# NIGERIA DEMOGRAPHIC AND HEALTH SURVEY 1990

## PRELIMINARY REPORT

Federal Office of Statistics

Demographic and Health Surveys
IRD/Macro Systems, Inc.

The Demographic and Health Surveys Program (DHS) is assisting government and private agencies with the implementation of 59 surveys in developing countries. Funded primarily by the United States Agency for International Development (USAID), DHS is implemented by the Institute for Resource Development (IRD)/Macro Systems, Inc. The main objectives of the project are: (1) to provide decisionmakers in survey countries with a database and analyses useful for informed policy choices, (2) to expand the international population and health database, (3) to advance survey methodology, and (4) to develop in participating countries the skills and resources necessary to conduct high quality demographic and health surveys.

# Nigeria
# Demographic and Health Survey
# 1990

Preliminary Report

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Institute for Resource Development/Macro Systems, Inc.

March 1991

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# I. BACKGROUND

## A. Introduction

The Nigeria Demographic and Health Survey (NDHS) was conducted by the Federal Office of Statistics (FOS). The Institute for Resource Development/Macro Systems (IRD) provided technical assistance to the project through a contract with the United States Agency for International Development, which provided financial assistance.

The NDHS is a national sample survey designed to provide information on fertility, family planning, and health in Nigeria. This report presents the preliminary results for some of the principal topics covered in the survey. A more comprehensive analysis of the survey results will be published before the end of 1991. It is expected that the final results will differ only slightly from those presented here.

## B. Objectives of the Survey

The primary objectives of the NDHS are as follows: i) to collect data for the evaluation of family planning and health programs, ii) to assess the demographic situation in Nigeria, and iii) to support dissemination and utilization of the results in planning and managing family planning and health programs.

# II. SURVEY IMPLEMENTATION

## A. Questionnaires

Two types of questionnaires were used for the NDHS: the Household Questionnaire and the Individual Questionnaire. These were adapted from the DHS Model B Questionnaire, which was designed for use in countries with low contraceptive prevalence. The NDHS questionnaires were developed in English, and then translated into six of the major Nigerian languages - Efik, Hausa, Igbo, Kanuri, Tiv, and Yoruba.

The Household Questionnaire was used to list all the usual members and visitors of a selected household, and to collect information about each member, such as age, sex, education, and relationship to the head of household. The major purpose of the Household Questionnaire was to identify women who would be eligible respondents for interview with the Individual Questionnaire.

Women eligible for interview with the Individual Questionnaire were those age 15 to 49 (inclusive) who had spent the previous night in a selected household. An interview with such a woman gathered information in the following areas:

- Background characteristics of the respondent
- Reproductive behavior and intentions
- Knowledge and use of contraception
- Breastfeeding, health, and immunizations
- Marriage
- Fertility preferences
- Husband's background and woman's work
- Height and weight of children under five.

## B. Training and Fieldwork

The NDHS questionnaires were pretested in January/February 1990. Twenty-one interviewers were hired to conduct 350 interviews in both urban and rural areas of seven states. The seven states (Anambra, Benue, Borno, Cross River, Kano, Lagos, Oyo) were chosen such that all seven languages could be tested.

Training of field staff for the main survey was conducted at four sites in two phases: first at two sites in the south, and then at two sites in the north. Senior FOS officers and IRD consultants trained a total of 172 persons to administer the questionnaires. The four weeks of training included practice interviews with women in the field and practice measurement of children (height and weight). In addition, lectures on family planning and immunization were given by representatives of the Planned Parenthood Federation of Nigeria and the United Nations Children's Fund, Expanded Programme on Immunization, respectively.

The trainees who performed best were selected for the main survey fieldwork. Twenty-five teams carried out the interviewing. Each team was composed of an FOS staff person as supervisor, a female field editor, four female interviewers, and a driver. In all, 25 supervisors, 25 field editors, 100 interviewers, and 20 drivers carried out the fieldwork.

Fieldwork was conducted from April to October 1990 (April to July in the southern states, and July to October in the northern states).

## C. Data Processing

The NDHS data were processed using four microcomputers and the DHS data entry and editing programs written in ISSA (Integrated System for Survey Analysis). Data were entered at the Lagos office of FOS as questionnaires were received from the field. Following one week of training, data processing began on 1 June, 1990 with four data entry operators. This number was later increased to seven, running two shifts daily. The last questionnaire was entered in October, and data editing was completed in November.

## D. Sample Design and Implementation

The NDHS sample was drawn from the National Master Sample for the 1987/1992 National Integrated Survey of Households (NISH) Programme being implemented by the FOS. NISH, as part of the United Nations National Household Survey Capability Programme, is a multi-subject household-based survey system.

The NISH master sample was created in 1986 on the basis of the 1973 census enumeration areas (EA). Within each state, EAs were stratified into three sectors (urban, semi-urban, and rural), from which an initial selection of approximately 800 EAs was made from each state. EAs were selected at this stage with equal probability within sectors. A quick count of households was conducted in each of the selected EAs, and a final selection of over 4,000 EAs was made, with probability proportional to size. This constitutes the NISH master sample from which the NDHS EAs were subsampled.

Prior to the NDHS selection of EAs, the urban and semi-urban sectors of NISH were combined into one urban category, while the rural retained the NISH classification. A sample of about 10,000 households in 299 EAs was designed with twofold oversampling of the urban stratum, yielding 132 urban EAs and 167 rural EAs.[1] The sample was constructed so as to provide national estimates as well as estimates for the four Ministry of Health zones. The distribution of the states across these zones is shown below.

| NORTHEAST | NORTHWEST | SOUTHEAST | SOUTHWEST |
|---|---|---|---|
| Bauchi | Abuja FCT | Akwa Ibom | Bendel |
| Borno | Kaduna | Anambra | Lagos |
| Gongola | Katsina | Benue | Ogun |
| Kano | Kwara | Cross River | Ondo |
| Plateau | Niger | Imo | Oyo |
| | Sokoto | Rivers | |

A new listing of housing units and households was conducted in each of the selected 299 EAs. A systematic sample of households was selected from the new listings, with a fixed take of 34 households in each EA. It was decided to use a fixed take of households in order to have better control of the sample size (given the variability in EA size of the NISH sample). Thus, the NDHS sample is a weighted sample, maintaining the twofold oversampling of the urban sector.

[1] The sample for Lagos state was drawn from the newly demarcated area frame carried out by the National Population Bureau in 1990.

Table 1 presents the survey response rates. Nearly 10,000 households were selected for the NDHS sample, of which 8,999 were successfully interviewed. The shortfall is due largely to households being absent or vacant at the time interviewers canvassed the area. Of the 9,171 households which were occupied, 98 percent were successfully interviewed, and 9,200 women were identified as eligible for interview. Interviews were completed with 8,781 women, resulting in a response rate of 95 percent.

Table 1 Household and individual sample results, Nigeria, 1990

| Result | Number of Households or Women | Percent |
|---|---|---|
| **Households selected** | 9998 | 100.0 |
| Households occupied | 9171 | 91.7 |
| Households absent | 368 | 3.7 |
| Households vacant/no dwelling | 288 | 2.9 |
| Other | 171 | 1.7 |
| **Households occupied** | 9171 | 100.0 |
| Households interviewed | 8999 | 98.1 |
| Households not interviewed | 172 | 1.9 |
| **Household Response Rate** | | 98.1 |
| **Eligible women** | 9200 | 100.0 |
| Women interviewed | 8781 | 95.4 |
| Women not interviewed | 419 | 4.6 |
| **Individual Response Rate** | | 95.4 |

## E. Service Availability and Reinterview Surveys

Two additional projects were carried out under the NDHS, the Service Availability Survey (SAS) and the Reinterview Survey. These surveys were conducted jointly following the main survey fieldwork.

The SAS canvassed health and family planning facilities with the aim of determining the availability of health and family planning services. Thus, while the main survey collected information from female respondents pertaining to the demand for health and family planning services, the SAS collected information pertaining to the supply of these services. The reinterview survey used a shortened version of the Individual Questionnaire to reinterview approximately 10 percent of the NDHS sample population. Its aim was to provide data to assess the reliability of the data collected in the main survey. Results from the SAS and Reinterview Survey are not included in this report.

# III. RESULTS

## A. Characteristics of the Respondents

The distributions of the women in the NDHS sample by selected background characteristics are shown in Table 2. Of the 8781 women interviewed, three-fourths are currently married and over one-half are below the age of thirty. Fifty-seven percent of the women have not attended any formal schooling.

Table 2 Percent distribution of women by selected background characteristics, Nigeria, 1990

| Characteristic | Weighted Percent | Weighted Number of Women | Unweighted Number of Women |
|---|---|---|---|
| **Age** | | | |
| 15-19 | 18.4 | 1612 | 1678 |
| 20-24 | 19.1 | 1676 | 1682 |
| 25-29 | 19.0 | 1669 | 1658 |
| 30-34 | 16.1 | 1410 | 1386 |
| 35-39 | 10.9 | 954 | 948 |
| 40-44 | 9.5 | 836 | 827 |
| 45-49 | 7.1 | 624 | 602 |
| **Residence** | | | |
| Urban | 24.9 | 2185 | 3526 |
| Rural | 75.1 | 6596 | 5255 |
| **Region** | | | |
| Northeast | 22.8 | 2000 | 2038 |
| Northwest | 23.9 | 2098 | 1699 |
| Southeast | 31.5 | 2768 | 2324 |
| Southwest | 21.8 | 1915 | 2720 |
| **Education** | | | |
| No education | 57.2 | 5020 | 4540 |
| Primary | 23.9 | 2099 | 2112 |
| Secondary | 17.1 | 1499 | 1911 |
| Higher | 1.9 | 163 | 218 |
| **Marital Status** | | | |
| Currently Married | 78.4 | 6880 | 6696 |
| Never Married | 17.2 | 1513 | 1701 |
| Widowed/Divorced/Separated | 4.4 | 388 | 384 |
| Total | 100.0 | 8781 | 8781 |

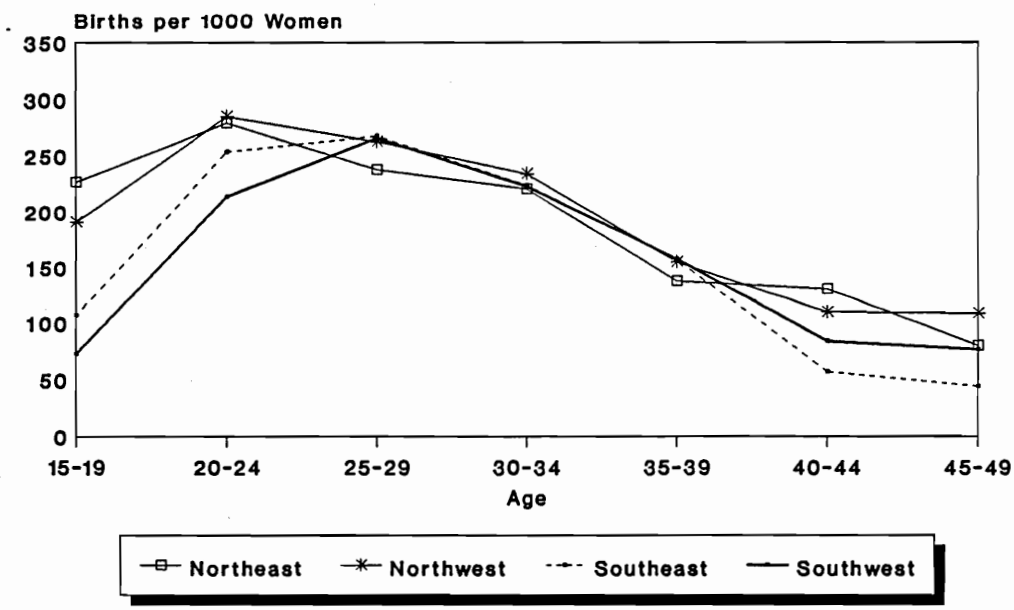
## B. Fertility

All women were asked to report the number of sons and daughters they had given birth to in their lifetime. In order to encourage a complete count of births, women were asked to report the number of sons and daughters who live at home, the number who live elsewhere, and the number who were born alive but later died. They were also asked to provide a complete birth history, i.e., the date of birth, sex, and survival status of each child.

Table 3 Age-specific fertility rates for the three-year period prior to the survey and mean number of children ever born by age of woman, Nigeria, 1990

| Age | Age-specific Fertility Rates | | | | | Mean Number of Children Ever Born | Number of Women |
|---|---|---|---|---|---|---|---|
| | National | Northeast | Northwest | Southeast | Southwest | | |
| 15-19 | 0.146 | 0.227 | 0.191 | 0.107 | 0.073 | 0.311 | 1612 |
| 20-24 | 0.260 | 0.279 | 0.285 | 0.254 | 0.214 | 1.443 | 1676 |
| 25-29 | 0.259 | 0.238 | 0.263 | 0.268 | 0.266 | 2.966 | 1669 |
| 30-34 | 0.226 | 0.221 | 0.234 | 0.224 | 0.223 | 4.578 | 1410 |
| 35-39 | 0.153 | 0.138 | 0.155 | 0.157 | 0.158 | 5.529 | 954 |
| 40-44 | 0.090 | 0.131 | 0.110 | 0.057 | 0.084 | 6.265 | 836 |
| 45-49 | 0.074 | 0.080 | 0.109 | 0.044 | 0.077 | 6.786 | 624 |
| **Total 15-49** | **6.036** | 6.572 | 6.734 | 5.553 | 5.476 | 3.311 | 8781 |
| **Total 15-44** | 5.665 | 6.172 | 6.190 | 5.334 | 5.090 | 3.045 | 8157 |

Figure 1
Age-Specific Fertility Rates
by Region




NDHS 1990

Table 3 and Figure 1 show age-specific fertility rates, which were averaged over the three years prior to the survey. The sum of the age-specific fertility rates (known as total fertility) is a useful means of summarizing 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 rates. If fertility were to remain constant at current levels, a Nigerian woman would bear 6.0 children.

The last national estimates of total fertility were calculated from data collected in the 1981/82 Nigeria Fertility Survey (NFS). There has been a modest decline nationally, from 6.3 to 6.0. However, there has been a significant decline in the south. Shown below are the levels of total fertility calculated for the NFS and the NDHS in four regions.[2] The substantial decline in fertility in the south is commensurate with greater use of family planning, as will be shown in the next section.

| Regions | Total Fertility Nigeria Fertility Survey | Total Fertility Demographic and Health Survey |
|---|---|---|
| Northeast | 6.4 | 6.6 |
| Northwest | 6.8 | 6.7 |
| Southeast | 6.0 | 5.6 |
| Southwest | 6.6 | 5.5 |
| National | 6.3 | 6.0 |

The rate of fertility could be said to exhibit two patterns: that of the north and that of the south. During the central childbearing ages (25-39), women tend to bear children at the same rate in both the north and the south. It is during the early and late childbearing ages that the differences are evident. While they are teenagers, women in the north have children at twice the rate of women in the south (on average, 100 15-19 year olds in the south will give birth to 10 babies, while 100 15-19 year olds in the north will give birth to 20 babies). Women in the north go on to achieve their peak fertility in their early twenties, while women in the south will not achieve their greatest fertility until their late twenties. Toward the end of the childbearing years, women in the north continue bearing children, once again doing so at twice the rate of women in the south. The higher fertility among women in the north results in total fertility which is one child greater than that of women in the south (6.6 vs. 5.5).

## C. Family Planning

In order to assess knowledge and use of family planning, the NDHS asked all women about knowledge of specific contraceptive methods, whether they knew where to obtain them, whether they had ever used a method, and also whether they were currently using a contraceptive method. Figure 2 summarizes the responses.

*Knowledge of family planning*

Table 4 shows statistics on knowledge and use of family planning for all women and currently married women. Nearly fifty percent of women know of at least one method of family planning. Table 4 shows that at the national level there are only marginal differences between currently married women and women not currently married, so we will focus on the currently married. The most commonly known methods are the pill and injection, each known by 34 percent of women. Following these, the condom, IUD and female sterilization are the most commonly known methods (20 percent of women). At least one traditional method (periodic abstinence, withdrawal, or a local method) is known by one-quarter of women. Other modern methods (foaming tablets, diaphragm, and male sterilization) are each less well known than traditional methods (7-10 percent of women).

[2] The NDHS total fertility is calculated on the basis of fertility rates for the three years prior to the survey, and the NFS for the five years prior to the survey. The composition of the four geographical regions is the same in the NDHS and the NFS, with the exceptions of Benue, Kano, and Kwara states, which shift regions.

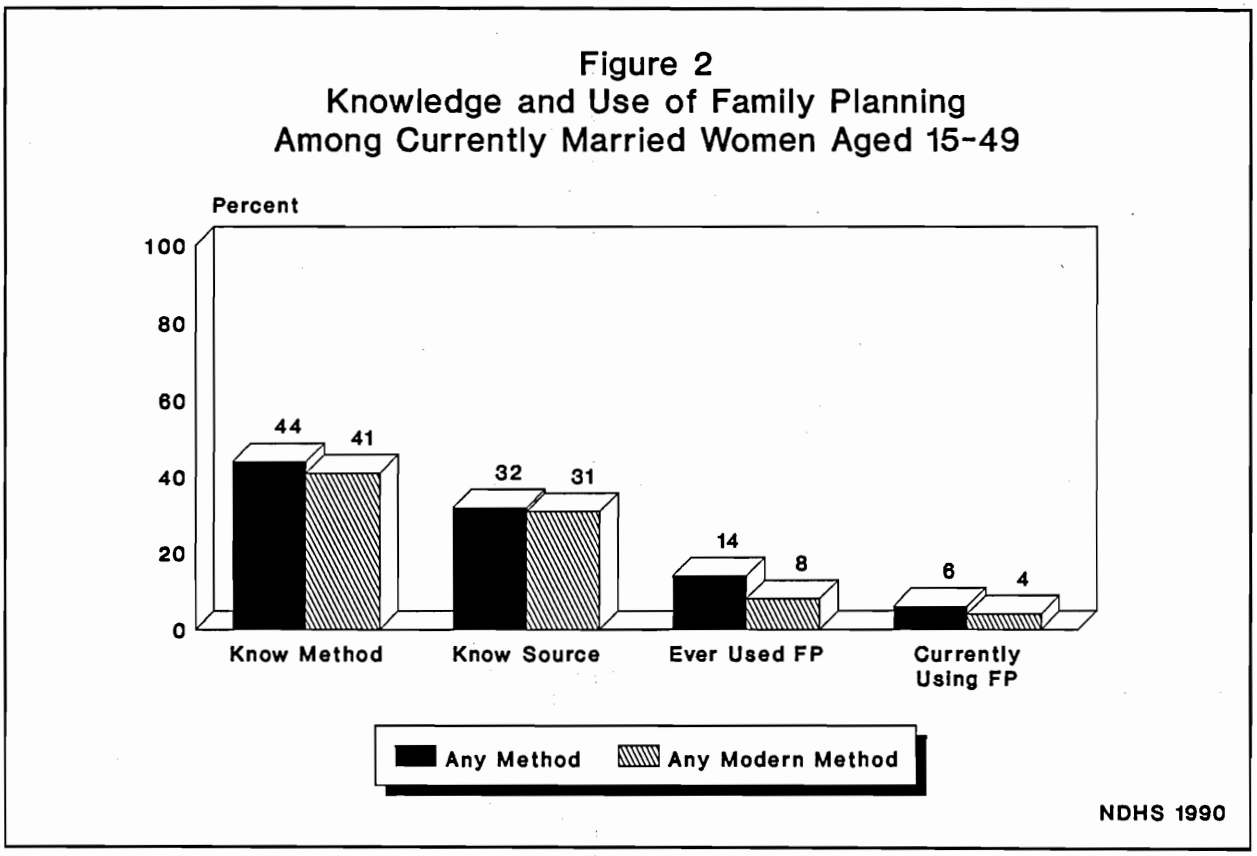



Table 4 Percentage of all women and currently married women who know a contraceptive method, who know a source for a method, who have ever used a method, and who are currently using a method, by method, Nigeria, 1990

| Contraceptive Method | Percent Who Know Method | | Percent Who Know Source | | Percent Ever Used Method | | Percent Currently Using Method | |
|---|---|---|---|---|---|---|---|---|
| | All[a] | CM[b] | All | CM | All | CM | All | CM |
| **Any Method** | 45.7 | 43.6 | 34.0 | 31.9 | 15.2 | 14.0 | 7.6 | 6.0 |
| **Any Modern Method** | 43.5 | 41.2 | 33.2 | 31.2 | 9.0 | 8.4 | 3.8 | 3.5 |
| Pill | 35.1 | 33.8 | 25.0 | 24.1 | 4.9 | 4.8 | 1.4 | 1.2 |
| IUD | 20.3 | 19.8 | 15.9 | 15.6 | 1.6 | 1.7 | 0.7 | 0.8 |
| Injection | 34.2 | 33.6 | 25.2 | 24.8 | 1.8 | 1.9 | 0.7 | 0.7 |
| Foaming Tablets | 10.7 | 9.6 | 8.1 | 7.1 | 0.6 | 0.5 | 0.2 | 0.1 |
| Diaphragm/Foam/Jelly | 7.9 | 7.3 | 6.2 | 5.7 | 0.2 | 0.1 | 0.0 | 0.0 |
| Condom | 24.1 | 21.6 | 17.7 | 15.9 | 2.5 | 2.0 | 0.5 | 0.4 |
| Female Sterilization | 20.4 | 19.4 | 15.7 | 14.9 | 0.2 | 0.3 | 0.2 | 0.3 |
| Male Sterilization | 7.5 | 6.7 | 5.6 | 4.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Any Traditional Method** | 25.7 | 23.6 | 10.8 | 8.9 | 9.4 | 8.1 | 3.8 | 2.5 |
| Periodic Abstinence | 17.3 | 14.7 | 10.8 | 8.9 | 5.4 | 4.3 | 2.4 | 1.4 |
| Withdrawal | 14.2 | 12.4 | 0.0 | 0.0 | 3.5 | 2.8 | 0.7 | 0.5 |
| Other methods | 10.0 | 10.3 | 0.0 | 0.0 | 2.3 | 2.3 | 0.7 | 0.6 |

[a] All = all women (number = 8781)
[b] CM = currently married women (number = 6880)

Of course, not all women who know of a method of family planning know where they can obtain it. One-quarter of the women who know of either the pill or injection (the most commonly known methods), do not know a source where they can obtain the method. The same is true of condoms. Overall, one-third of currently married women know a place where they could get some method of family planning.

*Past and current use of family planning*

Use of family planning is low in Nigeria (see Figure 2 and Table 4); only 8 percent of married women have ever used a modern method at any time in their lives. More women have had at least some experience using the pill than any other method (5 percent), followed by periodic abstinence (4 percent) and withdrawal (3 percent). Injection, IUD, and the condom have each been used by 2 percent of married women.

Overall, 6 percent of married women in Nigeria are currently using a contraceptive method. Among current users, nearly as many women are using a traditional method (3 percent) as are using a modern method (4 percent). The most popular methods are the pill, IUD and injection (each being used by 1 percent of married women); however, traditional methods are being used by more women than any one modern method. Periodic abstinence is reported as a current method by as many women reporting current use of the pill.

While overall use of family planning is quite low, some women are more likely to be using contraception than others, as can be seen in Figure 3 and Table 5. The women most likely to be using modern methods are: those residing in urban areas, those residing in the Southwest, those with four or more children, and those women with secondary or higher schooling. Among urban women, the methods most commonly being used are the pill and periodic abstinence, followed by the IUD and injection. These same four methods are the most commonly used methods amongst women in the Southwest and women with four or more living children.

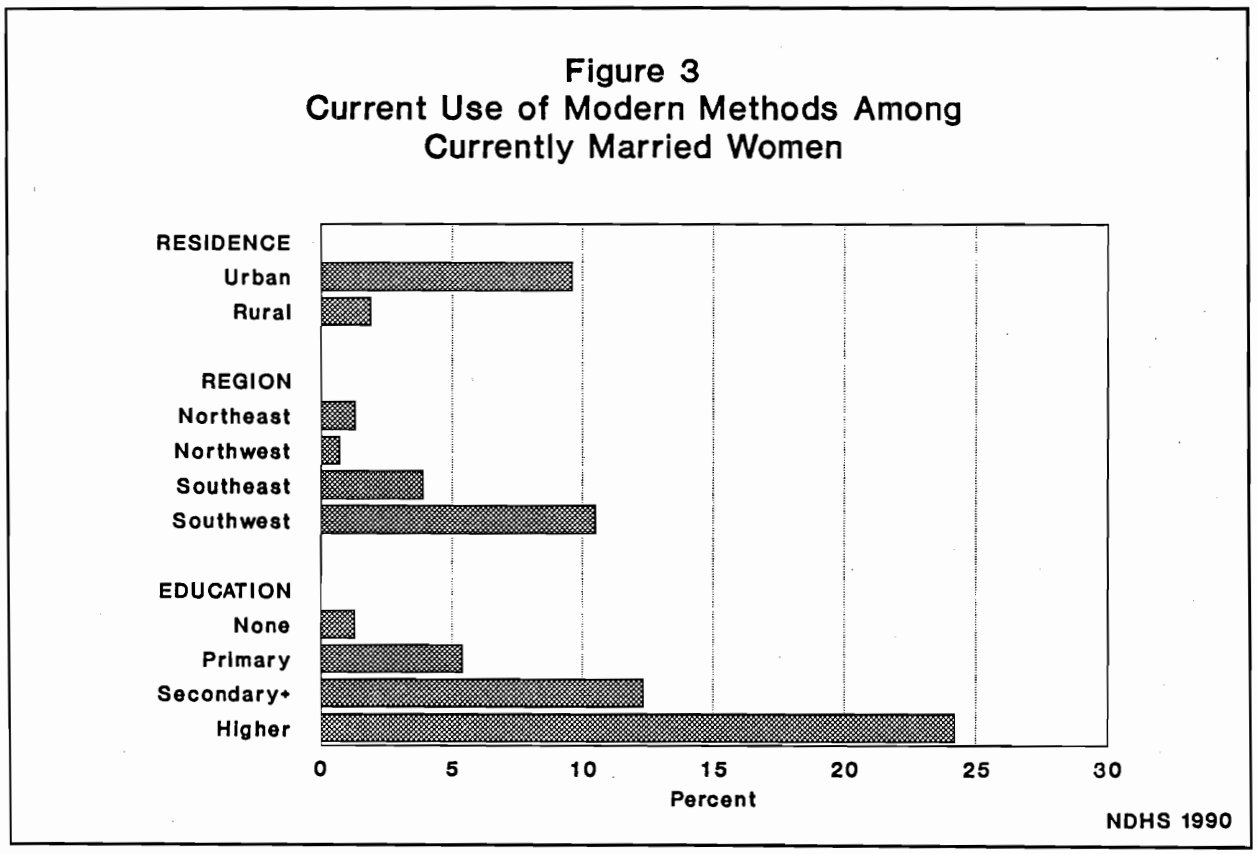


Table 5 Percent distribution of currently married women by contraceptive method currently being used, according to selected background characteristics, Nigeria, 1990

| Characteristics | Any Method | Modern Methods | | | | | Traditional Methods | | | | Not Currently Using | Total | Number of Women |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Total[a] | Pill | IUD | Injection | Condom | Total | Abstinence | Withdrawal | Other Methods | | | |
| **Age** | | | | | | | | | | | | | |
| 15-19 | 1.3 | 0.6 | 0.2 | 0.0 | 0.0 | 0.4 | 0.7 | 0.2 | 0.3 | 0.3 | 98.7 | 100.0 | 596 |
| 20-24 | 5.1 | 2.7 | 1.4 | 0.2 | 0.6 | 0.4 | 2.4 | 1.6 | 0.4 | 0.4 | 94.9 | 100.0 | 1279 |
| 25-29 | 6.0 | 3.1 | 1.2 | 0.7 | 0.3 | 0.6 | 3.0 | 2.0 | 0.7 | 0.4 | 94.0 | 100.0 | 1491 |
| 30-34 | 6.5 | 3.7 | 1.1 | 1.1 | 0.9 | 0.2 | 2.8 | 1.4 | 0.6 | 0.9 | 93.5 | 100.0 | 1348 |
| 35-39 | 8.7 | 5.4 | 1.8 | 1.0 | 1.6 | 0.4 | 3.3 | 1.7 | 0.6 | 1.1 | 91.3 | 100.0 | 892 |
| 40-44 | 8.4 | 5.8 | 1.2 | 1.9 | 1.0 | 0.1 | 2.6 | 1.0 | 0.9 | 0.7 | 91.6 | 100.0 | 731 |
| 45-49 | 4.6 | 3.6 | 1.5 | 0.7 | 0.7 | 0.1 | 1.0 | 0.4 | 0.0 | 0.6 | 95.4 | 100.0 | 543 |
| **Residence** | | | | | | | | | | | | | |
| Urban | 14.9 | 9.6 | 3.1 | 2.5 | 1.8 | 1.1 | 5.3 | 3.5 | 1.1 | 0.7 | 85.1 | 100.0 | 1475 |
| Rural | 3.6 | 1.9 | 0.7 | 0.3 | 0.4 | 0.1 | 1.7 | 0.8 | 0.4 | 0.5 | 96.4 | 100.0 | 5405 |
| **Region** | | | | | | | | | | | | | |
| Northeast | 2.0 | 1.3 | 0.5 | 0.1 | 0.5 | 0.0 | 0.7 | 0.0 | 0.2 | 0.5 | 98.0 | 100.0 | 1849 |
| Northwest | 1.2 | 0.7 | 0.4 | 0.2 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.4 | 98.8 | 100.0 | 1944 |
| Southeast | 9.0 | 3.9 | 0.8 | 0.9 | 1.1 | 0.5 | 5.1 | 3.5 | 1.0 | 0.6 | 91.0 | 100.0 | 1800 |
| Southwest | 15.0 | 10.5 | 4.0 | 2.5 | 1.6 | 1.2 | 4.5 | 2.3 | 1.1 | 1.1 | 85.0 | 100.0 | 1287 |
| **Education** | | | | | | | | | | | | | |
| No education | 2.0 | 1.3 | 0.5 | 0.2 | 0.3 | 0.0 | 0.7 | 0.1 | 0.1 | 0.4 | 98.0 | 100.0 | 4610 |
| Primary | 9.5 | 5.4 | 1.7 | 1.4 | 1.3 | 0.2 | 4.1 | 2.3 | 0.9 | 1.0 | 90.5 | 100.0 | 1509 |
| Secondary | 20.5 | 12.3 | 4.9 | 2.3 | 2.0 | 2.5 | 8.2 | 5.6 | 1.6 | 0.9 | 79.5 | 100.0 | 673 |
| Higher | 48.6 | 24.2 | 1.8 | 10.2 | 2.8 | 5.7 | 24.4 | 17.5 | 6.3 | 0.5 | 51.4 | 100.0 | 88 |
| **Number of Children** | | | | | | | | | | | | | |
| None | 4.2 | 1.6 | 0.9 | 0.0 | 0.3 | 0.3 | 2.6 | 2.0 | 0.3 | 0.3 | 95.8 | 100.0 | 802 |
| 1 | 3.6 | 1.7 | 0.7 | 0.1 | 0.1 | 0.6 | 1.9 | 0.9 | 0.6 | 0.4 | 96.4 | 100.0 | 1154 |
| 2 | 4.1 | 2.6 | 0.9 | 0.3 | 0.6 | 0.7 | 1.6 | 0.8 | 0.2 | 0.5 | 95.9 | 100.0 | 1172 |
| 3 | 5.2 | 2.8 | 0.9 | 0.8 | 0.5 | 0.1 | 2.4 | 1.3 | 0.5 | 0.6 | 94.8 | 100.0 | 1051 |
| 4 or more | 8.8 | 5.6 | 1.8 | 1.5 | 1.3 | 0.2 | 3.2 | 1.6 | 0.7 | 0.8 | 91.2 | 100.0 | 2701 |
| **Total Percentage** | **6.0** | **3.5** | **1.2** | **0.8** | **0.7** | **0.4** | **2.5** | **1.4** | **0.5** | **0.6** | **94.0** | **100.0** | **6880** |

[a] Total users of modern methods and all methods include users of foaming tablets (0.1 percent of women) and female sterilization (0.3 percent of women).

Increased use of family planning among women with formal education - an association documented in countries around the world - also occurs in Nigeria. Contraceptive use increases steadily with increased levels of education, reaching 49 percent among women with higher education (although half this use is of periodic abstinence and withdrawal). Their method of choice is the IUD, used more by these women (10 percent) than any other educational group. Among women who have attended primary or secondary school (which is the vast majority of those with any schooling), the method of choice is periodic abstinence, followed by the pill. Use of condoms is limited to those with secondary or higher schooling.

*Sources of methods*

All current users of modern methods were asked to report the source from which they most recently obtained their method of family planning. Table 6 shows that one-half of users obtained their method from a hospital or health center. One-quarter of users obtained their method from either a patent medicine shop or a pharmacy. Government hospitals were the single most frequently cited source (26 percent of users).

Table 6 Percent distribution of all current users of modern contraceptive methods by source of method, according to specific method, Nigeria, 1990

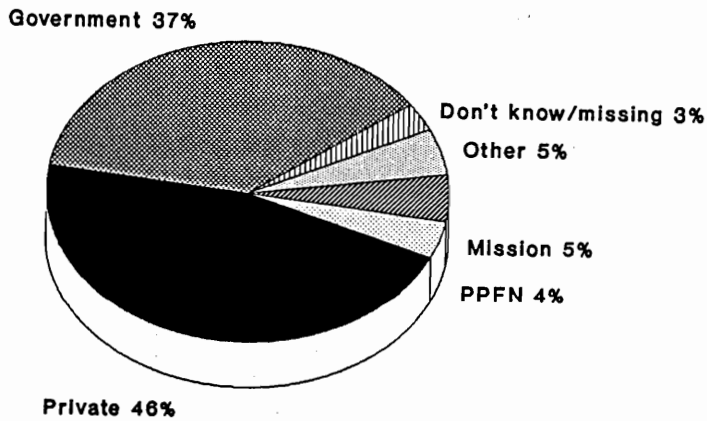
| Source of Method | Pill | IUD | Injection | Condom | All Modern Methods | Number of Women[a] |
|---|---|---|---|---|---|---|
| **Total Government** | 29.2 | 61.0 | 44.9 | 13.6 | 37.1 | 121 |
| Hospital | 19.6 | 41.2 | 31.9 | 7.3 | 26.1 | 85 |
| Health Center | 8.3 | 19.8 | 10.9 | 6.2 | 10.1 | 33 |
| Doctor | 1.3 | 0.0 | 2.1 | 0.0 | 0.9 | 3 |
| **Total PPFN[b]** | 2.3 | 7.8 | 3.6 | 3.7 | 4.4 | 14 |
| **Total Private** | 61.0 | 19.8 | 46.6 | 52.4 | 46.2 | 151 |
| Doctor | 1.5 | 0.5 | 6.3 | 0.3 | 1.9 | 6 |
| Health Center/Hospital | 4.1 | 18.6 | 35.6 | 4.1 | 13.3 | 44 |
| Pharmacy | 24.0 | 0.0 | 0.0 | 14.4 | 11.8 | 39 |
| Patent Medicine Shop | 27.4 | 0.0 | 3.0 | 27.9 | 16.4 | 54 |
| Market | 2.1 | 0.0 | 0.0 | 4.1 | 1.3 | 4 |
| Places of Work | 1.8 | 0.8 | 1.6 | 1.7 | 1.4 | 4 |
| **Total Other Sources** | 7.5 | 11.1 | 2.9 | 15.1 | 9.9 | 33 |
| Mission Sources | 1.5 | 10.1 | 1.6 | 0.0 | 5.1 | 17 |
| Friends/Relatives | 2.7 | 1.0 | 1.3 | 11.5 | 3.1 | 10 |
| Other Sources | 3.3 | 0.0 | 0.0 | 3.6 | 1.7 | 6 |
| Don't Know/Missing Data | 0.0 | 0.2 | 1.9 | 15.2 | 2.5 | 8 |
| Total Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 327 |
| Number of Users | 120 | 65 | 61 | 45 | 327 | 327 |

[a] Total number of users includes users of diaphragm (1 woman), foaming tablets (15), and female sterilization (20), which are too few in number for further breakdown.
[b] Planned Parenthood Federation of Nigeria

Of course, which source a woman uses depends on many things, one of which is the type of method sought. Most pill users obtain supplies from private sources, one-quarter from pharmacies and one-quarter from patent medicine shops. Conversely, the IUD is obtained largely from government facilities, approximately one-fifth from government health centers and two-fifths from government hospitals. Injections are obtained from government and private sources about equally. Most condoms are purchased from patent medicine shops and pharmacies, and the condom is the most likely method to be obtained from friends or relatives.

Overall, government sources supply 30 percent of pill users, 60 percent of IUD users, 45 percent of those obtaining injections, and 14 percent of condom users. Private sources supply 60 percent of pill users, 20 percent of the IUD users, 47 percent of those obtaining injections, and 52 percent of the condom users. Figure 4 summarizes the sources for current users for all modern methods combined.

Figure 4
Source of Family Planning
Current Users of Modern Methods




NDHS 1990

## D. Fertility Preferences

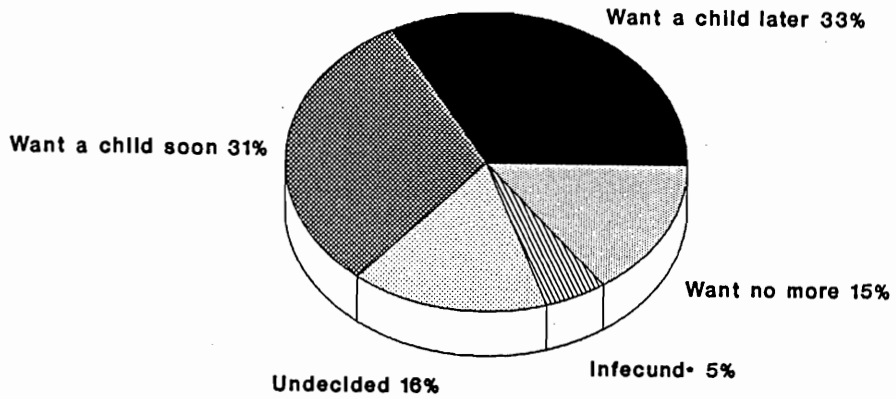
When asked, two-thirds of married women said they would like to have a child at some time in the future; however, one-half of these women said they would like to wait two or more years before having that birth. This latter group (33 percent of all married women) and women who want no more births at all (15 percent) represent one-half of all married women. These women, who either want to space or limit their births, can be considered to be potentially in need of family planning to meet their fertility desires. (See Table 7 and Figure 5).

Table 7 Percent distribution of currently married women by desire for children, according to age, Nigeria, 1990

| Desire for More Children | Age 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | Total Percentage |
|---|---|---|---|---|---|---|---|---|
| **Want Another** | | | | | | | | |
| Soon[a] | 38.3 | 39.6 | 32.2 | 30.0 | 29.0 | 23.0 | 15.7 | 31.0 |
| Later[b] | 47.7 | 43.9 | 43.5 | 31.8 | 24.2 | 12.6 | 7.1 | 33.0 |
| **Undecided[c]** | 11.9 | 12.0 | 15.5 | 20.7 | 17.2 | 18.6 | 13.1 | 15.9 |
| **Want no more** | 1.4 | 2.7 | 6.9 | 14.5 | 23.4 | 32.7 | 45.9 | 15.1 |
| Sterilized | 0.0 | 0.0 | 0.1 | 0.1 | 0.4 | 1.4 | 0.5 | 0.3 |
| Declare infecund | 0.6 | 1.2 | 1.5 | 2.7 | 5.3 | 11.6 | 17.0 | 4.4 |
| Missing | 0.0 | 0.6 | 0.3 | 0.3 | 0.5 | 0.1 | 0.7 | 0.4 |
| Total Percent | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Number of Women | 596 | 1279 | 1491 | 1348 | 892 | 731 | 543 | 6880 |

[a] Want another child within two years.
[b] Want another child two or more years from now.
[c] Undecided whether want another child or not.

Figure 5
Fertility Preferences
Currently Married Women 15-49




• Includes sterilized, missing

NDHS 1990

Table 8 For all births in the five years preceding the survey, the percentage whose mothers received at least one tetanus toxoid injection, antenatal care from a doctor or trained nurse/midwife, and assistance at delivery from a doctor or trained nurse/midwife, by selected background characteristics, Nigeria, 1990

| Characteristic | Received Tetanus Toxoid | Antenatal Care From: | | Assistance at Delivery From: | | Number of Births |
|---|---|---|---|---|---|---|
| | | Doctor | Nurse/Midwife | Doctor | Nurse/Midwife | |
| **Age of Mother** | | | | | | |
| Less than 20 | 42.8 | 25.1 | 19.7 | 6.7 | 18.0 | 476 |
| 20-34 | 55.7 | 38.0 | 21.1 | 10.7 | 21.5 | 5929 |
| 35 or older | 49.3 | 31.8 | 22.6 | 10.1 | 23.1 | 1797 |
| **Residence** | | | | | | |
| Urban | 77.1 | 60.7 | 23.5 | 21.5 | 38.9 | 1726 |
| Rural | 47.3 | 29.3 | 20.8 | 7.4 | 17.0 | 6476 |
| **Region** | | | | | | |
| Northeast | 35.0 | 26.3 | 10.2 | 7.3 | 3.8 | 1947 |
| Northwest | 43.2 | 30.9 | 14.2 | 5.0 | 5.2 | 2266 |
| Southeast | 64.1 | 34.6 | 32.0 | 10.4 | 36.7 | 2451 |
| Southwest | 75.4 | 57.5 | 29.0 | 21.8 | 44.4 | 1538 |
| **Education of Mother** | | | | | | |
| No education | 42.0 | 27.3 | 16.9 | 6.3 | 10.1 | 5155 |
| Primary | 68.7 | 41.8 | 31.9 | 12.3 | 36.8 | 2060 |
| Secondary | 82.1 | 68.2 | 22.8 | 26.5 | 49.5 | 910 |
| Higher | 82.8 | 78.1 | 19.1 | 38.4 | 57.0 | 77 |
| **Birth Order** | | | | | | |
| 1 | 56.1 | 38.7 | 21.7 | 13.0 | 23.0 | 1470 |
| 2-3 | 55.2 | 38.1 | 20.9 | 10.2 | 21.0 | 2549 |
| 4-5 | 54.4 | 37.5 | 19.8 | 10.3 | 21.4 | 2008 |
| 6 or higher | 49.1 | 30.1 | 23.1 | 8.8 | 21.6 | 2175 |
| **Total Percentage** | 53.6 | 35.9 | 21.3 | 10.3 | 21.6 | 8202 |

## E. Maternal Care

In the NDHS, all women who had had a birth in the five years prior to the survey were asked a number of questions regarding maternal health care. For each birth in that period, women were asked about tetanus toxoid injections, antenatal visits to health workers, and assistance at the time of delivery.

Table 8 shows that of all the births in the five years prior to the survey, 54 percent received the protection of at least one tetanus toxoid injection.[3] A trained health worker (doctor, nurse, or trained midwife) provided care during an antenatal check-up for 57 percent of these births. However, only 32 percent of these babies had the assistance of a trained health worker at the time of delivery.

Table 8 also shows that substantial differences in maternal care exist between women of different educational levels. While women with secondary schooling received tetanus toxoid injections for 82 percent of their births, only 42 percent of births to women with no formal schooling benefitted from such

[3] Tetanus toxoid injections are given during pregnancy for the prevention of neonatal tetanus, one of the principal causes of death among infants in developing countries. For full protection, a pregnant woman should receive two doses of the toxoid. However, if a woman has been vaccinated during a previous pregnancy, she may only require one dose for a current pregnancy.

an injection. Similarly, antenatal care was received from a trained health worker for 91 percent of births to women with secondary schooling, but only 44 percent of births to women with no schooling. This contrast is even greater for care at the time of delivery. Whereas the majority of births to women with some schooling had assistance from a health worker at the time of delivery, only 16 percent of births to women with no education did so.

Substantial differences in maternal care exist between urban and rural areas and between regions. Births in urban areas were about twice as likely to receive antenatal care and delivery care from health workers as were births in rural areas. Similarly, births in the two southern regions were much more likely to receive care from health professionals than births in the northern regions.

Table 9 Among children aged 12-23 months, the percentage with health cards seen by interviewer and the percentage who have received each vaccine (according to the vaccination card or the mother's report), by background characteristics, Nigeria, 1990

| Characteristics | Percent Children With Health Cards | Percent of children aged 12-23 months recorded on health cards or reported by mother to have received: BCG | DPT1 | DPT2 | DPT3 | Polio1 | Polio2 | Polio3 | Measles | All Vaccinations | No Vaccinations | Number of Children |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sex of Child** | | | | | | | | | | | | |
| Male | 30.9 | 59.5 | 57.8 | 45.7 | 33.0 | 58.3 | 45.7 | 33.1 | 45.1 | 29.9 | 38.6 | 683 |
| Female | 38.5 | 61.7 | 59.1 | 47.3 | 32.8 | 59.8 | 47.6 | 32.8 | 46.2 | 27.8 | 35.2 | 697 |
| **Residence** | | | | | | | | | | | | |
| Urban | 43.9 | 81.3 | 80.1 | 74.0 | 58.4 | 80.9 | 74.3 | 58.7 | 67.7 | 51.5 | 16.3 | 294 |
| Rural | 32.3 | 55.0 | 52.6 | 39.0 | 26.0 | 53.1 | 39.1 | 26.0 | 39.7 | 22.7 | 42.4 | 1086 |
| **Region** | | | | | | | | | | | | |
| Northeast | 21.2 | 41.2 | 40.1 | 32.1 | 16.9 | 42.3 | 32.3 | 16.9 | 31.6 | 15.5 | 54.5 | 359 |
| Northwest | 36.5 | 52.6 | 50.6 | 34.9 | 18.9 | 50.6 | 34.9 | 18.9 | 39.7 | 17.3 | 45.7 | 373 |
| Southeast | 40.9 | 72.7 | 69.4 | 58.2 | 49.8 | 69.4 | 58.4 | 49.8 | 53.4 | 42.3 | 25.6 | 408 |
| Southwest | 41.8 | 81.6 | 79.6 | 66.3 | 50.0 | 79.6 | 66.3 | 50.3 | 62.8 | 43.9 | 15.9 | 240 |
| **Education of Mother** | | | | | | | | | | | | |
| No education | 25.7 | 46.2 | 43.9 | 32.2 | 18.9 | 44.4 | 32.3 | 18.9 | 33.8 | 16.2 | 51.5 | 845 |
| Primary | 49.0 | 78.3 | 76.4 | 60.3 | 44.0 | 77.3 | 60.6 | 44.0 | 56.7 | 36.9 | 18.6 | 334 |
| Second./Higher | 49.3 | 92.0 | 90.0 | 83.6 | 73.6 | 90.0 | 83.6 | 73.6 | 77.6 | 68.7 | 5.5 | 201 |
| **Total Percentage** | 34.7 | 60.6 | 58.5 | 46.5 | 32.9 | 59.0 | 46.6 | 33.0 | 45.6 | 28.9 | 36.9 | 1380 |

## F. Vaccination of Children

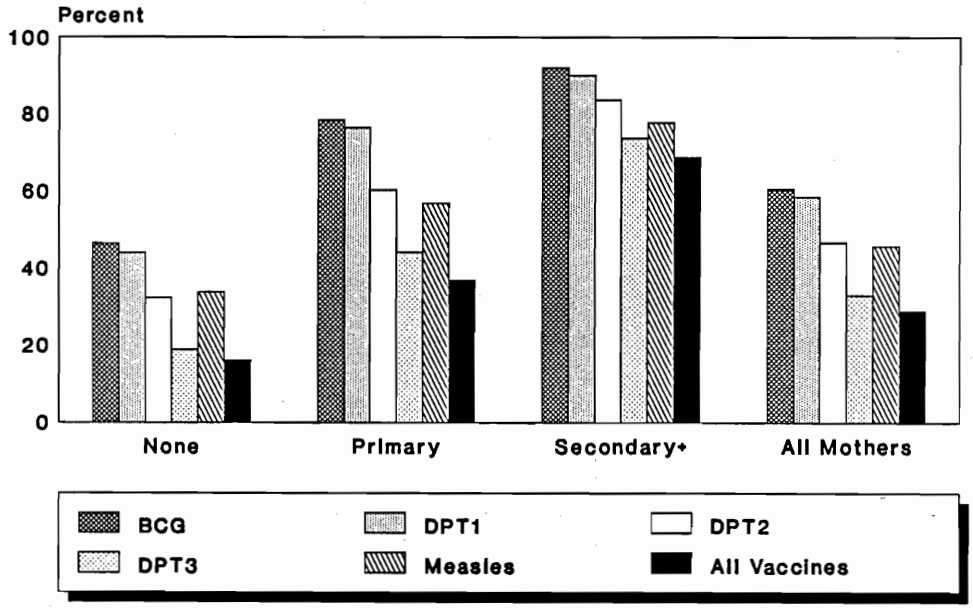
The Ministry of Health has initiated an Expanded Program for Immunizations which follows the guidelines of the World Health Organization (WHO). A child should receive the following vaccinations to be considered fully vaccinated: BCG, measles, and three doses each of DPT and polio. BCG is for protection against tuberculosis, and DPT is for prevention against diphtheria, pertussis, and tetanus; both DPT and polio require 3 vaccinations at intervals of several weeks. WHO recommends that children receive the complete schedule of vaccinations by 12 months of age. The vaccinations received by a child are recorded on a health card kept by the mother.

The NDHS asked mothers to show the interviewer the health cards of their children under age five. Interviewers recorded the dates of vaccinations which had been recorded on the cards, as well as any vaccinations which the mother reported had been given to the child. Data on vaccinations are presented in Table 9 for children aged 12-23 months, thereby including only those children who have reached the age by which they should be fully vaccinated. Cards were produced for 35 percent of these children; additional coverage was obtained from verbal reports of mothers. Those children who had been vaccinated, but whose mothers were unable to present a health card, could not be counted as among the vaccinated.

Three of every five children aged 12-23 months had received a BCG vaccination. Whether or not a child received BCG seems indicative of whether the child will ever receive any vaccinations; this pattern holds across all background characteristics shown in the table. Approximately one of every three children has never been vaccinated; and only one of three children is fully vaccinated.

The findings indicate that coverage for DPT and polio, which are usually given together, declines with each successive dose. Of the children who received DPT1/polio1, 20 percent did not go on to receive DPT2/polio2, and an additional 30 percent did not receive the third dose. Even children of educated mothers show a decline in coverage between the first and third doses of DPT and polio. Figure 6 shows the vaccination status of children by the educational level of the mother.

Figure 6
Vaccination Status of Children
Age 12-23 Months by Mother's Education

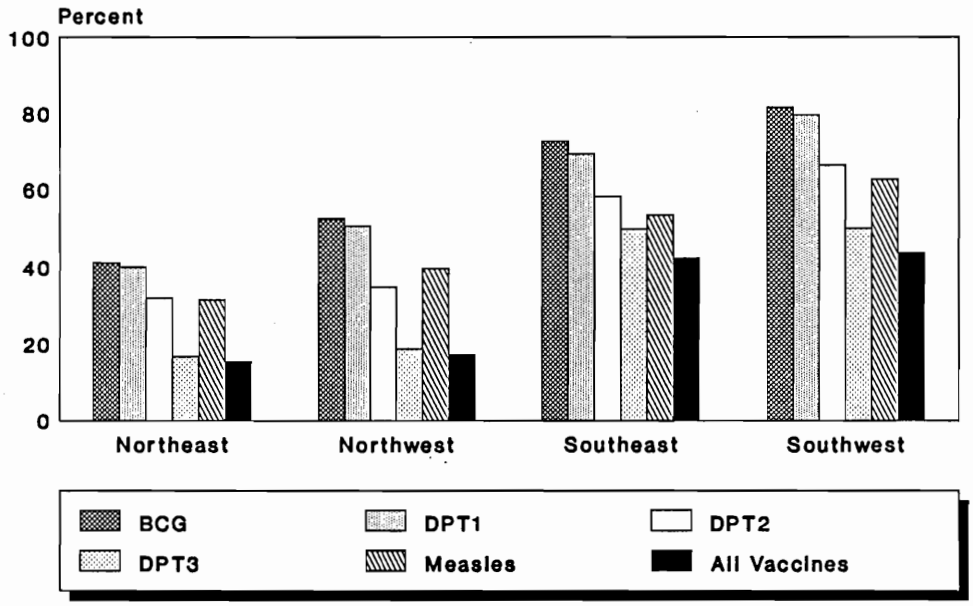



Note: Polio coverage is generally the same as DPT coverage.

NDHS 1990

Children with the least protection are those born to mothers with no formal education. One-half of these children have received no vaccinations at all. The other half began immunization coverage with BCG, but only one of every six children went on to receive all their vaccinations. This same pattern is true for children in the north; the regional pattern is shown in Figure 7.

Figure 7
Vaccination Status of Children
Age 12-23 Months by Region




Note: Polio coverage is generally the same as DPT coverage.

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## G. Childhood Diarrhea

Dehydration, brought on by severe bouts of diarrhea, is a leading cause of death among children in developing countries. The administration of oral rehydration solution is a simple treatment for countering the effects of dehydration. The solution can be prepared by mixing water with the salts in a commercially-prepared oral rehydration packet (ORS), or by following the WHO recipe for recommended home solution (RHS). Since the ingredients (sugar, salt, and water) are often easier to obtain than the ORS packets, the Ministry of Health advocates the teaching and administration of RHS.

In the NDHS, mothers with children under the age of five were asked whether their children had experienced any bouts of diarrhea in the two weeks or 24 hours prior to the survey. They were also asked whether the children received ORS or RHS treatment.

Children of all ages were reported to have had diarrhea in the two weeks prior to the survey, but the experience is more common among children between the ages of 6 months and two years. Children in the north are more likely to have had diarrhea, and are less likely to have received treatment than are children in the south. One of four children in the north has had diarrhea in the two weeks prior to the survey, but only 23 percent of them received ORS or RHS treatment. One of ten children has so suffered in the south, and 36 percent of them received treatment.

Table 10 Among children under five, the percentage reported by the mother to have had diarrhea in the past 24 hours and the past two weeks, and the percent of those with diarrhea in the past two weeks who received ORT treatment, either as a solution prepared from ORS packets or home solution (HS), by background characteristics, Nigeria, 1990

| Characteristics | Percentage of Children Who Had Diarrhea | | Percentage of Children With Diarrhea Who Received Treatment | | | Number of Children |
|---|---|---|---|---|---|---|
| | In Past 24 Hours | In Past 2 Weeks | ORS Packets | Home Solution | Either ORS or HS | |
| **Age of Child** | | | | | | |
| Less than 6 months | 6.5 | 11.6 | 10.3 | 18.0 | 20.6 | 759 |
| 6-11 months | 12.5 | 26.6 | 12.5 | 21.6 | 25.8 | 805 |
| 12-23 months | 14.5 | 29.3 | 10.4 | 29.8 | 32.2 | 1380 |
| 24-35 months | 10.2 | 20.7 | 10.0 | 22.4 | 23.7 | 1320 |
| 36-47 months | 3.4 | 10.4 | 12.9 | 15.8 | 24.0 | 1415 |
| 48-59 months | 3.8 | 9.6 | 16.9 | 22.0 | 23.6 | 1349 |
| **Sex of Child** | | | | | | |
| Male | 8.9 | 18.1 | 10.5 | 22.5 | 25.5 | 3394 |
| Female | 7.8 | 17.6 | 12.7 | 24.6 | 27.6 | 3634 |
| **Residence** | | | | | | |
| Urban | 4.5 | 11.7 | 25.5 | 43.2 | 49.4 | 1530 |
| Rural | 9.4 | 19.6 | 9.3 | 20.3 | 22.8 | 5498 |
| **Region** | | | | | | |
| Northeast | 13.7 | 23.9 | 13.6 | 18.7 | 23.8 | 1653 |
| Northwest | 11.9 | 25.7 | 10.7 | 19.3 | 21.6 | 1862 |
| Southeast | 4.6 | 12.2 | 8.9 | 33.3 | 34.7 | 2166 |
| Southwest | 2.7 | 8.7 | 15.1 | 34.9 | 37.8 | 1347 |
| **Education of Mother** | | | | | | |
| No education | 10.2 | 20.1 | 8.0 | 17.0 | 20.0 | 4330 |
| Primary | 6.2 | 16.0 | 20.4 | 36.1 | 38.5 | 1800 |
| Secondary | 3.7 | 10.7 | 18.1 | 44.8 | 48.3 | 824 |
| Higher | 1.2 | 10.0 | 23.6 | 55.6 | 79.2 | 74 |
| **Total Percentage** | 8.3 | 17.9 | 11.6 | 23.5 | 26.6 | 7028 |

Once again, the association with educational level of the mother is in the direction expected. Fewer children have had recent bouts of diarrhea, and a greater proportion of them have received treatment, as the educational level of the mother increases. One of five children of mothers with no education has had recent diarrhea, while one of ten children of mothers who have attended secondary school has been sick with diarrhea. Only 20 percent of the former had received treatment, while 48 percent of the latter had been treated.

## H. Breastfeeding

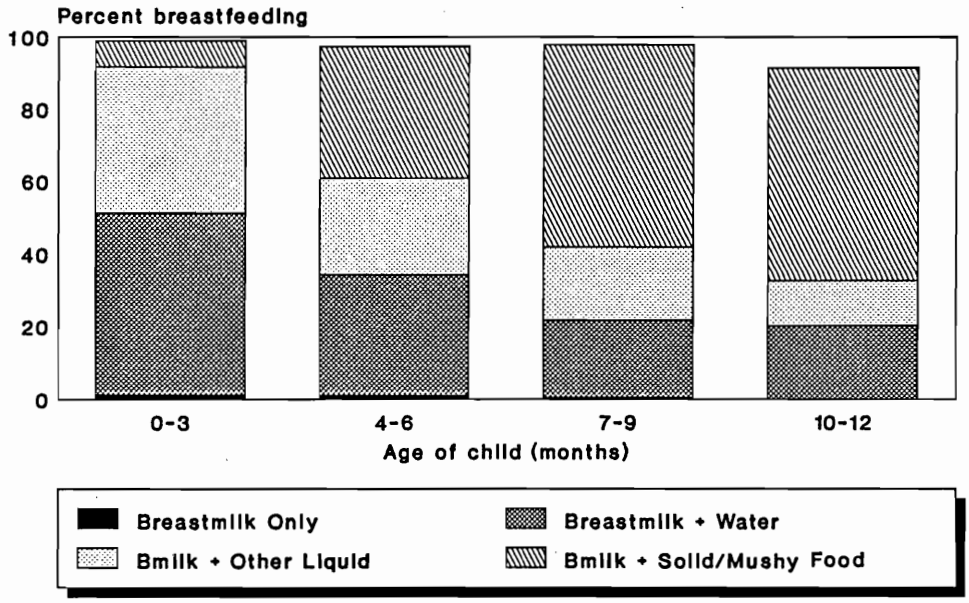
Breast milk is an important source of nutrients for infants. In the beginning months of life a baby can usually get all the nutrients he or she requires from breast milk alone. As the baby grows, breast milk is no longer sufficient, and other liquids, followed later by foods, have to be added to the baby's diet to ensure proper nourishment.

The breastfeeding practices of Nigerian mothers for (living) children under one year of age are summarized in Table 11 and Figure 8. Nearly all children are breastfed for at least some time, and the large majority are fed breast milk for more than 9 months (92 percent). Very few babies are ever given breast milk to the exclusion of anything else. Ninety percent of children aged 3 months or less are given water or other liquids in addition to breast milk. By the time children are 4 to 6 months of age, over one-third will have been introduced to solid or mushy food. However, many children are not introduced to foods until they are more than six months old; 42 percent of children 7-9 months and 33 percent of those 10-12 months have not yet been introduced to solid or mushy foods.

Table 11 Percent distribution of living children by breastfeeding status, food supplementation and use of a bottle with a nipple according to age, Nigeria, 1990

| Age | Not Currently Breastfeeding | Breast milk and: Only | Plain Water | Other Liquids | Solid/Mushy Food | Total Percent | Breastfed and Bottle Fed | Number of Living Children |
|---|---|---|---|---|---|---|---|---|
| 0-3 Months | 1.6 | 1.3 | 50.2 | 40.1 | 7.4 | 100.0 | 32.2 | 547 |
| 4-6 Months | 2.8 | 1.0 | 33.1 | 26.9 | 36.4 | 100.0 | 26.8 | 448 |
| 7-9 Months | 3.0 | 0.5 | 21.3 | 20.1 | 56.1 | 100.0 | 22.2 | 459 |
| 10-12 Months | 8.5 | 0.1 | 20.2 | 12.4 | 58.8 | 100.0 | 18.3 | 324 |

Figure 8
Breastfeeding Status of Living Children by Age

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# Demographic and Health Surveys
# Preliminary Reports

## DHS-I

| | | | |
|---|---|---|---|
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| Brazil | December | 1986 | (English) |
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| Dominican Republic | February | 1987 | (Spanish) |
| Liberia | March | 1987 | (English) |
| Colombia | March | 1987 | (Spanish) |
| Peru | March | 1987 | (Spanish) |
| Ecuador | July | 1987 | (Spanish) |
| Sri Lanka | July | 1987 | (English) |
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## DHS-II

| | | | |
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