Reading and Understanding DHS Tables

Statistical tables can look intimidating at first glance. This flyer suggests ways to read and understand tables from the 2012 Kyrgyz Republic Demographic and Health Survey report.

Example 1: 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, region 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, 36.3% of currently married women age 15-49 are currently using any method of contraception, 33.7% are using any modern method, and 2.6% are using any traditional method.

Step 5: To find out what percentage of married women with higher education are currently using a modern contraceptive method, draw two imaginary lines, as shown on the table. This shows that 33.8% of married women age 15-49 with higher education are currently using a modern method of contraception.

Table 7.3 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, Kyrgyz Republic 2012

Background characteristic	Any method	Any modern method	Any traditional method	Number of women
Number of living children				
0	2.2	2.2	0.0	444
1-2	31.8	28.8	3.0	2,243
3-4	46.8	43.8	3.0	2,037
5+	43.3	41.5	1.7	532
Residence				
Urban	38.9	34.2	4.6	1,684
Rural	35.1	33.4	1.7	3,572
Region				
Issyk-Kul	37.7	36.7	1.0	468
Djalal-Abad	37.5	34.5	3.1	942
Naryn	53.2	53.2	0.0	209
Batken	33.3	28.6	4.7	444
Osh Oblast	31.8	30.5	1.3	1,049
Talas	46.7	45.5	1.3	272
Chui	29.4	27.8	1.6	937
Bishkek City	42.9	36.6	6.3	750
Osh City	33.0	31.0	2.0	184
Education				
None/primary	*	*	*	17
Basic general	28.0	26.9	1.1	470
Secondary	36.2	33.9	2.3	2,442
Professional primary/ middle	39.1	36.7	2.4	967
Higher	37.7	33.8	3.9	1,360
Wealth quintile				
Lowest	37.8	36.4	1.4	1,016
Second	37.0	35.2	1.8	1,044
Middle	34.9	32.6	2.2	1,081
Fourth	32.4	30.5	2.0	1,110
Highest	39.8	34.0	5.8	1,004
Total	36.3	33.7	2.6	5,256

Note: If more than one method is used, only the most effective method is considered in this tabulation. An asterisk indicates that a figure is based in fewer than 25 unweighted cases and has been suppressed.
LAM = Lactational amenorrhea method.

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

a) What percentage of married women with 5+ children are using a modern method of contraception?

b) In which region are married women least likely to use modern method of contraception?

c) Compare married women in urban areas to married women rural areas—which group is more likely to use a traditional method of contraception?

a) 41.5% b) Chui- 27.8% c) Married women in urban areas - 4.6% using a traditional method compared to 1.7% of women in rural areas.

Example 2: Prevalence and Treatment of Fever 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 a fever 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 a fever in the 2 weeks before the survey (b).

Step 3: Look at the first panel. What percentage of children under 5 had a fever in the 2 weeks before the survey? It's 5.3%.

Now look at the second panel. How many children are there with fever? Only 210, or about 5.3% of the 3,975 children under age 5. The second panel is a subset of the first panel.

Step 4: Only approximately 5% of the children in the survey had a fever 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 age 6-11 months with fever took antibiotic drugs: 50.9%. 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 less than 6 months old received antibiotic drugs. There is no number in this cell—only an asterisk. This is because fewer than 25 children (unweighted) under 6 months were reported to have a fever 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 11.6 Prevalence and treatment of fever

Among children under age 5, the percentage who had a fever in the two weeks preceding the survey and among children with fever, the percentage for whom advice or treatment was sought from a health facility or provider, and the percentage who received antibiotics as treatment, by background characteristics, Kyrgyz Republic 2012

Background characteristic	Among children under age 5:		Among children under age 5 with fever		
	Percentage with fever	Number of children	Percentage for whom advice or treatment was sought from a health facility or provider[1]	Percentage who took antibiotic drugs	Number of children
Age in months					
<6	2.3	421	*	*	10
6-11	7.8	493	(55.8)	(50.9)	38
12-23	7.2	832	44.7	47.1	60
24-35	5.8	793	(25.1)	(48.9)	46
36-47	3.7	768	(54.9)	(32.2)	28
48-59	4.3	668	(36.4)	(30.8)	29
Sex					
Male	5.6	2,043	44.3	47.0	115
Female	4.9	1,932	40.6	38.3	95
Residence					
Urban	5.2	1,188	57.6	59.4	62
Rural	5.3	2,787	36.3	36.2	148
Region					
Issyk-Kul	5.4	376	(24.5)	(34.3)	20
Djalal-Abad	4.9	714	(40.6)	(15.5)	35
Naryn	2.0	173	*	*	3
Batken	3.9	350	*	*	14
Osh Oblast	3.6	810	*	*	30
Talas	7.7	246	(48.1)	(50.6)	19
Chui	8.6	643	(34.6)	(23.8)	55
Bishkek City	5.0	544	*	*	27
Osh City	5.5	119	*	*	7
Mother's education					
None/primary	*	22	*	*	2
Basic general	4.6	427	*	*	20
Secondary	4.8	1,801	39.3	40.7	86
Prof.primary/ middle	4.6	649	(45.9)	(38.9)	30
Higher	6.7	1,075	52.5	55.6	72
Wealth quintile					
Lowest	4.6	751	(35.1)	(52.5)	35
Second	5.8	794	(35.5)	(40.6)	46
Middle	4.2	843	(31.6)	(23.8)	35
Fourth	6.4	888	54.5	34.2	57
Highest	5.3	700	(50.7)	(68.9)	37
Total	5.3	3,975	42.6	43.0	210

Note: Figures in parentheses are based on 25-49 unweighted cases; an asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.
[1]

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):
a) In what age group is fever most common?
b) What percentage of children with fever in Issyk-Kul took antibiotics? Can you use this number with confidence?
c) What percentage of children with fever in Osh City took antibiotics? Why is there no number in the table?

a) 6-11 months. 7.8% of children 6-11 months had a fever in the 2 weeks before the survey. b) 34.3% but because this is based on only 25-49 cases, you should use this number with caution. c) This cell is empty because there are fewer than 25 cases in this category. There are not enough children in Osh City with a fever 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 women and men who have heard of AIDS.

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

Step 3: Look at the bottom of the first column to determine what percentage of women and men have heard of AIDS: 90.5% of women and 93.4% of men have heard of AIDS.

Step 4: Look at the row headings to identify the background characteristics. In this table, awareness of AIDS is disaggregated by age, marital status, residence, region, education, and wealth quintile.

Step 5:

Although awareness of AIDS is high among women and men in the Kyrgyz Republic, 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 regions? Only 75.4% of women in Osh Oblast have heard of AIDS compared to 98.9% in Issyk-Kul.
- 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 mother's level of education? By marital status?
- Answers: The youngest women and men have the least awareness of AIDS; and in general, AIDS awareness increases with age. Among women, AIDS awareness also increases with household wealth and with education. Among men, there is no clear relationship between AIDS awareness and household wealth, but AIDS awareness does increase incrementally with men's education. Women and men who have never had sex are least likely to have heard 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 the regions of Osh Oblast. 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.

Table 13.1 Knowledge of AIDS [1]

Percentage of women and men age 15-49 who have heard of AIDS, by background characteristics, Kyrgyz Republic 2012

Background characteristic	Women		Men	
[2]	Has heard of AIDS	Number of respondents	Has heard of AIDS	Number of respondents
Age				
15-24	87.3	3,164	88.0	836
15-19	82.5	1,637	80.8	432
20-24	92.4	1,527	95.6	404
25-29	92.6	1,265	95.8	409
30-39	92.2	1,943	97.7	596
40-49	92.6	1,837	95.1	572
Marital status				
Never married	86.0	2,245	87.3	875
Ever had sex	100.0	92	94.7	462
Never had sex	85.4	2,153	79.0	413
Married/living together	92.1	5,256	97.0	1,443
Divorced/separated/widowed	92.5	707	95.2	95
Residence				
Urban	94.4	3,070	92.4	781
Rural	88.1	5,138	93.9	1,632
Region				
Issyk-Kul	98.9	650	95.2	207
Djalal-Abad	86.7	1,332	96.8	402
Naryn	90.9	281	99.8	98
Batken	95.5	616	100.0	186
Osh Oblast	75.4	1,627	83.9	526
Talas	96.7	360	97.8	126
Chui	97.0	1,465	100.0	407
Bishkek City	95.5	1,566	87.8	383
Osh City	93.9	311	96.9	78
Education				
None/primary	(61.4)	39	*	7
Basic general	78.5	1,139	86.6	338
Secondary	87.1	3,468	92.2	1,158
Professional primary/middle	96.8	1,364	96.7	388
Higher	98.5	2,198	98.1	522
Wealth quintile				
Lowest	87.8	1,459	91.4	502
Second	88.5	1,473	93.6	496
Middle	87.6	1,538	95.3	451
Fourth	90.5	1,667	96.9	449
Highest	95.8	2,071	90.5	515
Total [3]	90.5	8,208	93.4	2,413

Note: Figures in parentheses are based on 25-49 unweighted cases; an asterisk denotes a figure based on fewer than 25 unweighted cases that has been suppressed.

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 2012 KgDHS, the survey sample is representative nationally, at the urban-rural level, and for each of the 9 regions.

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

For example, let's say that you have enough money to interview 8,208 women for a survey that should be representative of both the regions and the entire country (as in Table 3.1 for the Kyrgyz Republic, below). In the Kyrgyz Republic, the regions are not evenly distributed: some region are more heavily populated (such as Osh Oblast), while others have smaller populations (such as Naryn).

A sampling statistician can determine how many women should be interviewed in each region in order to get reliable statistics. In the case of the Kyrgyz Republic, the blue column (1) shows the actual number of women selected and interviewed in each region, ranging from 666 in Naryn to 1,248 in Osh Oblast. With these numbers, there are enough interviews to get reliable results in each region.

With this distribution of interviews, some regions are overrepresented and some regions are underrepresented. For example, the population of Naryn according to the 2009 Population Census was just over 3% of the entire population of the Kyrgyz Republic. In contrast, the population of Osh Oblast in 2009 was approximately 20% of the population. Osh Oblasts's population is approximately 6 times larger than the population in Naryn. But as the blue column shows, the DHS survey has interviewed only about twice as many people in Osh Oblast as in Naryn. 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, Kyrgyz Republic 2012			
	Women		
Background characteristic	Weighted percent	Weighted number	Unweighted number
Region			
Issyk-Kul	7.9	650	787
Djalal-Abad	16.2	1,332	1,012
Naryn	3.4	281	666
Batken	7.5	616	970
Osh Oblast	19.8	1,627	1,248
Talas	4.4	360	921
Chui	17.9	1,465	859
Bishkek City	19.1	1,566	1,017
Osh City	3.8	311	728
Total	100.0	8,208	8,208

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 region, like Naryn, should only contribute a small amount to the national total. Likewise, women from a larger region, like Osh Oblast, should contribute more. Therefore, DHS statisticians mathematically adjust or "weight" the number of women from each region so that each region'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 sample size of 8,208 women has not changed, but the distribution of the women in the regions 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 the Kyrgyz Republic, you would see that women in each region 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 Osh Oblast and how fewer women live in Naryn.

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.