



Reading and Understanding DHS Tables

Statistical tables can look intimidating at first glance. This flyer suggests ways to read and understand tables from the 2013 Nigeria Demographic and Health Survey report.

Example I: Current Use of Contraception A Question Asked of a Subgroup of Survey Respondents

Step 1: Read the title and subtitle. They tell you the topic and the specific population group being described. In this case, the table is about current use of contraception by currently married women age 15-49. This is a subgroup of survey respondents.

Step 2: Scan the column headings—the top horizontal row. They describe how the information is categorized. In this case, each column represents a contraceptive method: any method, any modern method, and any traditional method. The last column lists the number of women interviewed.

Step 3: Scan the row headings—the first vertical column. These show the different ways the data are divided into categories based on population characteristics. In this case, the table presents contraceptive use among married women by number of living children, urban-rural residence, zone of residence, educational level, and wealth. Most of the tables in DHS reports will be divided into these same categories.

Step 4: Look at the very last row at the bottom of the table. These percentages represent the totals of all married women age 15-49 who are currently using a method of contraception. In this case, 15.1% of currently married women age 15-49 are currently using any method of contraception, 9.8% are using any modern method, and 5.4% are using any traditional method.

Step 5: To find out what percentage of married women with more than secondary education are currently using a modern contraceptive method, draw two imaginary lines, as shown on the table. This shows that 22.4% of married women age 15-49 with more than secondary education are currently using a modern method of contraception.

Table 7.4 Current use of contraception by background characteristics

Percent distribution of currently married women age 15-49 by contraceptive method currently used, according to background characteristics, Nigeria 2013

| Background characteristic | Any method | Any modern method | Any traditional method | Number of women |
|----------------------------------|------------|-------------------|------------------------|-----------------|
| Number of living children | | | | |
| 0 | 2.4 | 1.2 | 1.1 | 2,823 |
| 1-2 | 12.9 | 8.2 | 4.7 | 8,637 |
| 3-4 | 20.9 | 13.0 | 7.8 | 8,305 |
| 5+ | 16.2 | 11.1 | 5.1 | 8,065 |
| Residence | | | | |
| Urban | 26.8 | 16.9 | 9.9 | 10,124 |
| Rural | 8.5 | 5.7 | 2.8 | 17,705 |
| Zone | | | | |
| North Central | 15.6 | 12.4 | 3.2 | 3,895 |
| North East | 3.2 | 2.7 | 0.4 | 4,679 |
| North West | 4.3 | 3.6 | 0.6 | 10,034 |
| South East | 29.3 | 11.0 | 18.2 | 2,333 |
| South South | 28.1 | 16.4 | 11.7 | 2,699 |
| South West | 38.0 | 24.9 | 13.1 | 4,189 |
| Education | | | | |
| No education | 2.7 | 1.7 | 0.9 | 13,470 |
| Primary | 19.9 | 13.6 | 6.3 | 5,336 |
| Secondary | 29.2 | 18.7 | 10.5 | 6,981 |
| More than secondary | 37.0 | 22.4 | 14.6 | 2,043 |
| Wealth quintile | | | | |
| Lowest | 1.7 | 0.9 | 0.8 | 6,424 |
| Second | 5.1 | 3.7 | 1.4 | 5,986 |
| Middle | 13.3 | 9.1 | 4.1 | 4,983 |
| Fourth | 23.1 | 14.4 | 8.6 | 5,042 |
| Highest | 36.7 | 23.4 | 13.3 | 5,395 |
| Total | 15.1 | 9.8 | 5.4 | 27,830 |

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

Practice: Use this table to answer the following questions (answers are upside down, below):

- What percentage of married women with 5+ children are using a modern method of contraception?
- In which zone are married women least likely to use a modern method of contraception?
- Compare married women in urban areas to married women in rural areas—which group is more likely to use a traditional method of contraception?

a) 11.1% b) North East- 2.7% c) Married women in urban areas - 9.9% use a traditional method compared to 2.8% of married women in rural areas.

Example 2: Prevalence and Treatment of ARI among Children

A Question Asked of a Subgroup of Survey Respondents

Step 1: Read the title and subtitle. In this case, the table is about two separate groups of children: (a) all children under age 5 and, (b) children under age 5 who had symptoms of an acute respiratory infection (ARI) in the 2 weeks before the survey.

Step 2: Identify the two panels. First identify the columns that refer to all children under 5 (a), and then isolate the columns that refer only to those children who had ARI symptoms in the 2 weeks before the survey (b).

Step 3: Look at the first panel. What percentage of children under 5 had symptoms of an ARI in the 2 weeks before the survey? It's 2.0%.

Now look at the second panel. How many children are there with fever? Only 565, or about 2% of the 28,950 children under age 5. The second panel is a subset of the first panel.

Step 4: Only approximately 2% of the children in the survey had ARI symptoms in the 2 weeks before the survey. Once these children are further divided into the background characteristic categories, there may be too few cases for the percentages to be reliable.

For example, look to see what percentage of children under 6 months with ARI symptoms received antibiotic drugs: 34.2%. This percentage is in parentheses because there are fewer than 50 children (unweighted) in this category. Readers should use this number with caution—it may not be accurate. (For more information on weighted and unweighted numbers, see Example 4.)

Look also to see what percentage of children with ARI symptoms in South West Zone received antibiotic drugs. There is no number in this cell—only an asterisk. This is because fewer than 25 children (unweighted) in South West Zone were reported to have ARI symptoms in the 2 weeks before the survey. Results for this group are not reported. The subgroup is too small, and therefore the data are not reliable.

Table 10.5 Prevalence and treatment of symptoms of ARI

Among children under age 5, the percentage who had symptoms of acute respiratory infection (ARI) in the two weeks preceding the survey and among children with symptoms of ARI, the percentage for whom advice or treatment was sought from a health facility or provider and the percentage who received antibiotics as treatment, according to background characteristics, Nigeria 2013

| Background characteristic | Among children under age five: | | Among children under age five with symptoms of ARI: | | |
|---------------------------|--|--------------------|--|-------------------------------------|--------------------|
| | Percentage with symptoms of ARI ¹ | Number of children | Percentage for whom advice or treatment was sought from a health facility or provider ² | Percentage who received antibiotics | Number of children |
| Age in months | | | | | |
| <6 | 1.5 | 2,989 | (28.2) | (34.2) | 44 |
| 6-11 | 2.9 | 3,263 | 33.5 | 39.7 | 93 |
| 12-23 | 3.1 | 5,900 | 30.5 | 35.3 | 184 |
| 24-35 | 2.1 | 5,490 | 44.6 | 36.6 | 115 |
| 36-47 | 1.0 | 5,722 | 31.9 | 32.6 | 59 |
| 48-59 | 1.2 | 5,586 | 35.8 | 40.0 | 69 |
| Sex | | | | | |
| Male | 1.9 | 14,509 | 36.2 | 35.9 | 279 |
| Female | 2.0 | 14,440 | 32.8 | 37.0 | 286 |
| Residence | | | | | |
| Urban | 1.5 | 10,403 | 46.6 | 44.2 | 154 |
| Rural | 2.2 | 18,547 | 30.0 | 33.6 | 411 |
| Zone | | | | | |
| North Central | 2.1 | 4,019 | 28.5 | 23.8 | 83 |
| North East | 5.1 | 5,034 | 32.7 | 37.2 | 257 |
| North West | 0.9 | 10,485 | 40.5 | 31.5 | 91 |
| South East | 2.1 | 2,585 | 29.9 | 28.9 | 53 |
| South South | 1.7 | 2,742 | 32.1 | 55.7 | 48 |
| South West | 0.8 | 4,084 | * | * | 33 |
| Mother's education | | | | | |
| No education | 2.0 | 13,945 | 31.2 | 34.5 | 277 |
| Primary | 2.1 | 5,563 | 27.5 | 37.1 | 115 |
| Secondary | 2.0 | 7,697 | 42.1 | 38.2 | 151 |
| More than secondary | 1.2 | 1,744 | * | * | 22 |
| Wealth quintile | | | | | |
| Lowest | 2.1 | 6,636 | 26.8 | 36.5 | 140 |
| Second | 2.9 | 6,483 | 27.7 | 25.2 | 189 |
| Middle | 2.1 | 5,534 | 40.7 | 42.5 | 114 |
| Fourth | 1.4 | 5,243 | 36.9 | 49.9 | 72 |
| Highest | 1.0 | 5,053 | (63.7) | (45.9) | 50 |
| Total | 2.0 | 28,950 | 34.5 | 36.5 | 565 |

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

¹ Symptoms of ARI (cough accompanied by short, rapid breathing which was chest-related and/or by difficult breathing which was chest-related) is considered a proxy for pneumonia

² Excludes pharmacy, chemist/PMS, shop, traditional practitioner, market and other

Note: When parentheses or asterisks are used in a table, the explanation will be noted under the table. If there are no parentheses or asterisks on a table, you can proceed with confidence that enough cases were included in all categories that the data are reliable.

Practice: Use this table to answer the following questions (answers are upside down, below):

- In what age group are symptoms of ARI the most common?
- What percentage of children with ARI symptoms in the wealthiest (highest wealth quintile) households took antibiotics? Can you use this number with confidence?
- Among children with ARI symptoms whose mothers have more than secondary education, what percentage received antibiotics? Why is there no number in the table?

a) 12-23 months, 3.1% of children 12-23 months had ARI symptoms in the 2 weeks before the survey. b) 45.9% but because this is based on only 25-49 cases, you should use this number with caution. c) This cell has an asterisk because there are fewer than 25 cases in this category. There are not enough children with ARI symptoms whose mothers have more than secondary education to be able to provide an accurate number.

Example 3: Knowledge of AIDS

Interpreting, Comparing, and Understanding Patterns

Step 1: Read the title and subtitle. In this case, the table is about women and men who have heard of AIDS.

Step 2: Identify the indicators in the top most row. In this table there are just two indicators: percentage of women and men who have heard of AIDS.

Step 3: Look at the row headings to identify the background characteristics. In this table, awareness of AIDS is disaggregated by age, marital status, urban/rural residence, zone, education, and wealth quintile.

Step 4: Look at the bottom of the first column to determine the total percentage of women and men who have heard of AIDS: 92.6% of women and 95.5% of men have heard of AIDS.

Step 5:

Although awareness of AIDS is high among women and men in Nigeria, a closer look at the table shows how awareness of AIDS varies throughout the population. Consider the following questions:

- What are the lowest and the highest percentages (range) of AIDS awareness among women within the zones? Only 83.5% of women in North Central have heard of AIDS compared to 99.0% in South East.
- Look for patterns: Does AIDS awareness vary by background characteristics? For example, is there a clear pattern of AIDS awareness by age? By wealth? By level of education? By marital status?
- Answers: The youngest women and men (age 15-19) have the least awareness of AIDS. AIDS awareness increases with household wealth and with education for both women and men. Women and men who have never had sex are least likely to have heard of AIDS, while women and men who are not married but sexually active are most aware of AIDS.
- What does this mean? To improve AIDS awareness, programs should focus on women and men with low levels of education and those living in North Central Zone. In addition, those who have not had sex are least likely to have heard of AIDS. Targeting this group before they initiate sexual activity could reduce their chances of HIV transmission.

| 1 | | | | |
|---|-------------------|-----------------------|-------------------|-----------------------|
| Table 13.1 Knowledge of AIDS | | | | |
| Percentage of women and men age 15-49 who have heard of AIDS, by background characteristics, Nigeria 2013 | | | | |
| Background characteristic | 2 Women | | Men | |
| | Has heard of AIDS | Number of respondents | Has heard of AIDS | Number of respondents |
| Age | | | | |
| 15-24 | 91.4 | 14,576 | 92.1 | 6,511 |
| 15-19 | 89.5 | 7,820 | 89.3 | 3,619 |
| 20-24 | 93.5 | 6,757 | 95.5 | 2,892 |
| 25-29 | 92.6 | 7,145 | 97.3 | 2,757 |
| 30-39 | 94.2 | 10,185 | 97.5 | 4,589 |
| 40-49 | 92.8 | 7,042 | 97.7 | 3,501 |
| Marital status | | | | |
| Never married | 94.3 | 9,326 | 93.7 | 8,378 |
| Ever had sex | 97.8 | 3,732 | 98.5 | 3,461 |
| Never had sex | 91.9 | 5,593 | 90.3 | 4,918 |
| Married/living together | 91.8 | 27,830 | 97.1 | 8,723 |
| Divorced/separated/widowed | 95.5 | 1,793 | 99.4 | 258 |
| Residence | | | | |
| Urban | 97.3 | 16,414 | 98.3 | 7,611 |
| Rural | 89.2 | 22,534 | 93.3 | 9,748 |
| Zone | | | | |
| North Central | 83.5 | 5,572 | 93.8 | 2,685 |
| North East | 88.1 | 5,766 | 94.1 | 2,515 |
| North West | 95.4 | 11,877 | 95.3 | 5,185 |
| South East | 99.0 | 4,476 | 98.7 | 1,686 |
| South South | 94.3 | 4,942 | 97.5 | 2,445 |
| South West | 93.6 | 6,314 | 95.1 | 2,843 |
| Education | | | | |
| No education | 85.7 | 14,729 | 88.6 | 3,685 |
| Primary | 93.1 | 6,734 | 94.9 | 2,907 |
| Secondary | 97.8 | 13,927 | 97.5 | 8,281 |
| More than secondary | 99.6 | 3,558 | 99.5 | 2,486 |
| Wealth quintile | | | | |
| Lowest | 85.3 | 7,132 | 88.6 | 2,862 |
| Second | 89.3 | 7,428 | 93.1 | 2,992 |
| Middle | 91.6 | 7,486 | 96.4 | 3,338 |
| Fourth | 96.2 | 7,992 | 97.8 | 3,835 |
| Highest | 98.8 | 8,910 | 98.9 | 4,332 |
| Total | 4 92.6 | 38,948 | 95.5 | 17,359 |

Example 4: Understanding Sampling Weights in DHS Tables

A sample is a group of people that have been selected for a survey. In DHS surveys, the sample represents the entire national population. Most countries want to collect data and report information both for the entire country and also for a country's regions or provinces. For the 2013 NDHS, the survey sample is representative nationally, at the urban-rural level, for each of the 6 zones, and, for most indicators, for the 36 states and the Federal Capital Territory (FCT).

DHS surveys are designed to provide these national and state-level statistics. We want the sample surveyed in each state to resemble the actual population of that state, just as we want the national sample to resemble the actual population of the country. If the states vary in size and especially if some states have very small populations, then a randomly-drawn sample may not include enough people from each state for analysis.

For example, let's say that you have enough money to interview 38,948 women for a survey that should be representative of both the states and the entire country (as in Table 3.1 for Nigeria, below). In Nigeria, the states are not evenly distributed: some states are more heavily populated (such as Lagos), while others have smaller populations (such as Ekiti).

A sampling statistician can determine how many women should be interviewed in each zone and state in order to get reliable statistics. The South West Zone in Nigeria makes up 16.2% of the population of Nigeria. Within South West Zone there are six states. The blue column (1) in the table at the right shows the actual number of women selected and interviewed in each Zone and in the states in South West Zone. With these numbers, there are enough interviews to get reliable results in each region.

With this distribution of interviews, some states are overrepresented and some states are underrepresented. For example, the population of women in Ekiti is less than 1% of women in Nigeria, while Lagos is about 5% of the population of women in Nigeria. Lagos's population is more than six times larger than the population in Ekiti. But as the blue column shows, the DHS survey interviewed almost twice as many women in Ekiti as in Lagos. This does not accurately represent the population of the country.

Table 3.1 Background characteristics of respondents
Percent distribution of women age 15-49 by selected background characteristics, Nigeria 2013

| Background characteristic | Women | | |
|---------------------------|---------------------|-----------------|-------------------|
| | Weighted percentage | Weighted number | Unweighted number |
| Zone | | | |
| North Central | 14.3 | 5,572 | 6,251 |
| North East | 14.8 | 5,766 | 6,630 |
| North West | 30.5 | 11,877 | 9,673 |
| South East | 11.5 | 4,476 | 4,462 |
| South South | 12.7 | 4,942 | 6,058 |
| South West | 16.2 | 6,314 | 5,874 |
| South West Zone states: | | | |
| Ekiti | 3 0.8 | 2 326 | 1 863 |
| Lagos | 5.0 | 1,964 | 1,482 |
| Ogun | 2.3 | 883 | 672 |
| Ondo | 2.1 | 808 | 916 |
| Osun | 2.0 | 765 | 1,026 |
| Oyo | 4.0 | 1,568 | 915 |
| Total | 100.0 | 38,948 | 38,948 |

In order to get statistics that are representative of the entire country, the distribution of the women in the sample needs to resemble the distribution of the women in the country. Women from a smaller state, like Ekiti, should only contribute a small amount to the national total. Likewise, women from a larger state, like Lagos, should contribute more. Therefore, DHS statisticians mathematically adjust or "weight" the number of women from each state so that each state's contribution to the total is proportionate to the actual population of the country. The numbers in the purple column (2) represent the "weighted" values. The total national sample size of 38,948 women has not changed, but the distribution of the women in the zones and states has been changed to represent their contribution to the total population size.

How do statisticians weight each category? They recalculate the categories to reflect the real population of the country. If you were to compare the light red column (3) to the actual population distribution of Nigeria, you would see that women in each zone and state are contributing to the total sample with the same weight that they contribute to the population of the country. The weighted number of women in the survey now accurately represents how many women live in Lagos and how fewer women live in Ekiti.

With sampling and weighting, it is possible to interview enough women to provide reliable statistics at both the national and regional level without distorting the overall distribution of the population within the country. In general, only the weighted numbers are shown in each of the DHS tables, so don't be distressed if these numbers seem low: they may actually represent a larger number of women interviewed. And remember, the table will use parentheses and asterisks to warn you if there are too few unweighted cases in any category.