVIVAL STATUS OF EACH BIRTH SINCE JANUARY 1996 IN THE TABLE. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH.			
		LAST BIRTH NAME _____	NEXT-TO-LAST BIRTH NAME _____	SECOND-FROM-LAST BIRTH NAME _____
460	Was anything (else) given to treat the diarrhoea?	YES ..... 1 NO ..... 2 (SKIP TO 462) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 462) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 462) DON'T KNOW 8
461	What was given to treat the diarrhoea? Anything else? RECORD ALL MENTIONED.	RECOMMENDED HOME FLUID .... A TABLET OR SYRUP ..... B INJECTION ..... C (I.V.) INTRAVENOUS ..... D HOME REMEDIES/ HERBAL MEDICINES ..... E OTHER _____ X (SPECIFY)	RECOMMENDED HOME FLUID ... A TABLET OR SYRUP ..... B INJECTION ..... C (I.V.) INTRAVENOUS ..... D HOME REMEDIES/ HERBAL MEDICINES ..... E OTHER _____ X (SPECIFY)	RECOMMENDED HOME FLUID . A TABLET OR SYRUP ..... B INJECTION ..... C (I.V.) INTRAVENOUS ..... D HOME REMEDIES/ HERBAL MEDICINES ..... E OTHER _____ X (SPECIFY)
462	Did you seek advice or treatment for the diarrhoea?	YES ..... 1 NO ..... 2 (SKIP TO 464)	YES ..... 1 NO ..... 2 (SKIP TO 464)	YES ..... 1 NO ..... 2 (SKIP TO 464)
463	Where did you seek advice or treatment? Anywhere else? *RECORD ALL* MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH POST ..... C MOBILE CLINIC ..... D *COMM. HEALTH WORKER* ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... G PHARMACY/PMS ..... H PRIVATE DOCTOR ..... I MOBILE CLINIC ..... J COMM. HEALTH WORKER ..... K OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER SOURCE SHOP ..... M TRAD. PRACTITIONER ..... N SPIRITUAL HEALER ..... P OTHER_____ X (SPECIFY)	PUBLIC SECTOR GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH POST ..... C MOBILE CLINIC ..... D *COMM. HEALTH WORKER* ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... G PHARMACY/PMS ..... H PRIVATE DOCTOR ..... I MOBILE CLINIC ..... J COMM. HEALTH WORKER ..... K OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER SOURCE SHOP ..... M TRAD. PRACTITIONER ..... N SPIRITUAL HEALER ..... P OTHER_____ X (SPECIFY)	PUBLIC SECTOR GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH POST ..... C MOBILE CLINIC ..... D *COMM. HEALTH WORKER* ... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... G PHARMACY/PMS ..... H PRIVATE DOCTOR ..... I MOBILE CLINIC ..... J COMM. HEALTH WORKER ... K OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER SOURCE SHOP ..... M TRAD. PRACTITIONER ..... N SPIRITUAL HEALER ..... P OTHER_____ X (SPECIFY)
464		GO BACK TO 442 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 465.	GO BACK TO 442 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 465.	GO BACK TO 442 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 465.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
465	When a child has diarrhoea, should he/she be given less to drink than usual, about the same amount, or more than usual?	LESS TO DRINK ..... 1 ABOUT SAME AMOUNT TO DRINK ..... 2 MORE TO DRINK ..... 3 DON'T KNOW 8	
466	When a child has diarrhoea, should he/she be given less to eat than usual, about the same amount, or more than usual?	LESS TO EAT ..... 1 ABOUT SAME AMOUNT TO EAT ..... 2 MORE TO EAT ..... 3 DON'T KNOW 8	
467	When a child is sick with diarrhoea, what signs of illness would tell you that he or she should be taken to a health facility or health worker? RECORD ALL MENTIONED.	REPEATED WATERY STOOLS ..... A ANY WATERY STOOLS ..... B REPEATED VOMITING ..... C ANY VOMITING ..... D BLOOD IN STOOLS ..... E FEVER ..... F MARKED THIRST ..... G NOT EATING/NOT DRINKING WELL .... H GETTING SICKER/VERY SICK ..... I NOT GETTING BETTER ..... J OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	
468	When a child is sick with a cough, what signs of illness would tell you that he or she should be taken to a health facility or health worker? RECORD ALL MENTIONED.	FAST BREATHING ..... A DIFFICULT BREATHING ..... B NOISY BREATHING ..... C FEVER ..... D UNABLE TO DRINK ..... E NOT EATING/NOT DRINKING WELL .... F GETTING SICKER/VERY SICK ..... G NOT GETTING BETTER ..... H OTHER _____ X (SPECIFY) DON'T KNOW ..... Z	
469	CHECK 459, ALL COLUMNS: NO CHILD RECEIVED ORS ☐ ▼ ANY CHILD RECEIVED ORS ☐ _____		→ 501
470	Have you ever heard of a special product called "ORT" you can get for the treatment of diarrhoea?	YES ..... 1 NO 2	

SECTION 4C CAUSE OF DEATH OF CHILDREN BORN AND DYING IN THE PAST 3 YEARS

473	**ENTER LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH SINCE JANUARY 1996 IN THE TABLE. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS WHO HAVE DIED. IF 2 OR MORE, BEGIN WITH THE LAST.**			
		LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND -FROM-LAST BIRTH
	LINE NUMBER FROM Q. 212	LINE NUMBER	LINE NUMBER	LINE NUMBER .....
	FROM Q. 212 AND Q 216	NAME _____ DEAD ☐ ALIVE ☐ (GO TO NEXT COLUMN; IF NO MORE BIRTHS, GO TO 501.)	NAME _____ DEAD ☐ ALIVE ☐ (GO TO NEXT COLUMN; IF NO MORE BIRTHS, GO TO 501.)	NAME _____ DEAD ☐ ALIVE ☐ (GO TO NEXT COLUMN; IF NO MORE BIRTHS, GO TO 501.)
474	I know it may be difficult to talk about the child(ren) you had who died, but this information is very important in helping to plan health programs to prevent other children from dying. I would like to ask you some questions about the events and symptoms your child(ren) had during the time before he/she/they died. (We will talk about one child at a time).			
475	What do you think was the cause of (NAME'S) death?	LAST DECEASED CHILD	NEXT-TO-LAST DECEASED CHILD	SECOND -FROM-LAST DECEASED CHILD .....
476	During the illness that led to (NAME'S) death, did you seek advice or treatment anywhere or from anyone? IF YES: Whom did you see? Where did you go? RECORD ALL MENTIONED.	PUBLIC SECTOR GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH POST ..... C MOBILE CLINIC ..... D COMM. HEALTH WORKER .... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... G PHARMACY/PMS ..... H PRIVATE DOCTOR ..... I MOBILE CLINIC ..... J COMM. HEALTH WORKER .... K OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER SHOP ..... M TRAD. PRACTITIONER ..... N SPIRITUAL HEALER ..... P OTHER_____ X (SPECIFY) NONE ..... Z	PUBLIC SECTOR GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH POST ..... C MOBILE CLINIC ..... D COMM. HEALTH WORKER ..... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... G PHARMACY/PMS ..... H PRIVATE DOCTOR ..... I MOBILE CLINIC ..... J COMM. HEALTH WORKER ..... K OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER SHOP ..... M TRAD. PRACTITIONER ..... N SPIRITUAL HEALER ..... P OTHER_____ X (SPECIFY) NONE ..... Z	PUBLIC SECTOR GOVT. HOSPITAL ..... A GOVT. HEALTH CENTER ..... B GOVT. HEALTH POST ..... C MOBILE CLINIC ..... D COMM. HEALTH WORKER .... E OTHER PUBLIC _____ F (SPECIFY) PRIVATE MEDICAL SECTOR PVT. HOSPITAL/CLINIC ..... G PHARMACY/PMS ..... H PRIVATE DOCTOR ..... MOBILE CLINIC ..... COMM. HEALTH WORKER .... K OTHER PRIVATE MEDICAL _____ L (SPECIFY) OTHER SHOP ..... M TRAD. PRACTITIONER ..... N SPIRITUAL HEALER ..... P OTHER_____ X (SPECIFY) NONE ..... Z
477	Where did (NAME) die?	AT HOME ..... 1 IN A HEALTH FACILITY ..... 2 ON THE WAY TO FACILITY ..... 3 OTHER_____ 4 (SPECIFY)	AT HOME ..... 1 IN A HEALTH FACILITY ..... 2 ON THE WAY TO FACILITY ..... 3 OTHER_____ 4 (SPECIFY)	AT HOME ..... IN A HEALTH FACILITY ..... ON THE WAY TO FACILITY ..... OTHER_____ (SPECIFY)

	FROM Q. 212	LAST DECEASED CHILD NAME_____	NEXT-TO-LAST-DECEASED CHILD NAME_____	SECOND-FROM-LAST DECEASED CHILD NAME_____
478	CHECK Q. 219: AGE AT DEATH	LESS THAN 1 MONTH ☐ ▼ 1 MONTH OR OLDER ☐ → SKIP TO 489	LESS THAN 1 MONTH ☐ ▼ 1 MONTH OR OLDER ☐ → SKIP TO 489	LESS THAN 1 MONTH ☐ ▼ 1 MONTH OR OLDER ☐ → SKIP TO 489
479	Was (NAME) born after a difficult labor/delivery?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... NO ..... DOES NOT KNOW .....
480	Was (NAME) malformed in any way? IF YES, SPECIFY	YES ..... 1 _____ (SPECIFY) NO ..... 2 DOES NOT KNOW 8	YES ..... 1 _____ (SPECIFY) NO ..... 2 DOES NOT KNOW 8	YES ..... _____ (SPECIFY) NO ..... DOES NOT KNOW .....
481	Did (NAME) suckle or drink normally during the first two days of life?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... NO ..... DOES NOT KNOW .....
482	Did (NAME) have a decrease in suckling or difficulty suckling during the days before death?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... NO ..... DOES NOT KNOW .....
483	Did (NAME) have convulsions or spasms during the illness that led to death?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... NO ..... DOES NOT KNOW .....
484	During the illness that led to death, did (NAME) have a cough?	YES ..... 1 NO ..... 2 (SKIP TO 488) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 488) DON'T KNOW 8	YES ..... NO ..... (SKIP TO 488) DON'T KNOW .....
485	For how many days did the cough last? IF LESS THAN 1 DAY, WRITE "00"	DAYS ..... ☐☐	DAYS ..... ☐☐	DAYS ..... ☐☐
486	When (NAME) had the illness with the cough, did he/she have difficulty or rapid breathing?	YES ..... 1 NO ..... 2 (SKIP TO 488) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 488) DON'T KNOW 8	YES ..... NO ..... (SKIP TO 488) DON'T KNOW .....
487	For how many days did the difficult/rapid breathing last? IF LESS THAN 1 DAY, WRITE "00"	DAYS ..... ☐☐	DAYS ..... ☐☐	DAYS ..... ☐☐
488	GO BACK TO 475 FOR NEXT DECEASED CHILD; IF NO MORE DEATHS, GO TO 501			
489	During the illness that led to death, did (NAME) have loose or liquid stools, that is, diarrhoea?	YES ..... 1 NO ..... 2 (SKIP TO 493) DON'T KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 493) DON'T KNOW 8	YES ..... NO ..... (SKIP TO 493) DON'T KNOW .....
490	Was the episode of diarrhoea mild or severe?	MILD ..... 1 SEVERE ..... 2 DOES NOT KNOW 8	MILD ..... 1 SEVERE ..... 2 DOES NOT KNOW 8	MILD ..... SEVERE ..... DOES NOT KNOW .....

	FROM Q. 212	LAST DECEASED CHILD NAME _____	NEXT-TO-LAST DECEASED CHILD NAME _____	SECOND-FROM-LAST DECEASED CHILD NAME _____
491	For how long did the diarrhoea last? IF LESS THAN 1 DAY, WRITE "00"	DAYS ..... 1 ▒▒ WEEKS ..... 2 ▒▒ MONTHS ..... 3 ▒▒ DOES NOT KNOW 998	DAYS ..... 1 ▒▒ WEEKS ..... 2 ▒▒ MONTHS ..... 3 ▒▒ DOES NOT KNOW 998	DAYS ..... 1 ▒▒ WEEKS ..... 2 ▒▒ MONTHS ..... 3 ▒▒ DOES NOT KNOW 99
492	Was there any blood in the stool?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... NO ..... DOES NOT KNOW .....
493	During the illness that led to death, did (NAME) have a cough?	YES ..... 1 NO ..... 2 *(SKIP TO 497)* DON'T KNOW 8	YES ..... 1 NO ..... 2 *(SKIP TO 497)* DON'T KNOW 8	YES ..... NO ..... *(SKIP TO 497)* DON'T KNOW .....
494	For how long did the cough last? IF LESS THAN 1 DAY, WRITE "00"	DAYS ..... 1 ▒▒ WEEK ..... 2 ▒▒ MONTHS ..... 3 ▒▒ DOES NOT KNOW 998	DAYS ..... 1 ▒▒ WEEK ..... 2 ▒▒ MONTHS ..... 3 ▒▒ DOES NOT KNOW 998	DAYS ..... 1 ▒▒ WEEK ..... 2 ▒▒ MONTHS ..... 3 ▒▒ DOES NOT KNOW 99
495	When (NAME) had the illness with the cough, did he/she have difficult or rapid breathing?	YES ..... 1 NO ..... 2 *(SKIP TO 497)* DON'T KNOW 8	YES ..... 1 NO ..... 2 *(SKIP TO 497)* DON'T KNOW 8	YES ..... NO ..... *(SKIP TO 497)* DON'T KNOW .....
496	For how long did the difficult/rapid breathing last? IF LESS THAN 1 DAY, WRITE "00"	DAYS ..... 1 ▒▒ WEEK ..... 2 ▒▒ MONTHS ..... 3 ▒▒ DOES NOT KNOW 998	DAYS ..... 1 ▒▒ WEEK ..... 2 ▒▒ MONTHS ..... 3 ▒▒ DOES NOT KNOW 998	DAYS ..... 1 ▒▒ WEEK ..... 2 ▒▒ MONTHS ..... 3 ▒▒ DOES NOT KNOW 99
497	During the illness that led to death, did (NAME) have a fever?	YES ..... 1 NO ..... 2 *(SKIP TO 498)* DON'T KNOW 8	YES ..... 1 NO ..... 2 *(SKIP TO 498)* DON'T KNOW 8	YES ..... NO ..... *(SKIP TO 498)* DON'T KNOW .....
497A	Was the fever of (NAME) mild or severe?	MILD ..... 1 SEVERE ..... 2 DOES NOT KNOW 8	MILD ..... 1 SEVERE ..... 2 DOES NOT KNOW 8	MILD ..... SEVERE ..... DOES NOT KNOW .....
497B	How long did the fever last? IF LESS THAN 1 DAY, WRITE "00"	DAYS ..... 1 ▒▒ WEEK ..... 2 ▒▒ MONTHS ..... 3 ▒▒ DOES NOT KNOW 998	DAYS ..... 1 ▒▒ WEEK ..... 2 ▒▒ MONTHS ..... 3 ▒▒ DOES NOT KNOW 998	DAYS ..... 1 ▒▒ WEEK ..... 2 ▒▒ MONTHS ..... 3 ▒▒ DOES NOT KNOW 99
498	During the illness that led to death, was (NAME) unconscious?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... NO ..... DOES NOT KNOW .....

	FROM Q. 212	LAST DECEASED CHILD NAME _____	NEXT-TO-LAST DECEASED CHILD NAME _____	SECOND-FROM-LAST DECEASED CHILD NAME _____
498A	During the illness that led to death, did (NAME) have convulsions?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... NO ..... DOES NOT KNOW .....
498B	During the illness that led to death, did (NAME) have a skin rash all over his/her body and face?	YES ..... 1 NO ..... 2 (SKIP TO 498E) DOES NOT KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 498E) DOES NOT KNOW 8	YES ..... NO ..... (SKIP TO 498E) DOES NOT KNOW .....
498C	How long did the rash last?? IF LESS THAN 1 DAY, WRITE "00"	DAYS ..... 1 ☐☐ WEEK ..... 2 ☐☐ MONTHS ..... 3 ☐☐ DOES NOT KNOW 998	DAYS ..... 1 ☐☐ WEEK ..... 2 ☐☐ MONTHS ..... 3 ☐☐ DOES NOT KNOW 998	DAYS ..... 1 ☐☐ WEEK ..... 2 ☐☐ MONTHS ..... 3 ☐☐ DOES NOT KNOW 99
498D	During the illness that led to death, was there any discharge from the eyes?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	YES ..... NO ..... DOES NOT KNOW .....
498E	During the illness that led to death, was (NAME) very thin?	YES ..... 1 NO ..... 2 (SKIP TO 498G) DOES NOT KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 498G) DOES NOT KNOW 8	YES ..... NO ..... (SKIP TO 498G) DOES NOT KNOW .....
498F	How long was (NAME) very thin?	DAYS ..... 1 ☐☐ WEEK ..... 2 ☐☐ MONTHS ..... 3 ☐☐ DOES NOT KNOW 998	DAYS ..... 1 ☐☐ WEEK ..... 2 ☐☐ MONTHS ..... 3 ☐☐ DOES NOT KNOW 998	DAYS ..... 1 ☐☐ WEEK ..... 2 ☐☐ MONTHS ..... 3 ☐☐ DOES NOT KNOW 99
498G	During the illness that led to death, did (NAME) have swelling of the feet or legs?	YES ..... 1 NO ..... 2 (SKIP TO 499) DOES NOT KNOW 8	YES ..... 1 NO ..... 2 (SKIP TO 499) DOES NOT KNOW 8	YES ..... NO ..... (SKIP TO 499) DOES NOT KNOW .....
498H	How long was the swelling present? IF LESS THAN 1 DAY, WRITE "00"	DAYS ..... 1 ☐☐ WEEK ..... 2 ☐☐ MONTHS ..... 3 ☐☐ DOES NOT KNOW 998	DAYS ..... 1 ☐☐ WEEK ..... 2 ☐☐ MONTHS ..... 3 ☐☐ DOES NOT KNOW 998	DAYS ..... 1 ☐☐ WEEK ..... 2 ☐☐ MONTHS ..... 3 ☐☐ DOES NOT KNOW 99
499	GO BACK TO 475 FOR NEXT DECEASED CHILD; IF NO MORE DEATHS, GO TO 501			

SECTION 5A. MARRIAGE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	PRESENCE OF OTHERS AT THIS POINT.	YES NO CHILDREN UNDER 10 ..... 1 2 HUSBAND/PARTNER ..... 1 2 OTHER MALES ..... 1 2 OTHER FEMALES 1 2	
502	Are you currently married or living with a man?	YES, CURRENTLY MARRIED ..... 1 YES, LIVING WITH A MAN ..... 2 → 507 NO, NOT IN UNION 3	
503	Do you currently have a regular sexual partner, an occasional sexual partner, multiple sexual partner, or no sexual partner at all?	REGULAR SEXUAL PARTNER ..... 1 OCCASIONAL SEXUAL PARTNER ..... 2 NO SEXUAL PARTNER ..... 3 MULTIPLE SEXUAL PARTNER 4	
504	Have you ever been married or lived with a man?	YES, FORMERLY MARRIED ..... 1 YES, LIVED WITH A MAN ..... 2 → 511 NO ..... 3 → 515	
506	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED ..... 1 DIVORCED ..... 2 → 511 SEPARATED 3	
507	Is your husband/partner living with you now or is he staying elsewhere?	LIVING WITH HER ..... 1 STAYING ELSEWHERE 2	
508	Does your husband/partner have any other wives/partners besides yourself?	YES ..... 1 NO ..... 2 → 511	
509	How many other wives/partners does he have?	NUMBER ..... [ ][ ] DON'T KNOW ..... 98 → 511	
510	Are you the first, second,.... wife?	RANK ..... [ ][ ]	
511	Have you been married or lived with a man only once, or more than once?	ONCE ..... 1 MORE THAN ONCE 2	
512	CHECK 511: MARRIED/LIVED WITH A MAN ONLY ONCE → In what month and year did you start living with your husband/partner? MARRIED/LIVED WITH A MAN MORE THAN ONCE → Now we will talk about your first husband/partner. In what month and year did you start living with him?	MONTH ..... [ ][ ] DON'T KNOW MONTH ..... 98 YEAR ..... [ ][ ][ ][ ] DON'T KNOW YEAR 9998	
513	How old were you when you started living with him?	AGE ..... [ ][ ]	
514A	Before you got married, was your (first) husband related to you in any way?	YES ..... 1 NO ..... 2 → 515	
514B	What type of relationship was it?	FIRST COUSIN ON FATHER'S SIDE ..... 1 FIRST COUSIN ON MOTHER'S SIDE ..... 2 *SECOND COUSIN* ..... 3 UNCLE ..... 4 OTHER BLOOD RELATIVE ..... 5 BROTHER-IN-LAW ..... 6 OTHER NON-BLOOD RELATIVE 7	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
515	Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family planning issues. When was the last time you had sexual intercourse (if ever)?	NEVER ..... 000 DAYS AGO ..... 1 ▒▒ WEEKS AGO ..... 2 ▒▒ MONTHS AGO ..... 3 ▒▒ YEARS AGO ..... 4 ▒▒ BEFORE LAST BIRTH 996	→520
516	CHECK 301 AND 302: KNOWS CONDOM ☐ → The last time you had sex, was a condom used? DOES NOT KNOW CONDOM ☐ → Some men use a condom, which means that they put a rubber sheath on their penis for sexual intercourse. The last time you had sex, was a condom used?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
517	Do you know of a place where you can get condoms?	YES ..... 1 NO 2	→519
518	Where is that? 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. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL ..... 11 GOVERNMENT HEALTH CENTER .. 12 FAMILY PLANNING CLINIC ..... 13 MOBILE CLINIC ..... 14 COMMUNITY HEALTH WORKER .. 15 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PHARMACY/PMS ..... 22 PRIVATE DOCTOR ..... 23 MOBILE CLINIC ..... 24 COMMUNITY HEALTH WORKER .. 25 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) OTHER SOURCE SHOP ..... 31 CHURCH ..... 32 FRIENDS/RELATIVES ..... 33 NGO ..... 34 OTHER _____ 36 (SPECIFY)	
519	How old were you when you first had sexual intercourse?	AGE ..... ▒▒ FIRST TIME WHEN MARRIED 96	

SECTION 5B. CIRCUMCISION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
520	Are you circumcised?	YES ..... 1 NO 2	→ 524
521	What type of circumcision did you have? *Did you have clitoridectomy, excision, or infibulation?*	CLITORIDECTOMY ..... 01 *EXCISION* ..... 02 INFIBULATION ..... 03 OTHER_____ 96 (SPECIFY)	
522	How old were you when you were circumcised?	AGE IN COMPLETED YEARS ..... ☐☐ DOES NOT KNOW 98	
523	Who performed the circumcision?	DOCTOR ..... 01 TRAINED NURSE/MIDWIFE ..... 02 TRADITIONAL BIRTH ATTENDANT ... 03 CIRCUMCISION PRACTITIONER ..... 04 OTHER_____ 96 (SPECIFY) *DOES NOT KNOW* 98	
524	CHECK 214, AND 217: HAS AT LEAST ONE LIVING DAUGHTER ☐ HAS NO LIVING DAUGHTER ☐		→ 530
525	Has (NAME OF ELDEST DAUGHTER) been circumcised?	YES ..... 1 NO 2	→ 527
526	Do you plan to have (NAME OF ELDEST DAUGHTER) circumcised?	YES ..... 1 NO 2	→ 530
527	How old was she when she was circumcised?	AGE IN COMPLETED YEARS ..... ☐☐ DOES NOT KNOW 98	
528	Who performed the circumcision?	DOCTOR ..... 01 TRAINED NURSE/MIDWIFE ..... 02 TRADITIONAL BIRTH ATTENDANT ... 03 CIRCUMCISION PRACTITIONER ..... 04 OTHER_____ 96 (SPECIFY) DOES NOT KNOW 98	
529	Did anyone object to your eldest daughter being circumcised? Anyone else? RECORD ALL PERSONS MENTIONED.	NO ONE OBJECTED ..... A RESPONDENT ..... B RESPONDENT'S HUSBAND ..... C RESPONDENT'S MOTHER ..... D RESPONDENT'S MOTHER-IN-LAW ..... E OTHER RELATIVE OF RESPONDENT .... F OTHER RELATIVE OF HUSBAND ..... G RESPONDENT'S FATHER-IN-LAW ..... H OTHER_____ X (SPECIFY) DOES NOT KNOW ..... Y	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
530	Do you think female circumcision should be continued, or should it be discontinued?	CONTINUED ..... 1 DISCONTINUED ..... 2 → 533 DOES NOT KNOW ..... 8 → 534	
531	What type of female circumcision do you think should be continued: clitoridectomy, excision, or infibulation?	CLITORIDECTOMY ..... 01 EXCISION ..... 02 INFIBULATION ..... 03 OTHER _____ 96 (SPECIFY)	
532	Why do you think female circumcision should be continued? Any other reasons? RECORD ALL REASONS MENTIONED	GOOD TRADITION ..... A CUSTOM AND TRADITION ..... B RELIGIOUS DEMAND ..... C CLEANLINESS ..... D BETTER MARRIAGE PROSPECTS ..... E GREATER PLEASURE OF HUSBAND .... F PRESERVATION OF VIRGINITY/ PREVENTION OF IMMORALITY ..... G OTHER _____ X (SPECIFY) DOES NOT KNOW ..... Y	→ 534
533	Why do you think female circumcision should be discontinued? Any other reasons? RECORD ALL PERSONS MENTIONED.	BAD TRADITION ..... A AGAINST RELIGION ..... B MEDICAL COMPLICATIONS ..... C PAINFUL PERSONAL EXPERIENCE ..... D AGAINST DIGNITY OF WOMEN ..... E PREVENTS SEXUAL SATISFACTION .... F OTHER _____ X (SPECIFY) DOES NOT KNOW ..... Y	
534	CHECK 502: IN UNION ☐ NOT IN UNION ☐ _____		→ 536
535	Does your husband/partner think female circumcision should be continued or discontinued?	CONTINUED ..... 1 DISCONTINUED ..... 2 DOES NOT KNOW 8	
536	Has there been any activities against female circumcision in this community?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	

SECTION 6. FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	CHECK 314: NEITHER STERILIZED ☐ ▼ HE OR SHE STERILIZED ☐		→612
602	CHECK 227: NOT PREGNANT OR UNSURE ☐ ▼ PREGNANT ☐ ▼ Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD ..... 1 NO MORE/NONE ..... 2 SAYS SHE CAN'T GET PREGNANT ..... 3 UNDECIDED/DON'T KNOW 8	→606 →604
603	CHECK 227: NOT PREGNANT OR UNSURE ☐ ▼ PREGNANT ☐ ▼ How long would you like to wait from now before the birth of (a/another) child? After the child you are expecting now, how long would you like to wait before the birth of another child?	MONTHS ..... 1 ☐☐ YEARS ..... 2 ☐☐ SOON/NOW ..... 993 SAYS SHE CAN'T GET PREGNANT .... 994 AFTER MARRIAGE ..... 995 OTHER _____ 996 (SPECIFY) DON'T KNOW 998	→606
604	CHECK 227: NOT PREGNANT OR UNSURE ☐ ▼ PREGNANT ☐		→607
605	If you become pregnant in the next few weeks, would you be happy, unhappy, or would it not matter very much?	HAPPY ..... 1 UNHAPPY ..... 2 WOULD NOT MATTER 3	
606	CHECK 313: USING A METHOD? NOT ASKED ☐ ▼ NOT CURRENTLY USING ☐ ▼ CURRENTLY USING ☐		→612
607	Do you think you will use a method to delay or avoid pregnancy within the next 12 months?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→609
608	Do you think you will use a method to delay or avoid pregnancy at any time in the future?	YES ..... 1 NO ..... 2 DON'T KNOW 8	→610

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
609	Which method would you prefer to use?	PILL ..... 01 IUD ..... 02 INJECTABLES ..... 03 IMPLANTS ..... 04 DIAPHRAGM/FOAM/JELLY ..... 05 CONDOM/FEMIDOM ..... 06 FEMALE STERILIZATION ..... 07 MALE STERILIZATION ..... 08 PERIODIC ABSTINENCE ..... 09 WITHDRAWAL ..... 10 OTHER _____ 96 (SPECIFY) UNSURE 98	→612
610	What is the main reason that you think you will never use a method?	NOT CURRENTLY MARRIED ..... 11 FERTILITY-RELATED REASONS INFREQUENT SEX ..... 22 MENOPAUSAL/HYSTERECTOMY ... 23 SUBFECUND/INFECUND ..... 24 WANTS MORE CHILDREN ..... 26 OPPOSITION TO USE RESPONDENT OPPOSED ..... 31 HUSBAND OPPOSED ..... 32 OTHERS OPPOSED ..... 33 RELIGIOUS PROHIBITION ..... 34 LACK OF KNOWLEDGE KNOWS NO METHOD ..... 41 KNOWS NO SOURCE ..... 42 METHOD-RELATED REASONS HEALTH CONCERNS ..... 51 FEAR OF SIDE EFFECTS ..... 52 LACK OF ACCESS/TOO FAR ..... 53 COST TOO MUCH ..... 54 INCONVENIENT TO USE ..... 55 INTERFERES WITH BODY'S NORMAL PROCESSES ..... 56 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	→612
611	Would you ever use a method if you were married?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
612	CHECK 216: HAS LIVING CHILDREN ☐ ▼ If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ ▼ If you could choose exactly the number of children to have in your whole life, how many would that be? PROBE FOR A NUMERIC RESPONSE.	NUMBER ..... ▒▒ OTHER _____ 96 (SPECIFY)	→614

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
613	How many of these children would you like to be boys, how many would you like to be girls and for how many would it not matter?	BOYS NUMBER ..... ▒▒ OTHER_____ 96 (SPECIFY) GIRLS NUMBER ..... ▒▒ OTHER_____ 96 (SPECIFY) EITHER NUMBER ..... ▒▒ OTHER_____ 96 (SPECIFY)	
614	Would you say that you approve or disapprove of couples using a method to avoid getting pregnant?	APPROVE ..... 1 DISAPPROVE ..... 2 NO OPINION 3	
615	Is it acceptable or not acceptable to you for information on family planning to be provided: On the radio? On the television?	ACCEPTABLE / NOT ACCEPTABLE / DK RADIO ..... 1 2 8 TELEVISION 1 2 8	
616	In the last few months, have you heard about family planning: On the radio? On the television? In a newspaper or magazine? From a poster? From leaflets or brochures? From town crier Any Other_____ (SPECIFY)	YES / NO RADIO ..... 1 2 TELEVISION ..... 1 2 NEWSPAPER OR MAGAZINE ..... 1 2 POSTER ..... 1 2 LEAFLETS OR BROCHURES ..... 1 2 TOWN CRIER ..... 1 2 OTHER_____ X	
617 617B	In the last few months, have you heard about any message on Radio/T.V. on condom use? If Yes, (Specify)_____	YES ..... 1 NO 2	
618	In the last few months have you discussed the practice of family planning with your friends, neighbors, or relatives/Spouse?	YES ..... 1 NO 2	→620
619	With whom? Anyone else? RECORD ALL MENTIONED.	HUSBAND/PARTNER ..... A MOTHER ..... B FATHER ..... C SISTER(S) ..... D BROTHER(S) ..... E DAUGHTER ..... F MOTHER-IN-LAW ..... G FRIENDS/NEIGHBORS ..... H OTHER_____ X (SPECIFY)	
620	CHECK 502: YES, CURRENTLY MARRIED ▼ ☐ YES, LIVING WITH A MAN ▼ ☐ NO, NOT IN UNION ☐_____		→701

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
621	Spouses/partners do not always agree on everything. Now I want to ask you about your husband's/partner's views on family planning. Do you think that your husband/partner approves or disapproves of couples using a method to avoid pregnancy?	APPROVES ..... 1 DISAPPROVES ..... 2 DON'T KNOW 8	
622	How often have you talked to your husband/partner about family planning in the past year?	NEVER ..... 1 ONCE OR TWICE ..... 2 MORE OFTEN 3	
623	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 ..... 1 MORE CHILDREN ..... 2 FEWER CHILDREN ..... 3 DON'T KNOW 8	

SECTION 7. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	CHECK 502 AND 504: CURRENTLY MARRIED/ LIVING WITH A MAN ▼ ☐ FORMERLY MARRIED/ LIVED WITH A MAN ☐ NEVER MARRIED AND NEVER IN UNION ☐		→703 →709
702	How old was your husband/partner on his last birthday?	AGE ..... ▒▒	
703	Did your (last) husband/partner ever attend school?	YES ..... 1 NO 2	→706
704	What was the highest level of school he attended: primary, secondary, or higher?	PRIMARY ..... 1 SECONDARY ..... 2 HIGHER ..... 3 DON'T KNOW 8	→706
705	What was the highest (grade/form/year) he completed at that level?	GRADE ..... ▒▒ DON'T KNOW 98	
706	What (is/was) your (last) husband/partner's occupation? That is, what kind of work (does/did) he mainly do?	▒▒▒ _____ _____	
707	CHECK 706: WORKS (WORKED) IN AGRICULTURE ☐ ▼ DOES (DID) NOT WORK IN AGRICULTURE ☐		→709
708	(Does/did) your husband/partner work mainly on his own land or on family land, or (does/did) he rent land, or (does/did) he work on someone else's land?	HIS LAND ..... 1 FAMILY LAND ..... 2 RENTED LAND ..... 3 SOMEONE ELSE'S LAND 4	
709	Aside from your own housework, are you currently working?	YES ..... 1 NO 2	→712
710	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. Are you currently doing any of these things or any other work?	YES ..... 1 NO 2	→712
711	Have you done any work in the last 12 months?	YES ..... 1 NO 2	→801A
712	What is your occupation, that is, what kind of work do you mainly do?	▒▒▒ _____ _____	
713	CHECK 712: WORKS IN AGRICULTURE ☐ ▼ DOES NOT WORK IN AGRICULTURE ☐		→715

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
714	Do you work mainly on your own land or on family land, or do you rent land or work on someone else's land?	OWN LAND ..... 1 FAMILY LAND ..... 2 RENTED LAND ..... 3 SOMEONE ELSE'S LAND 4	
715	Do you do this work for a member of your family, for someone else, or are you self-employed?	FOR FAMILY MEMBER ..... 1 FOR SOMEONE ELSE ..... 2 SELF-EMPLOYED 3	
716	*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	→718 →719
717	During the last 12 months, how many months did you work?	NUMBER OF MONTHS ..... [ ][ ]	
718	During the last 12 months, how many days a week did you usually work (in the months that you worked) ?	NUMBER OF DAYS ..... [ ]	→720
719	During the last 12 months, approximately how many days did you work?	NUMBER OF DAYS ..... [ ][ ][ ]	
720	Do you earn cash for your work? PROBE: Do you make money for working?	YES ..... 1 NO 2	→723
721	How much do you usually earn for this work? PROBE: Is this by the day, by the week, or by the month?	PER HOUR ..... 1 [ ][ ][ ][ ][ ] PER DAY ..... 2 [ ][ ][ ][ ][ ] PER WEEK ..... 3 [ ][ ][ ][ ][ ] PER MONTH ..... 4 [ ][ ][ ][ ][ ] PER YEAR ..... 5 [ ][ ][ ][ ][ ] OTHER _____ 999996 (SPECIFY)	
722	CHECK 502: YES, CURRENTLY MARRIED, LIVING WITH A MAN ☐ ▼ Who mainly decides how the money you earn will be used: you, your husband/partner, you and your husband/partner jointly, or someone else? NO, NOT IN UNION ☐ ▼ Who mainly decides how the money you earn will be used: you, someone else, or you and someone else jointly?	RESPONDENT DECIDES ..... 1 HUSBAND/PARTNER DECIDES ..... 2 JOINTLY WITH HUSBAND/PARTNER ... 3 SOMEONE ELSE DECIDES ..... 4 JOINTLY WITH SOMEONE ELSE 5	
723	Do you usually work at home or away from home?	HOME ..... 1 AWAY 2	
724	CHECK 217 AND 218: IS A CHILD LIVING AT HOME WHO IS AGE 5 OR LESS? YES ☐ ▼ NO ☐ _____		→801A

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
725	Who usually takes care of (NAME OF YOUNGEST CHILD AT HOME) while you are working?	RESPONDENT ..... 01 HUSBAND/PARTNER ..... 02 OLDER FEMALE CHILD ..... 03 OLDER MALE CHILD ..... 04 OTHER RELATIVES ..... 05 NEIGHBOURS ..... 06 FRIENDS ..... 07 SERVANTS/HIRED HELP ..... 08 CHILD IS IN SCHOOL ..... 09 INSTITUTIONAL CHILD CARE ..... 10 HAS NOT WORKED SINCE LAST BIRTH ..... 95 OTHER_____ 96 (SPECIFY)	

SECTION 8. AIDS AND OTHER SEXUALLY TRANSMITTED DISEASES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801A	Have you heard about diseases that can be transmitted through sexual intercourse?	YES ..... 1 NO ..... 2 → 801M	
801B	Which diseases do you know? RECORD ALL RESPONSES	SYPHILIS ..... A GONORRHEA ..... B AIDS ..... C GENITAL WARTS/CONDYLOMATA ..... D OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) DOES NOT KNOW ..... Z	
801C	CHECK 515: HAS HAD SEXUAL INTERCOURSE ☐ HAS NEVER HAD SEXUAL INTERCOURSE ☐		→ 801M
801D	During the last twelve months, did you have any of these diseases?	YES ..... 1 NO ..... 2 → 801M DOES NOT KNOW ..... 8 → 801M	
801E	Which of the diseases did you have? RECORD ALL RESPONSES	SYPHILIS ..... A GONORRHEA ..... B AIDS ..... C GENITAL WARTS/CONDYLOMATA ..... D OTHER _____ W (SPECIFY) OTHER _____ X (SPECIFY) DOES NOT KNOW ..... Z	
801F	The last time you had (DISEASE(S) FROM 801E) did you seek advice or treatment?	YES ..... 1 NO ..... 2 → 801J	
801G	In the last 12 months, did you have a discharge from your virgina?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
801H	In the last 12 months, did you have sore or ulcer in your private part?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
801I	Where did you seek advice or treatment? ANY OTHER PLACE OR PERSON RECORD ALL MENTIONED	PUBLIC SECTOR GOVT. HOSPITAL ..... A HEALTH CENTER ..... B FP CLINIC ..... C MOBILE CLINIC ..... D DISPENSARY ..... E OTHER PUBLIC SECTOR ..... F MEDICAL PRIVATE SECTOR PRIVATE HOSPITAL/CLINIC ..... G PHARMACY/PMS ..... H PRIVATE DOCTOR ..... I MOBILE CLINIC ..... J OTHER MED. PRIVATE SECTOR ..... K OTHER SHOP ..... L RELATIVES/FRIENDS ..... M TRADITIONAL HEALER ..... N OTHER _____ X (SPECIFY) DOES NOT KNOW ..... Z	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801J	When you had (DISEASE(S) from 801E) did you inform your partner(s)?	YES ..... 1 NO 2	
801K	When you had (DISEASE(S) from 801E) did you do something not to infect your partner(s)?	YES ..... 1 NO ..... 2 PARTNER ALREADY INFECTED ..... 3 → 801M	
801L	What did you do? RECORD ALL MENTIONED	NO SEXUAL INTERCOURSE ..... A USED CONDOMS ..... B TOOK MEDICINES ..... C REFERRED PARTNER TO HEALTH WORKER ..... D OTHER_____ X (SPECIFY)	
801M	CHECK 801B: DID NOT MENTION "AIDS" ☐ ▼ MENTIONED "AIDS" ☐ _____		→ 802
801N	Have you ever heard of a disease called 'AIDS'?	YES ..... 1 NO 2	→ 811C
802	From which sources of information have you learned most about AIDS?? ANY OTHER SOURCES? RECORD ALL MENTIONED.	RADIO ..... A T.V ..... B NEWSPAPER/MAGAZINE ..... C PAMPHLETS/POSTERS ..... D HEALTH WORKERS ..... E MOSQUES/CHURCHES ..... F SCHOOLS/TEACHERS ..... G COMMUNITY MEETINGS ..... H FRIENDS/RELATIVES ..... I WORKPLACE ..... J OTHER_____ X (SPECIFY)	
802B	How can a person get AIDS? ANY OTHER WAYS? RECORD ALL MENTIONED.	SEXUAL INTERCOURSE ..... A SEXUAL INTERCOURSE WITH MULTIPLE PARTNERS ..... B SEX WITH PROSTITUTES ..... C NOT USING CONDOM ..... D HOMOSEXUAL CONTACT ..... E BLOOD TRANSFUSION ..... F INJECTIONS ..... G KISSING ..... H MOSQUITO BITES ..... I CIRCUMCISION ..... J OTHER_____ W (SPECIFY) OTHER_____ X (SPECIFY) DON'T KNOW ..... Z	
803	Is there anything a person can do to avoid getting HIV or the virus that causes AIDS?	YES ..... 1 NO ..... 2 DON'T KNOW ..... 8 → 807	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
804	What can a person do? ANY OTHER WAYS? RECORD ALL MENTIONED.	SAFE SEX ..... A ABSTAIN FROM SEX ..... B USE CONDOMS ..... C AVOID MULTIPLE SEX PARTNERS ..... D AVOID SEX WITH PROSTITUTES ..... E AVOID SEX WITH HOMOSEXUALS ..... F ENSURE SAFE BLOOD TRANSFUSIONS ..... G ENSURE INJECTIONS WITH STERILIZED NEEDLES ..... H ENSURE CIRCUMCISION WITH CLEAN BLADES/KNIVES ..... I AVOID KISSING ..... J AVOID MOSQUITO BITES ..... K SEEK PROTECTION FROM TRADITIONAL HEALER ..... L OTHER_____ W (SPECIFY) OTHER_____ X (SPECIFY) DOES NOT KNOW ..... Z	
805	CHECK 804: MENTION "SAFE SEX" ☐ ▼ DID NOT MENTION "SAFE SEX" ☐		→ 807
806	What does "safe sex" mean to you? RECORD ALL MENTIONED	ABSTAIN FROM SEX ..... B USE CONDOMS ..... C HAVE ONLY ONE SEX PARTNER ..... D AVOID SEX WITH PROSTITUTES ..... E AVOID SEX WITH HOMOSEXUALS ..... F OTHER_____ X (SPECIFY) DOES NOT KNOW ..... Z	
807	Is it possible for a healthy-looking person to have the AIDS virus?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	
808	Do you think that persons with AIDS almost never die from the disease, sometimes die, or almost always die from the disease?	ALMOST NEVER ..... 1 SOMETIMES ..... 2 ALMOST ALWAYS ..... 3 DOES NOT KNOW 8	
808A	Can AIDS be cured?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	
808B	Can AIDS be transmitted from mother to child?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	→ 808D
808C	What can an infected pregnant mother do to avoid infecting her child with HIV?	TAKE MEDICATION LIKE AZT ..... 1 DO NOT BREASTFEED ..... 2 OTHER_____ 8 (SPECIFY)	
808D	Do you personally know someone who has AIDS or has died of AIDS?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
809	Do you think your chances of getting AIDS are small, moderate, great, or no risk at all?	SMALL ..... 1 MODERATE ..... 2 GREAT ..... 3 →809C NO RISK AT ALL ..... 4 HAS AIDS ..... 5 →811A	
809B	Why do you think that you have (NO RISK/A SMALL CHANCE) of getting AIDS? ANY OTHER REASONS? RECORD ALL MENTIONED.	ABSTAIN FROM SEX ..... B USE CONDOMS ..... C AVOID MULTIPLE SEX PARTNERS ..... D AVOID SEX WITH PROSTITUTES ..... E AVOID SEX WITH HOMOSEXUALS ..... F ENSURE SAFE BLOOD TRANSFUSION ..... G ENSURE INJECTION WITH STERILIZED NEEDLE ..... H AVOID KISSING ..... I AVOID MOSQUITO BITES ..... J SEEK PROTECTION FROM TRADITIONAL HEALER ..... K OTHER_____ W (SPECIFY) OTHER_____ X (SPECIFY) DOES NOT KNOW ..... Z	
809C	Why do you think that you have a (MODERATE/GREAT CHANCE) of getting AIDS? ANY OTHER REASONS? RECORD ALL MENTIONED.	DO NOT USE CONDOMS ..... C MORE THAN ONE SEXUAL PARTNER ..... D SEX WITH PROSTITUTES ..... E SPOUSE HAS OTHER (PARTNER(S) ..... F HOMOSEXUAL CONTACT ..... G HAD BLOOD TRANSFUSION ..... H HAD INJECTIONS WITH UNSTERILISED NEEDLES ..... I SEEK PROTECTION FROM TRADITIONAL HEALER ..... K OTHER_____ W (SPECIFY) OTHER_____ X (SPECIFY)	
811A	Since you heard of AIDS, have you changed your behaviour to prevent getting AIDS? IF YES, WHAT DID YOU DO? RECORD ALL MENTIONED	DIDN'T START SEX ..... A STOPPED ALL SEX ..... B STARTED USING CONDOMS ..... C RESTRICTED SEX TO ONE PARTNER ..... D REDUCED NUMBER OF PARTNERS ..... E ADVICE SPOUSE/PARTNER TO BE FAITHFUL ..... F NO MORE HOMOSEXUAL CONTACTS ..... G ENSURE INJECTION WITH STERILIZED NEEDLES ..... H OTHER_____ W (SPECIFY) OTHER_____ X (SPECIFY) NO BEHAVIOUR CHANGE ..... Y	→811C

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
811B	Has your knowledge of AIDS influenced or changed your decisions about having sex or your sexual behaviour? IF YES, IN WHAT WAY? RECORD ALL MENTIONED	DIDN'T START SEX ..... A STOPPED ALL SEX ..... B STARTED USING CONDOMS ..... C RESTRICTED SEX TO ONE PARTNER ..... D REDUCED NUMBER OF PARTNERS ..... E NO MORE HOMOSEXUAL CONTACTS ..... F ADVISED PARTNER TO BE FAITHFUL ..... G OTHER_____ W (SPECIFY) OTHER_____ Y (SPECIFY) NO BEHAVIOUR CHANGE ..... Z	
811C	Some people use a condom for sexual intercourse to avoid getting AIDS or other sexually transmitted diseases? Have you ever heard of this?	YES ..... 1 NO 2	→811F
811D	CHECK 515: HAS HAD SEXUAL INTERCOURSE ☐ HAS NEVER HAD SEXUAL INTERCOURSE ☐		→901
811E	We may already have talked about this. Have you ever used a condom for sex to avoid getting or transmitted diseases, such as AIDS?	YES ..... 1 NO 2	
811F	Have you given or received money, gifts or favours in return for sex at any time in the last 12 months?	YES ..... 1 NO 2	
811G	If yes, was a condom used?	YES ..... 1 NO 2	

SECTION 9. MATERNAL MORTALITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	Now I would like to ask you some questions about your brothers and sisters, that is, all of the children born to your natural mother, including those who are living with you, those living elsewhere and those who have died. How many children did your mother give birth to, including you?	NUMBER OF BIRTHS TO NATURAL MOTHER	
902	CHECK 901: TWO OR MORE BIRTHS ☐ ▼ ONLY ONE BIRTH (RESPONDENT ONLY) ☐		→916
903	How many of these births did your mother have before you were born?	NUMBER OF PRECEDING BIRTHS	

	(1)	(2)	(3)	(4)	(5)
904 What was the name given to your oldest (next oldest) brother or sister?	.....	.....	.....	.....	.....
905 Is (NAME) male or female?	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2
906 Is (NAME) still alive?	YES ..... 1 NO ..... 2 GO TO 908 DON'T KNOW ..... 8 GO TO [2]	YES ..... 1 NO ..... 2 GO TO 908 DON'T KNOW ..... 8 GO TO [3]	YES ..... 1 NO ..... 2 GO TO 908 DON'T KNOW ..... 8 GO TO [4]	YES ..... 1 NO ..... 2 GO TO 908 DON'T KNOW ..... 8 GO TO [5]	YES ..... 1 NO ..... 2 GO TO 908 DON'T KNOW ..... 8 GO TO [6]
907 How old is (NAME)	GO TO [2]	GO TO [3]	GO TO [4]	GO TO [5]	GO TO [6]
908 In what year did (NAME) die?	19 GO TO 910 DON'T KNOW 98	19 GO TO 910 DON'T KNOW 98	19 GO TO 910 DON'T KNOW 98	19 GO TO 910 DON'T KNOW 98	19 GO TO 910 DON'T KNOW 98
909 How many years ago did (NAME) die					
910 How old was (NAME) when he/she died?	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [2]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [3]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [4]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [5]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [6]
911 Was (NAME) pregnant when she died?	YES ..... 1 GO TO 914 NO 2	YES ..... 1 GO TO 914 NO 2	YES ..... 1 GO TO 914 NO 2	YES ..... 1 GO TO 914 NO 2	YES ..... 1 GO TO 914 NO 2
912 Did (NAME) die during childbirth?	YES ..... 1 GO TO 915 NO 2	YES ..... 1 GO TO 915 NO 2	YES ..... 1 GO TO 915 NO 2	YES ..... 1 GO TO 915 NO 2	YES ..... 1 GO TO 915 NO 2
913 Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES ..... 1 NO ..... 2 GO TO 915	YES ..... 1 NO ..... 2 GO TO 915	YES ..... 1 NO ..... 2 GO TO 915	YES ..... 1 NO ..... 2 GO TO 915	YES ..... 1 NO ..... 2 GO TO 915

914 Was her death due to complications of pregnancy or childbirth?	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2
915 How many children did (NAME) give birth to during her lifetime?	GO TO [2]	GO TO [3]	GO TO [4]	GO TO [5]	GO TO [6]
904 What was the name given to your oldest (next oldest) brother or sister?	(6)	(7)	(8)	(9)	(10) .....
905 Is (NAME) male or female?	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2
906 Is (NAME) still alive?	YES ..... 1 NO ..... 2 GO TO 908 DON'T KNOW ..... 8 GO TO [7]	YES ..... 1 NO ..... 2 GO TO 908 DON'T KNOW ..... 8 GO TO [8]	YES ..... 1 NO ..... 2 GO TO 908 DON'T KNOW ..... 8 GO TO [9]	YES ..... 1 NO ..... 2 GO TO 908 DON'T KNOW ..... 8 GO TO [10]	YES ..... 1 NO ..... 2 GO TO 908 DON'T KNOW ..... 8 GO TO [11]
907 How old is (NAME)	GO TO [7]	GO TO [8]	GO TO [9]	GO TO [10]	GO TO [11]
908 In what year did (NAME) die?	19 GO TO 910 DON'T KNOW 98	19 GO TO 910 DON'T KNOW 98	19 GO TO 910 DON'T KNOW 98	19 GO TO 910 DON'T KNOW 98	19 GO TO 910 DON'T KNOW 98
909 How many years ago did (NAME) die					
910 How old was (NAME) when he/she died?	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [7]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [8]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [9]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [10]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [11]
911 Was (NAME) pregnant when she died?	YES ..... 1 GO TO 914 NO 2	YES ..... 1 GO TO 914 NO 2	YES ..... 1 GO TO 914 NO 2	YES ..... 1 GO TO 914 NO 2	YES ..... 1 GO TO 914 NO 2
912 Did (NAME) die during childbirth?	YES ..... 1 GO TO 915 NO 2	YES ..... 1 GO TO 915 NO 2	YES ..... 1 GO TO 915 NO 2	YES ..... 1 GO TO 915 NO 2	YES ..... 1 GO TO 915 NO 2
913 Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES ..... 1 NO ..... 2 GO TO 915	YES ..... 1 NO ..... 2 GO TO 915	YES ..... 1 NO ..... 2 GO TO 915	YES ..... 1 NO ..... 2 GO TO 915	YES ..... 1 NO ..... 2 GO TO 915
914 Was her death due to complications of pregnancy or childbirth?	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2
915 How many children did (NAME) give birth to during her lifetime?	GO TO [7]	GO TO [8]	GO TO [9]	GO TO [10]	GO TO [11]

904 What was the name given to your oldest (next oldest) brother or sister?	(11)	(12)	(13)	(14)	(15) .....
905 Is (NAME) male or female?	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2
906 Is (NAME) still alive?	YES ..... 1 NO ..... 2 GO TO *908* DON'T KNOW ..... 8 GO TO [12]	YES ..... 1 NO ..... 2 GO TO *908* DON'T KNOW ..... 8 GO TO [13]	YES ..... 1 NO ..... 2 GO TO *908* DON'T KNOW ..... 8 GO TO [14]	YES ..... 1 NO ..... 2 GO TO *908* DON'T KNOW ..... 8 GO TO [15]	YES ..... 1 NO ..... 2 GO TO *908* DON'T KNOW ..... 8 GO TO [16]
907 How old is (NAME)	GO TO [12]	GO TO [13]	GO TO [14]	GO TO [15]	
908 In what year did (NAME) die?	19 GO TO 910 DON'T KNOW 98	19 GO TO 910 DON'T KNOW 98	19 GO TO 910 DON'T KNOW 98	19 GO TO 910 DON'T KNOW 98	19 GO TO 910 DON'T KNOW 98
909 How many years ago did (NAME) die					
910 How old was (NAME) when he/she died?	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [12]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [13]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [14]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [15]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [916]
911 Was (NAME) pregnant when she died?	YES ..... 1 GO TO 914 NO 2	YES ..... 1 GO TO 914 NO 2	YES ..... 1 GO TO 914 NO 2	YES ..... 1 GO TO 914 NO 2	YES ..... 1 GO TO 914 NO 2
912 Did (NAME) die during childbirth?	YES ..... 1 GO TO 915 NO 2	YES ..... 1 GO TO 915 NO 2	YES ..... 1 GO TO 915 NO 2	YES ..... 1 GO TO 915 NO 2	YES ..... 1 GO TO 915 NO 2
913 Did (NAME) die *within two months after* the end of a pregnancy or childbirth?	YES ..... 1 NO ..... 2 GO TO 915	YES ..... 1 NO ..... 2 GO TO 915	YES ..... 1 NO ..... 2 GO TO 915	YES ..... 1 NO ..... 2 GO TO 915	YES ..... 1 NO ..... 2 GO TO 915
914 Was her death due to complications of pregnancy or childbirth?	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2
915 How many children did (NAME) give birth to during her lifetime?	GO TO [12]	GO TO [13]	GO TO [14]	GO TO [15]	

IF NO MORE BROTHERS OR SISTERS, GO TO 916

916 RECORD THE TIME (END OF INTERVIEW)	HOUR ..... MINUTES .....

SECTION 10. HEIGHT AND WEIGHT

1001	CHECK 215: ONE OR MORE BIRTHS SINCE JAN. 1996	☐ ▼	NO BIRTHS SINCE JAN. 1996 ☐ → END	

IN 1002 (COLUMNS 2 AND 3) RECORD THE LINE NUMBER FOR EACH CHILD BORN SINCE JANUARY 1996 AND STILL ALIVE. IN 1003 AND 1004 RECORD THE NAME AND BIRTH DATE FOR THE RESPONDENT AND FOR ALL LIVING CHILDREN BORN SINCE JANUARY 1996. IN 1006 AND 1008 RECORD HEIGHT AND WEIGHT OF THE RESPONDENT AND THE LIVING CHILDREN.
(NOTE: ALL RESPONDENTS WITH ONE OR MORE BIRTHS SINCE JANUARY 1996 SHOULD BE WEIGHED AND MEASURED EVEN IF ALL OF THE CHILDREN HAVE DIED. IF THERE ARE MORE THAN 2 LIVING CHILDREN BORN SINCE JANUARY 1996, GO TO NEXT PAGE).

		1) RESPONDENT	2) YOUNGEST LIVING CHILD	3) NEXT-TO-YOUNGEST LIVING CHILD
1002	LINE NO. FROM Q212			
1003	NAME FROM Q212 FOR CHILDREN	(NAME)	(NAME)	(NAME)
1004	DATE OF BIRTH FROM Q215, AND ASK FOR DAY OF BIRTH		DAY MONTH YEAR	DAY MONTH YEAR
1005	BCG SCAR ON TOP OF LEFT SHOULDER		SCAR SEEN ..... 1 NO SCAR 2	SCAR SEEN ..... 1 NO SCAR 2
1006	HEIGHT (In centimeters)	.	.	.
1007	WAS LENGTH/HEIGHT OF CHILD MEASURED LYING DOWN OR STANDING UP?		LYING ..... 1 STANDING 2	LYING ..... 1 STANDING 2
1008	WEIGHT (In kilograms)	.	0 .	0 .
1009	DATE WEIGHED AND MEASURED	DAY MONTH YEAR	DAY MONTH YEAR	DAY MONTH YEAR
1010	RESULT	MEASURED ..... 1 NOT PRESENT ..... 3 REFUSED ..... 4 OTHER ..... 6 (SPECIFY)	MEASURED ..... 1 CHILD SICK ..... 2 CHILD NOT PRESENT ..... 3 CHILD REFUSED ..... 4 MOTHER REFUSED ..... 5 OTHER ..... 6 (SPECIFY)	MEASURED ..... 1 CHILD SICK ..... 2 CHILD NOT PRESENT ..... 3 CHILD REFUSED ..... 4 MOTHER REFUSED ..... 5 OTHER ..... 6 (SPECIFY)
1011	NAME OF MEASURER:		NAME OF ASSISTANT:	

				4) SECOND -TO-YOUNGEST LIVING CHILD
1002	LINE NO. FROM Q212			

1003	NAME FROM Q212 FOR CHILDREN			(NAME)
1004	DATE OF BIRTH FROM Q215, AND ASK FOR DAY OF BIRTH			DAY ..... MONTH ..... YEAR .....
1005	BCG SCAR ON TOP OF LEFT SHOULDER			SCAR SEEN ..... 1 NO SCAR 2
1006	HEIGHT (In centimeters)			.
1007	WAS LENGTH/HEIGHT OF CHILD MEASURED LYING DOWN OR STANDING UP?			LYING ..... 1 STANDING 2
1008	WEIGHT (In kilograms)			0 .
1009	DATE WEIGHED AND MEASURED			DAY ..... MONTH ..... YEAR .....
1010	RESULT			MEASURED ..... 1 CHILD SICK ..... 2 CHILD NOT PRESENT ..... 3 CHILD REFUSED ..... 4 MOTHER REFUSED ..... 5 OTHER ..... 6 (SPECIFY)
1011	NAME OF MEASURER:		NAME OF ASSISTANT:	

INTERVIEWER'S OBSERVATIONS

To be filled in after completing interview

Comments about Respondent: _____

_____

_____

Comments on Specific Questions: _____

_____

_____

Any other Comments: _____

_____

_____

SUPERVISOR'S OBSERVATIONS

_____

_____

_____

Name of Supervisor: _____ Date: _____

EDITOR'S OBSERVATIONS

_____

_____

_____

Name of Editor: _____ Date: _____

FEDERAL REPUBLIC OF NIGERIA
NATIONAL POPULATION COMMISSION
1999 DEMOGRAPHIC AND HEALTH SURVEY
INDIVIDUAL QUESTIONNAIRE FOR MEN

IDENTIFICATION	
STATE NAME	
LOCAL GOVT. AREA	
LOCALITY NAME	
ENUMERATION AREA	
*URBAN/RURAL	
**LARGE TOWN/MEDIUM TOWN/SMALL TOWN/VILLAGE	
BUILDING NUMBER	
HOUSEHOLD NAME/NUMBER	
NAME AND LINE NUMBER OF MAN IN HOUSEHOLD SCHEDULE	

INTERVIEWER'S VISITS				
	1	2	3	FINAL VISIT
DATE				DAY / MONTH / YEAR
INTERVIEWER'S NAME				NAME
RESULT				RESULT
NEXT VISIT: DATE				TOTAL NO. OF VISITS
TIME				

RESULT CODES:
1. COMPLETED
2 NOT AT HOME
3. POSTPONED
4. *REFUSED*
5. PARTLY COMPLETED
6. INCAPACITATED
7. DWELLING DESTROYED
8 OTHER ..... (Specify)

SUPERVISOR	FIELD EDITOR	OFFICE EDITOR	KEYED BY
NAME _____	NAME _____		
DATE _____	DATE _____		

* (Urban = 1, Rural = 2)
** (Large Town=1, Medium Town=2, Small Town=3, Village=4)
Large Towns are places with over 1 million population; Medium Towns are places with between 50,000 and 1 million population; Small Towns are placesboth between 20,000 and 50,000 population while places with less than 20,000 are villages.

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	RECORD THE TIME. (START OF INTERVIEW)	HOUR ..... ☐☐ MINUTES ..... ☐☐	
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 large town, medium town, small town, or in the village?	LARGE TOWN ..... 1 MEDIUM TOWN ..... 2 SMALL TOWN ..... 3 VILLAGE 4	
103	How long have you been living continuously in (NAME OF CURRENT PLACE OF RESIDENCE)?	YEARS ..... ☐☐ ALWAYS ..... 95 VISITOR 96	→ 105
104	Just before you moved here, did you live in a large town, medium town, small town, or in the village?	LARGE TOWN ..... 1 MEDIUM TOWN ..... 2 SMALL TOWN ..... 3 VILLAGE 4	
105	In what month and year were you born?	MONTH ..... ☐☐ DON'T KNOW MONTH ..... 98 YEAR ..... ☐☐☐☐ DON'T KNOW YEAR 98	
106	How old were you at your last birthday? COMPARE AND CORRECT 105 AND/OR 106 IF INCONSISTENT.	AGE IN COMPLETED YEARS ..... ☐☐	
107	Have you ever attended school?	YES ..... 1 NO 2	→ 111
108	What is the highest level of school you attended: primary, secondary, or higher?	PRIMARY ..... 1 SECONDARY ..... 2 HIGHER ..... 3 OTHERS ..... 4 SPECIFY	
109	What is the highest (grade/form/year) you completed at that level?	GRADE (YEAR) ..... ☐☐	
110	CHECK 108: PRIMARY ☐ ▼ SECONDARY OR HIGHER ☐		→ 112
111	Can you read and understand a letter or newspaper easily, with difficulty, or not at all?	EASILY ..... 1 WITH DIFFICULTY ..... 2 NOT AT ALL 3	→ 113
112	Do you usually read a newspaper or magazine at least once a week?	YES ..... 1 NO 2	
113	Do you usually listen to radio every day?	YES ..... 1 NO 2	
114	Do you usually watch television at least once a week?	YES ..... 1 NO 2	
115	Are you currently working?	YES ..... 1 NO 2	→ 117
116	Have you done any work in the last 12 months?	YES ..... 1 NO 2	→ 124

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
117	What is your occupation, that is, what kind of work do you mainly do?	....	
118	CHECK 117: WORK IN AGRICULTURE ☐ DOES NOT WORK IN AGRICULTURE ☐		→120
119	Do you work mainly on your own land or on family land, or do you rent land, or work on someone else's land?	OWN LAND ..... 1 FAMILY LAND ..... 2 RENTED LAND ..... 3 SOMEONE ELSE'S LAND 4	
120	Do you do this work for a member of your family, for someone else, or are you self-employed?	FOR FAMILY MEMBER ..... 1 FOR SOMEONE ELSE ..... 2 SELF EMPLOYED 3	
121	Do you usually work at this job 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	→123
122	During the last 12 months, how many months did you work at this job?	NUMBER OF MONTHS	
123	How much do you earn for this work? PROBE: Is this by the hour, by the day, by the week, by the month or by the year?	PER HOUR ..... 1 PER DAY ..... 2 PER WEEK ..... 3 PER MONTH ..... 4 PER YEAR ..... 5 OTHER _____ 99996 (SPECIFY)	
124	What is your religion?	CATHOLIC ..... 1 PROTESTANT ..... 2 OTHER CHRISTIAN ..... 3 ISLAM ..... 4 TRADITIONALIST ..... 5 OTHER _____ 6 (SPECIFY)	
125	What is your ethnic group?	.....	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Now I would like to ask about your children. I am interested only in the children that are biologically yours. Have you ever had children?	YES ..... 1 NO ..... 2 → 206	
202	Do you have any sons or daughters who are now living with you?	YES ..... 1 NO ..... 2 → 204	
203	How many sons live with you? And how many daughters live with you? IF NONE, RECORD '00'.	SONS AT HOME ..... [ ][ ] DAUGHTERS AT HOME ..... [ ][ ]	
204	Do you have any sons or daughters who are alive but do not live with you?	YES ..... 1 NO ..... 2 → 206	
205	How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? IF NONE, RECORD '00'.	SONS ELSEWHERE ..... [ ][ ] DAUGHTERS ELSEWHERE ..... [ ][ ]	
206	Have you ever given birth to a boy or girl who was born alive but later died? IF NO, PROBE: Any baby who cried or showed signs of life but survived only a few hours or days?	YES ..... 1 NO ..... 2 → 208	
207	How many boys have died? And how many girls have died? IF NONE, RECORD '00'.	BOYS DEAD ..... [ ][ ] GIRLS DEAD ..... [ ][ ]	
208	SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL. IF NONE, RECORD '00'.	TOTAL ..... [ ][ ]	
209	CHECK 208: Just to make sure that I have this right: you have had in TOTAL ____ children during your life. Is that correct? YES ☐ ▼ NO ☐ → PROBE AND CORRECT 201-208 AS NECESSARY.		
210	CHECK 208: HAS HAD CHILDREN ☐ ▼ HAS NEVER HAD CHILDREN ☐ → 301		
210A	In what month and year was your **last child** born?	MONTH ..... [ ][ ] YEAR ..... [ ][ ]	
210B	CHECK 201A, LAST CHILD: BORN SINCE JANUARY 1996 ☐ ▼ BEFORE JANUARY 1996 ☐ → 301		
211	When you were expecting your last born child, did you want to have the child then, did you want to wait until later, or did you not want to have any (more) children at all?	THEN ..... 1 LATER ..... 2 NOT AT ALL 3	

SECTION 3. CONTRACEPTION

Now I would like to talk about family planning that is 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 302, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY. CIRCLE CODE 2 IF METHOD IS RECOGNIZED, AND CODE 3 IF NOT RECOGNIZED.
THEN, FOR EACH METHOD WITH CODE 1 OR 2 CIRCLED IN 301 OR 302, ASK 303.

	301 Which ways or methods have you heard about?	302 Have you ever heard of (METHOD)? SPONTANEOUS YES	PROBED YES	NO	303 Have you ever used (METHOD)?
01	PILL Women can take a pill every day.	1	2	3	YES ..... 1 NO, DOES NOT KNOW 2
02	IUD Women can have a loop or coil placed inside them by a doctor or a nurse.	1	2	3	YES ..... 1 NO, DOES NOT KNOW 2
03	INJECTABLES Women can have an injection by a doctor or nurse which stops them from becoming pregnant for several months.	1	2	3	YES ..... 1 NO, DOES NOT KNOW 2
04	IMPLANTS Women can have several small rods placed in their upper arm by a doctor or nurse which can prevent pregnancy for several years.	1	2	3	YES ..... 1 NO, DOES NOT KNOW 2
05	DIAPHRAGM, FOAM, JELLY Women can place a sponge, suppository, diaphragm, jelly, or cream inside themselves before intercourse.	1	2	3	YES ..... 1 NO, DOES NOT KNOW 2
06	CONDOM Men can put a rubber sheath on their penis for sexual intercourse.	1	2	3	YES ..... 1 NO 2
07	FEMALE STERILIZATION Women can have an operation to avoid having any more children.	1	2	3	Have you ever had a partner who had operation to avoid having any more children? YES ..... 1 NO 2
08	MALE STERILIZATION Men can have an operation to avoid having any more children.	1	2	3	Have you ever had a partner who had an operation to avoid having children? YES ..... 1 NO 2
09	RHYTHM, PERIODIC ABSTINENCE Every month that a woman is sexually active she can avoid having sexual intercourse on the days of the month she is most likely to get pregnant.	1	2	3	YES ..... 1 NO, DOES NOT KNOW 2
10	WITHDRAWAL Men can be careful and pull out before climax.	1	2	3	YES ..... 1 NO 2
11	Have you heard of any other ways or methods that women or men can use to avoid pregnancy?	1 _____ (SPECIFY) _____ (SPECIFY)		3	YES ..... 1 NO ..... 2 YES ..... 1 NO 2

304	CHECK 303: NOT A SINGLE "YES" (NEVER USED) →
	AT LEAST ONE "YES" (EVER USED) → SKIP TO 307

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
305	Have you or any of your wives/partners ever used anything or tried in any way to delay or avoid getting pregnant?	YES ..... 1 NO 2	→309
306	What have you used or done? CORRECT 303 AND 304 (AND 302 IF NECESSARY).	_____ _____	
307	Are you or your wife (wives)/partner (s) doing something or using a method to delay or avoid a pregnancy?	YES ..... 1 NO 2	→309
308	Which method are you using?	PILL ..... 01 IUD ..... 02 INJECTABLES ..... 03 IMPLANTS ..... 04 DIAPHRAGM/FOAM/JELLY ..... 05 CONDOM/FEMIDOM ..... 06 FEMALE STERILIZATION ..... 07 MALE STERILIZATION ..... 08 PERIODIC ABSTINENCE ..... 09 WITHDRAWAL ..... 10 OTHER _____ 96 SPECIFY	→401
309	What is the main reason you are not using a method of contraception to avoid pregnancy?	NOT MARRIED ..... 11 FERTILITY-RELATED REASONS NOT HAVING SEX ..... 21 INFREQUENT SEX ..... 22 WIFE NENOPAUSAL/HYSTERECTOMY . 23 WIFE SUBFECUND/ INFECUND . 24 POSTPARTUM/BREAST FEEDING 25 WANTS (MORE) CHILDREN .... 26 WIFE PREGNANT ..... 27 OPPOSITION TO USE RESPONDENT OPPOSED ..... 31 WIFE/PARTNER OPPOSED ..... 32 OTHERS OPPOSED ..... 33 RELIGIOUS PROHIBITION ..... 34 LACK OF KNOWLEDGE KNOWS NO METHOD ..... 41 KNOWS NO SOURCE ..... 42 METHOD-RELATED REASONS HEALTH CONCERNS ..... 51 FEAR OF SIDE EFFECTS ..... 52 LACK OF ACCESS/TOO FAR .... 53 COST TOO MUCH ..... 54 INCONVENIENT TO USE ..... 55 INTERFERES WITH BODY'S NORMAL PROCESSES ..... 56 UP TO THE WOMAN TO USE ..... 61 OTHER _____ 96 SPECIFY DOES NOT KNOW 98	

SECTION 4: MARRIAGE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
401	Are you currently married or living with a woman?	YES, CURRENTLY MARRIED ..... 1 YES, LIVING WITH A WOMAN ..... 2 NO, NOT IN UNION 3	→402A →404
402	How many wife/wives do you have?	NO. OF WIVES	
402A	How many women are you living with as if you are married?	NO. OF WOMEN	
403	WRITE THE LINE NUMBERS FROM THE HOUSEHOLD QUESTIONNAIRE FOR HIS WIFE/WIVES. IF A WIFE DOES NOT LIVE IN THE HOUSEHOLD, WRITE '00'. THE NUMBER OF BOXES FILLED MUST EQUAL THE NUMBER OF WIVES		→407
404	Do you currently have a regular sexual partner, an occasional sexual partner, multiple sexual partners, or no sexual partner at all?	REGULAR SEXUAL PARTNER ..... 1 OCCASIONAL SEXUAL PARTNER ..... 2 NO SEXUAL PARTNER ..... 3 MULTIPLE SEXUAL PARTNERS 4	
405	Have you ever been married or lived with a woman?	YES, FORMERLY MARRIED ..... 1 YES, LIVED WITH A WOMAN ..... 2 NO 3	 →407 →410
406	What is your marital status now: are you widowed, divorced, or separated?	WIDOWED ..... 1 DIVORCED ..... 2 SEPARATED 3	
407	Have you been married or lived with a woman only once, or more than one?	ONCE ..... 1 MORE THAN ONCE 2	
408	CHECK 407: MARRIED/LIVED WITH A WOMAN ONLY ONCE ☐ In what month and year did you start living with your wife/woman? MARRIED/LIVED WITH WOMAN MORE THAN ONCE ☐ Now we will talk about your first wife/woman you lived with. In what month and year did you start living with her?	MONTH ..... DOES NOT KNOW MONTH ..... 98 YEAR ..... DOES NOT KNOW YEAR 98	 →410
409	How old were you when you started living with her?	AGE	
410	Now I need to ask you some questions about sexual activities in order to gain a better understanding of some family planning issues When was the last time you had sexual intercourse (if ever)?	NEVER ..... 000 DAYS AGO ..... 1 WEEKS AGO ..... 2 MONTHS AGO ..... 3 YEARS AGO ..... 4 BEFORE LAST BIRTH 996	→509

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
411	CHECK 301 AND 302: KNOWS CONDOM ☐ → The last time you had sex, was a condom used? DOES NOT KNOW CONDOM ☐ → Some men use a condom, which means that they put a rubber sheath on their penis for sexual intercourse. The last time you had sex, was a condom used?	YES ..... 1 NO 2	
412	Do you know of a place where you can get condom?	YES ..... 1 NO 2	→ 414
413	Where is that? 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. _____ (NAME OF PLACE)	PUBLIC SECTOR GOVERNMENT HOSPITAL ..... 11 GOVERNMENT HEALTH CENTER ..... 12 FAMILY PLANNING CLINIC ..... 13 MOBILE CLINIC ..... 14 COMMUNITY HEALTH WORKER ..... 15 OTHER PUBLIC _____ 16 (SPECIFY) PRIVATE MEDICAL SECTOR PRIVATE HOSPITAL/CLINIC ..... 21 PHARMACY/PMS ..... 22 PRIVATE DOCTOR ..... 23 MOBILE CLINIC ..... 24 COMMUNITY HEALTH WORKER ..... 25 OTHER PRIVATE MEDICAL _____ 26 (SPECIFY) OTHER SOURCE SHOP ..... 31 CHURCH ..... 32 FRIENDS/RELATIVES ..... 33 NGO ..... 34 OTHER _____ 36 (SPECIFY)	
414	CHECK 401: CURRENTLY MARRIED OR LIVING WITH A WOMAN ☐ → In the last 12 months, how many different persons have you had sex with other than your (wife/wives/women you are living with) NO, NOT IN UNION ☐ → In the last 12 months, how many different persons have you had sex with?	NUMBER	
415	How old were you when you first had sexual intercourse?	AGE ..... FIRST TIME WHEN MARRIED 96	

SECTION 5: FERTILITY PREFERENCES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	CHECK 401: NOT IN UNION ☐ ▼ CURRENTLY MARRIED OR LIVING WITH A WOMAN ☐		→503
502	CHECK 404 REGULAR SEXUAL PARTNER ☐ ▼ OCCASIONAL SEXUAL PARTNER ☐ ▼ MULTIPLE SEXUAL PARTNERS ☐ ▼ NO, SEXUAL PARTNER ☐		→505A
503	Is your wife (or one of your wives)/partner pregnant now?	YES ..... 1 NO ..... 2 UNSURE 8	2,8→505A
504	When she became pregnat, did you want her to become pregnant then, did you want her to wait until later, or did you not want this pregnancy at all?	THEN ..... 1 LATER ..... 2 NOT AT ALL 3	→505B
505	A) WIFE/PARTNER NOT PREGNANT OR UNSURE OR NO WIFE/PARTNER ☐ ▼ Now I have some questions about the future. Would you like to have (a/another) child, or would you prefer not to have any (more) children? (B) WIFE/PARTNER PREGNANT ☐ ▼ Now I have some questions about the future. After the child you are expecting now, would you like to have another child, or would you prefer not to have any more children?	HAVE (A/ANOTHER) CHILD ..... 1 NO MORE/NONE ..... 2 SAYS WIFE CAN'T GET PREGNANT 3 SAYS HE CAN'T HAVE ONE ANY MORE ..... 4 UNDECIDED/DON'T KNOW 8	1,2,3,4→507
506	CHECK503: WIFE/PARTNER NOT PREGNANT OR UNSURE NO WIFE/ PARTNER ☐ ▼ How long would you like to wait from now before the birth of (a/another) child? WIFE/PARTNER PREGNANT ☐ ▼ After the child your wife/partner is expecting, how long would you like to wait before the birth of another child?	MONTHS ..... 1 ▒▒ YEARS ..... 2 ▒▒ SOON/NOW ..... 993 SAYS WIFE CAN'T GET PREGNANT ..... 994 *AFTER MARRIAGE* ..... *995* OTHER _____ 996 (SPECIFY) DOES NOT KNOW 998	
507	CHECK 308: USING A METHOD? NOT ASKED ☐ ▼ NOT CURRENTLY USING ☐ ▼ CURRENTLY USING ☐		→512
508	Do you think you will use a method to delay or avoid pregnancy within the next 12 months?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	1→510
509	Do you think you will use a method at any time in the future	YES ..... 1 NO ..... 2 DOES NOT KNOW 3	2,3→511

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
510	Which method would you prefer to use?	PILL ..... 01 IUD ..... 02 INJECTABLES ..... 03 IMPLANTS ..... 04 DIAPHRAGM/FOAM/JELLY ..... 05 CONDOM/FEMIDOM ..... 06 FEMALE STERILIZATION ..... 07 MALE STERILIZATION ..... 08 PERIODIC ABSTINENCE ..... 09 WITHDRAWAL ..... 10 OTHER _____ 96 (SPECIFY) UNSURE 98	→512
511	What is the main reason that you think you will never use a method?	NOT MARRIED ..... 11 FERTILITY-RELATED REASONS INFREQUENT SEX ..... 22 WIFE MENOPAUSAL/HYSTERECTOMY . 23 WIFE SUBFECUND/INFECUND . 24 WANTS MORE CHILDREN .... 26 OPPOSITION TO USE RESPONDENT OPPOSED ..... 31 WIFE OPPOSED ..... 32 OTHERS OPPOSED ..... 33 RELIGIOUS PROHIBITION ..... 34 LACK OF KNOWLEDGE KNOWS NO METHOD ..... 41 KNOWS NO SOURCE ..... 42 METHOD-RELATED REASONS HEALTH CONCERNS ..... 51 FEAR OF SIDE EFFECTS ..... 52 LACK OF ACCESS/TOO FAR ... 53 COST TOO MUCH ..... 54 INCONVENIENT TO USE ..... 55 INTERFERES WITH BODY'S NORMAL PROCESSES ..... 56 UP TO THE WOMAN TO USE ..... 61 OTHER _____ 96 (SPECIFY) DON'T KNOW 98	
512	CHECK 204: HAS LIVING CHILDREN ☐ If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? NO LIVING CHILDREN ☐ If you could choose exactly the number of children to have in your whole life, how many would that be?	NUMBER ..... ▒▒ OTHER _____ 96 (SPECIFY)	→514
513	How many of these children would you like to be boys, how many would you like to be girls and for how many would it not matter?	BOYS NUMBER ..... ▒▒ OTHER _____ 96 (SPECIFY) GIRLS NUMBER ..... ▒▒ OTHER _____ 96 (SPECIFY) EITHER NUMBER ..... ▒▒ OTHER _____ 96 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
514	Would you say that you approve or disapprove of couples using a method to avoid getting pregnant?	APPROVE ..... 1 DISAPPROVE ..... 2 NO OPINION 3	
515	Is it acceptable or not acceptable to you for information on family planning to be provided: On the radio? On the television?	ACCEPTABLE / NOT ACCEPTABLE / DOES NOT KNOW RADIO ..... 1 2 8 TELEVISION 1 2 8	
516	In the last few months, have you heard about family planning: On the radio? On the television? In a newspaper? From a poster? From leaflets or brochures? From Town Crier? Any Other _____ (SPECIFY)	YES / NO RADIO ..... 1 2 TELEVISION ..... 1 2 NEWSPAPER OR MAGAZINE 1 2 POSTER ..... 1 2 LEAFLETS OR BROCHURES . 1 2 TOWN CRIER ..... 1 2 OTHER _____ X	
517	In the last few months, have you heard about any message on Radio/TV on condom use?	YES ..... 1 NO 2	
517B	If Yes, (Specify) _____		
518	In the last few months, have you discussed the practice of family planning with your spouse/partner, friends, neighbors, or relatives?	YES ..... 1 NO 2	→ 520
519	With whom? Anyone else? RECORD ALL MENTIONED.	WIFE/PARTNER ..... A MOTHER ..... B FATHER ..... C SISTER(S) ..... D BROTHER(S) ..... E DAUGHTER ..... F MOTHER-IN-LAW ..... G FRIENDS/NEIGHBORS ..... H SON ..... I OTHER _____ X (SPECIFY)	
520	CHECK 401: CURRENTLY MARRIED ☐ ▼ LIVING WITH A WOMAN ☐ ▼ NOT IN UNION ☐ _____		→ 601
521	Spouses/partners do not always agree on everything. Now I want to ask you about your wife's/the woman you live with's views on family planning. Do you think that your wife/the woman you live with approves or disapproves of couples using a method to avoid pregnancy?	APPROVES ..... 1 DISAPPROVES ..... 2 DOES NOT KNOW 8	
522	How often have you talked to your wife/the woman you live with about family planning in the past year?	NEVER ..... 1 ONCE OR TWICE ..... 2 MORE OFTEN 3	
523	Do you think your wife/the woman you live with wants the same number of children that you want, or does she want more or fewer than you want?	SAME NUMBER ..... 1 MORE CHILDREN ..... 2 FEWER CHILDREN ..... 3 DOES NOT KNOW 8	
524	Who decides on the number of children you want to have?	HUSBAND ONLY ..... 1 WIFE ONLY ..... 2 HUSBAND/WIFE ..... 3 MOTHER-IN-LAW ..... 4 FATHER-IN-LAW ..... 5 OTHER _____ 6 (SPECIFY)	

SECTION 6: AIDS AND OTHER SEXUALLY TRANSMITTED DISEASES

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601A	Have you heard about diseases that can be transmitted through sexual intercourse?	YES ..... 1 NO 2	→601F
601B	Which diseases do you know? RECORD ALL RESPONSES	SYPHILIS ..... A GONORRHEA ..... B AIDS ..... C GENITAL WARTS/CONDYLOMATA ... D OTHER_____ W (SPECIFY) OTHER_____ X (SPECIFY) DOES NOT KNOW ..... Z	
601C	CHECK 410 AND 410F: HAS HAD SEXUAL INTERCOURSE ☐ HAS NEVER HAD SEXUAL INTERCOURSE ☐		→601F
601D	During the last twelve months, did you have any of these diseases?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	→601F
601E	Which of the diseases did you have? RECORD ALL RESPONSES	SYPHILIS ..... A GONORRHEA ..... B AIDS ..... C GENITAL WARTS/CONDYLOMATA ... D OTHER_____ W (SPECIFY) OTHER_____ X (SPECIFY) DOES NOT KNOW ..... Z	
601F	During the last 12 months, did you have a discharge from your penis?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	
601G	During the last 12 months, did you have a sore or ulcer on your penis?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	
601H	CHECK 601E, 601F AND 601G: HAD ONE OR MORE DISEASES ☐ NONE OF THE DISEASES ☐		→601N
601 I	The last time you had (DISEASE FROM 601E/DISCHARGE/SORE) did you seek advice or treatment?	YES ..... 1 NO 2	→601JA

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601J	Where did you seek advice or treatment? Any other place or person? RECORD ALL MENTIONED	PUBLIC SECTOR GOVT. HOSPITAL ..... A HEALTH CENTRE ..... B FP CLINIC ..... C MOBILE CLINIC ..... D DISPENSARY ..... E OTHER PUBLIC SECTOR ..... F *MEDICAL PRIVATE SECTOR* PRIVATE HOSPITAL ..... G PHARMACY/P.M.S ..... H PRIVATE DOCTOR ..... I MOBILE CLINIC ..... J OTHER MED. PRIVATE SECTOR ..... K OTHER_____ X (SPECIFY) SHOP ..... L RELATIVES/FRIEND ..... M TRADITIONAL HEALER ..... N NGO ..... P OTHER_____ X (SPECIFY) DOES NOT KNOW ..... Z	
601JA	CHECK 410 AND 410F: HAS HAD SEXUAL INTERCOURSE ☐ — *HAS NEVER HAD SEXUAL INTERCOURSE* ☐		→601N
601K	When you had (DISEASES FROM 601E/DISCHARGE/SORE) did you inform your partner(s)?	YES ..... 1 NO 2	
601L	When you had (DISEASES FROM 601E/DISCHARGE/SORE) did you do something not to infect your partner(s)?	YES ..... 1 NO ..... 2 PARTNER ALREADY INFECTED 3	→601N
601M	What did you do? RECORD ALL MENTIONED	NO SEXUAL INTERCOURSE ..... A USED CONDOMS ..... B TOOK MEDICINES ..... C REFER PARTNER TO HEALTH WORKER ..... D OTHER_____ X (SPECIFY)	
601N	CHECK 601B: DID NOT MENTION 'AIDS' ☐ — MENTIONED 'AIDS' ☐		→602
601P	Have you ever heard of a disease called AIDS?	YES ..... 1 NO 2	→611C
602	From which sources of information have you learned most about AIDS? Any other sources? RECORD ALL MENTIONED	RADIO ..... A TELEVISION ..... B NEWSPAPERS/MAGAZINES ..... C PAMPHLETS/POSTERS ..... D HEALTH WORKERS ..... E MOSQUES/CHURCHES ..... F SCHOOLS/TEACHERS ..... G COMMUNITY MEETINGS ..... H FRIENDS/RELATIVES ..... I WORK PLACE ..... J OTHER_____ X (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
602B	How can a person get AIDS? Any other ways? Record ALL MENTIONED	SEXUAL INTERCOURSE ..... A SEXUAL INTERCOURSE WITH MULTIPLE PARTNERS ..... B SEX WITH PROSTITUTES ..... C NOT USE CONDOM ..... D HOMOSEXUAL CONTACT ..... E BLOOD TRANSFUSION ..... F INJECTIONS ..... G KISSING ..... H MOSQUITO BITES ..... I SCARIFICATION/CIRCUMCISION ..... J OTHER_____ W (SPECIFY) OTHER_____ X (SPECIFY) DOES NOT KNOW ..... Z	
603	Is there anything a person can do to avoid getting AIDS or the virus that causes AIDS?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	→607
604	What can a person do? Any other ways? RECORD ALL MENTIONED.	SAFE SEX ..... A ABSTAIN FROM SEX ..... B USE CONDOMS ..... C HAVE ONLY ONE SEX PARTNER ..... D AVOID SEX WITH PROSTITUTES ..... E AVOID SEX WITH HOMOSEXUALS .... F ENSURE SAFE BLOOD TRANSFUSION G ENSURE INJECTIONS WITH INFECTED NEEDLES ..... H ENSURE CIRCUMCISION WITH CLEAN BLADES/KNIVES ..... I AVOID KISSING ..... J AVOID MOSQUITO BITES ..... K SEEK PROTECTION FROM TRADITIONAL HEALER ..... L OTHER_____ M (SPECIFY) OTHER_____ X (SPECIFY) DON'T KNOW ..... Z	
605	CHECK 604: MENTIONED "SAFE SEX" ☐ ▼ DID NOT MENTION "SAFE SEX" ☐		→607
606	What does "safe sex" mean to you? RECORD ALL MENTIONED	ABSTAIN FROM SEX ..... B USE CONDOMS ..... C AVOID MULTIPLE SEX PARTNER ..... D AVOID SEX WITH PROSTITUTES ..... E AVOID SEX WITH HOMOSEXUALS .... F OTHER_____ X (SPECIFY) DOES NOT KNOW ..... Z	
607	Is it possible for a healthy-looking person to have the AIDS virus?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	
608	Do you think that persons with AIDS almost never die from the disease, sometimes die, or almost always die from the disease?	ALMOST NEVER ..... 1 SOMETIMES ..... 2 ALMOST ALWAYS ..... 3 DOES NOT KNOW 8	
608A	Can AIDS be cured?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	
608B	Can AIDS be transmitted from mother to child?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
608C	Do you personally know someone who has AIDS or has died of AIDS?	YES ..... 1 NO ..... 2 DOES NOT KNOW 8	
608D	What can an infected mother do to avoid transmitting AIDS to her unborn child?	TAKE MEDICATION LIKE AZT ..... 1 SHOULD NOT BREAST-FEED ..... 2 DOES NOT KNOW 8	
609	Do you think your chances of getting AIDS are small, moderate, great, or no risk at all?	SMALL ..... 1 MODERATE ..... 2 GREAT ..... 3 NO RISK AT ALL ..... 4 HAS AIDS 5	→609C →611A
609B	Why do you think that you have (NO RISK/A SMALL CHANCE) of getting AIDS? Any other reasons? RECORD ALL MENTIONED	ABSTAIN FROM SEX ..... B USE CONDOMS ..... C HAVE ONLY ONE SEX PARTNER ..... D LIMITED NUMBER OF SEX PARTNERS . E AVOID SEX WITH PROSTITUTES ..... F SPOUSE HAS NO OTHER PARTNER ... G NO HOMOSEXUAL CONTACT ..... H ENSURE SAFE BLOOD TRANSFUSION . I ENSURE INJECTION WITH STERILIZED NEEDLES ..... J OTHER_____X (SPECIFY)	→611A
609C	Why do you think that you have a (MODERATE/GREAT) chance of getting AIDS? Any other reasons? RECORD ALL MENTIONED	DO NOT USE CONDOMS ..... C MORE THAN ONE SEX PARTNER ..... D SEX WITH PROSTITUTES ..... E SPOUSE HAS OTHER PARTNER(S) ..... F HOMOSEXUAL CONTACT ..... G HAD BLOOD TRANSFUSION ..... H HAD INJECTIONS ..... I OTHER_____W (SPECIFY) OTHER_____X (SPECIFY)	
611A	Since you heard of AIDS, have you changed your behaviour to prevent getting AIDS? IF YES, what did you do? Anything else? RECORD ALL MENTIONED	DIDN'T START SEX ..... A STOPPED ALL SEX ..... B STARTED USING CONDOMS ..... C RESTRICTED SEX TO ONE PARTNER . D REDUCED NUMBER OF PARTNERS .... E AVOID SEX WITH PROSTITUTES ..... F ASK SPOUSE TO BE FAITHFUL ..... G NO MORE HOMOSEXUAL CONTACTS ..... H ENSURE INJECTIONS WITH STERILIZED NEEDLE ..... J OTHER_____X (SPECIFY) OTHER_____X (SPECIFY) NO BEHAVIOUR CHANGE ..... Y	→611C
611B	Has your knowledge of AIDS influenced or changed your decisions about having sex or your sexual behaviour? IF YES, In what way? RECORD ALL MENTIONED	DIDN'T START SEX ..... A STOPPED ALL SEX ..... B STARTED USING CONDOMS ..... C RESTRICTED SEX TO ONE PARTNER . D REDUCED NUMBER OF PARTNERS .... E AVOID SEX WITH PROSTITUTES ..... F NO MORE HOMOSEXUAL CONTACTS G ASK SPOUSE TO BE FAITHFUL ..... H OTHER_____X (SPECIFY) NO CHANGE IN SEXUAL BEHAVIOUR Y DOES NOT KNOW ..... Z	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
611C	Some people use a condom for sexual intercourse to avoid getting AIDS or other sexually transmitted infection. Have you ever heard of this?	YES ..... 1 NO 2	→611F
611D	CHECK 401 AND 401F: HAS HAD SEXUAL INTERCOURSE ▼ HAS NEVER HAD SEXUAL INTERCOURSE		→701
611E	We may already have talked about this. Have you ever used a condom for sex to avoid getting or transmitting disease, such as AIDS?	YES ..... 1 NO 2	
611G	Have you given or received money, gifts or favors in return for sex at any time in the last 12 months?	YES ..... 1 NO 2	
611H	If yes, was a condom used?	YES ..... 1 NO 2	

SECTION 7: MATERNAL MORTALITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	Now I would like to ask you some questions about your brothers and sisters, that is, all of the children born to your natural mother, including those who are living with you, those living elsewhere and those who have died. How many children did your mother give birth to, including you?	NUMBER OF BIRTHS TO NATURAL MOTHER	
702	CHECK 901: TWO OR MORE BIRTHS ☐ ▼ ONLY ONE BIRTH (RESPONDENT ONLY) ☐		→716
703	How many of these births did your mother have before you were born?	NUMBER OF PRECEDING BIRTHS	

704 What was the name given to your oldest (next oldest) brother or sister?	(1)	(2)	(3)	(4)	(5) .....
705 Is (NAME) male or female?	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2
706 Is (NAME) still alive?	YES ..... 1 NO ..... 2 GO TO 708 DK ..... 8 GO TO [2]	YES ..... 1 NO ..... 2 GO TO 708 DK ..... 8 GO TO [3]	YES ..... 1 NO ..... 2 GO TO 708 DK ..... 8 GO TO [4]	YES ..... 1 NO ..... 2 GO TO 708 DK ..... 8 GO TO [5]	YES ..... 1 NO ..... 2 GO TO 708 DK ..... 8 GO TO [6]
707 How old is (NAME)	GO TO [2]	GO TO [3]	GO TO [4]	GO TO [5]	GO TO [6]
708 In what year did (NAME) die?	19 GO TO 710 DK 98	19 GO TO 710 DK 98	19 GO TO 710 DK 98	19 GO TO 710 DK 98	19 GO TO 710 DK 98
709 How many years ago did (NAME) die					
710 How old was (NAME) when he/she died?	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [2]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [3]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [4]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [5]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [6]
711 Was (NAME) pregnant when she died?	YES ..... 1 GO TO 714 NO 2	YES ..... 1 GO TO 714 NO 2	YES ..... 1 GO TO 714 NO 2	YES ..... 1 GO TO 714 NO 2	YES ..... 1 GO TO 714 NO 2
712 Did (NAME) die during childbirth?	YES ..... 1 GO TO 715 NO 2	YES ..... 1 GO TO 715 NO 2	YES ..... 1 GO TO 715 NO 2	YES ..... 1 GO TO 715 NO 2	YES ..... 1 GO TO 715 NO 2
713 Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES ..... 1 NO ..... 2 GO TO 715	YES ..... 1 NO ..... 2 GO TO 715	YES ..... 1 NO ..... 2 GO TO 715	YES ..... 1 NO ..... 2 GO TO 715	YES ..... 1 NO ..... 2 GO TO 715
714 Was her death due to complications of pregnancy or childbirth?	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2
715 How many children did (NAME) give birth to during her lifetime?	GO TO [2]	GO TO [3]	GO TO [4]	GO TO [5]	GO TO [6]

IF NO MORE BROTHERS OR SISTERS, GO TO 716

704 What was the name given to your oldest (next oldest) brother or sister?	(6)	(7)	(8)	(9)	(10) .....
705 Is (NAME) male or female?	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2
706 Is (NAME) still alive?	YES ..... 1 NO ..... 2 GO TO 708 DK ..... 8 GO TO [7]	YES ..... 1 NO ..... 2 GO TO 708 DK ..... 8 GO TO [8]	YES ..... 1 NO ..... 2 GO TO 708 DK ..... 8 GO TO [9]	YES ..... 1 NO ..... 2 GO TO 708 DK ..... 8 GO TO [10]	YES ..... 1 NO ..... 2 GO TO 708 DK ..... 8 GO TO [11]
707 How old is (NAME)	GO TO [7]	GO TO [8]	GO TO [9]	GO TO [10]	GO TO [11]
708 In what year did (NAME) die?	19 GO TO 710 DK 98	19 GO TO 710 DK 98	19 GO TO 710 DK 98	19 GO TO 710 DK 98	19 GO TO 710 DK 98
709 How many years ago did (NAME) die					
710 How old was (NAME) when he/she died?	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [7]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [8]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [9]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [10]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [11]
711 Was (NAME) pregnant when she died?	YES ..... 1 GO TO 714 NO 2	YES ..... 1 GO TO 714 NO 2	YES ..... 1 GO TO 714 NO 2	YES ..... 1 GO TO 714 NO 2	YES ..... 1 GO TO 714 NO 2
712 Did (NAME) die during childbirth?	YES ..... 1 GO TO 715 NO 2	YES ..... 1 GO TO 715 NO 2	YES ..... 1 GO TO 715 NO 2	YES ..... 1 GO TO 715 NO 2	YES ..... 1 GO TO 715 NO 2
713 Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES ..... 1 NO ..... 2 GO TO 715	YES ..... 1 NO ..... 2 GO TO 715	YES ..... 1 NO ..... 2 GO TO 715	YES ..... 1 NO ..... 2 GO TO 715	YES ..... 1 NO ..... 2 GO TO 715
714 Was her death due to complications of pregnancy or childbirth?	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2
715 How many children did (NAME) give birth to during her lifetime?	GO TO [7]	GO TO [8]	GO TO [9]	GO TO [10]	GO TO [11]
IF NO MORE BROTHERS OR SISTERS, GO TO 716					

704 What was the name given to your oldest (next oldest) brother or sister?	(11)	(12)	(13)	(14)	(15) .....
705 Is (NAME) male or female?	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2	MALE ..... 1 FEMALE 2
706 Is (NAME) still alive?	YES ..... 1 NO ..... 2 GO TO 708 DK ..... 8 GO TO [12]	YES ..... 1 NO ..... 2 GO TO 708 DK ..... 8 GO TO [13]	YES ..... 1 NO ..... 2 GO TO 708 DK ..... 8 GO TO [14]	YES ..... 1 NO ..... 2 GO TO 708 DK ..... 8 GO TO [15]	YES ..... 1 NO ..... 2 GO TO 708 DK 8
707 How old is (NAME)	GO TO [12]	GO TO [13]	GO TO [14]	GO TO [15]	
708 In what year did (NAME) die?	19 GO TO 710 DK 98	19 GO TO 710 DK 98	19 GO TO 710 DK 98	19 GO TO 710 DK 98	19 GO TO 710 DK 98
709 How many years ago did (NAME) die					
710 How old was (NAME) when he/she died?	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [12]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [13]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [14]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [15]	IF MALE OR DIED BEFORE 10 YEARS OF AGE GO TO [716]
711 Was (NAME) pregnant when she died?	YES ..... 1 GO TO 714 NO 2	YES ..... 1 GO TO 714 NO 2	YES ..... 1 GO TO 714 NO 2	YES ..... 1 GO TO 714 NO 2	YES ..... 1 GO TO 714 NO 2
712 Did (NAME) die during childbirth?	YES ..... 1 GO TO 715 NO 2	YES ..... 1 GO TO 715 NO 2	YES ..... 1 GO TO 715 NO 2	YES ..... 1 GO TO 715 NO 2	YES ..... 1 GO TO 715 NO 2
713 Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES ..... 1 NO ..... 2 GO TO 715	YES ..... 1 NO ..... 2 GO TO 715	YES ..... 1 NO ..... 2 GO TO 715	YES ..... 1 NO ..... 2 GO TO 715	YES ..... 1 NO ..... 2 GO TO 715
714 Was her death due to complications of pregnancy or childbirth?	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2	YES ..... 1 NO 2
715 How many children did (NAME) give birth to during her lifetime?	GO TO [12]	GO TO [13]	GO TO [14]	GO TO [15]	
716 RECORD THE TIME (END OF INTERVIEW)				HOUR ..... MINUTES	

INTERVIEWER'S OBSERVATIONS

To be filled in after completing interview

Comments about Respondent: _____

_____

_____

Comments on Specific Questions: _____

_____

_____

Any other Comments: _____

_____

_____

SUPERVISOR'S OBSERVATIONS

_____

_____

_____

Name of Supervisor: _____ Date: _____

EDITOR'S OBSERVATIONS

_____

_____

_____

Name of Editor: _____ Date: _____