Reading and Understanding Tables from the 2015-16 Armenia Demographic and Health Survey (ADHS)

Example 1: Exposure to Mass Media
A Question Asked of All Survey Respondents

Table 3.3.1 Exposure to mass media: Women (1)

Percentage of women age 15-49 who are exposed to specific media on a weekly basis, by background characteristics, Armenia 2015-16

(3) Background characteristic	Reads a newspaper or magazine at least once a week	Watches television at least once a week	Listens to the radio at least once a week	Accesses all three media at least once a week	Accesses none of the three media at least once a week	(2) Number of women
Age						
15-19	25.4	90.4	14.6	9.8	8.3	725
20-24	27.1	93.3	16.9	12.9	6.0	928
25-29	28.5	93.9	17.9	13.7	5.5	1,099
30-34	26.9	94.2	17.8	13.0	5.7	1,007
35-39	28.1	94.3	13.9	11.4	5.1	867
40-44	26.5	94.3	13.4	10.4	4.7	784
45-49	27.1	93.4	10.1	7.1	5.8	706
Residence						
Urban	33.7	94.6	20.9	15.8	4.5	3,657
Rural	17.4	91.8	7.0	5.1	7.8	2,459
Region						
Yerevan	41.3	96.9	30.4	23.8	2.5	2,001
Aragatsotn	15.5	86.9	4.2	3.8	12.7	315
Ararat	15.9	97.2	15.7	10.1	1.8	552
Armavir	18.0	97.8	7.2	5.5	2.0	586
Gegharkunik	3.6	65.7	0.3	0.0	32.7	478
Lori	8.7	87.3	2.5	1.5	12.1	355
Kotayk	26.4	97.8	14.0	10.0	1.5	678
Shirak	18.4	95.8	11.3	7.3	3.9	510
Syunik	29.4	97.7	6.0	4.5	2.0	238
Vayots Dzor	37.0	98.0	2.1	1.6	1.1	119
Tavush	56.1	95.4	2.3	1.6	3.7	283
Education						
Basic	10.5	91.0	6.3	2.8	8.1	396
Secondary	14.5	91.7	8.8	5.1	8.0	2,444
Secondary special	26.8	94.8	11.4	8.1	4.5	1,360
Higher	47.1	95.4	28.3	24.0 (5)	3.5	1,910
Wealth quintile						
Lowest	11.5	92.0	4.9	2.5	7.8	1,081
Second	22.2	93.1	9.3	7.2	6.3	1,242
Middle	25.3	91.0	14.9	10.9	8.2	1,142
Fourth	29.4	93.8	17.3	11.9	4.9	1,287
Highest	43.6	96.9	27.5	22.7	2.8	1,365
Total (4)	27.2	93.5	15.3	11.5	5.8	6,116

Note: Total includes 5 (weighted) women with no education.

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 women age 15-49 and their access to different types of media. All eligible female respondents age 15-49 were asked these questions.

Step 2: Scan the column headings—highlighted in green in the table above. They describe how the information is categorized. In this table, the first three columns of data show different types of media that women access at least once a week. The fourth column shows women who access all three media, while the fifth column is women who do not access any of the three types of media at least once a week. The last column lists the number of women interviewed in the survey.

Step 3: Scan the row headings—the first vertical column highlighted in blue in the table above. These show the different ways the data are divided into categories based on population characteristics. In this case, the table presents women's access to media by age, urban-rural residence, region, educational level, and wealth quintile. Most of the tables in the ADHS report will be divided into these same categories.

Step 4: Look at the row at the bottom of the table highlighted in light red. These percentages represent the totals of all women age 15-49 and their access to different types of media. In this case, 27.2% of women age 15-49 read a newspaper or magazine at least once a week, 93.5% watch television weekly, and 15.3% listen to the radio weekly.

Step 5: To find out what percentage of women with higher education access all three media weekly, draw two imaginary lines, as shown on the table. This shows that 24.0% of women age 15-49 with higher education access all three types of media weekly.

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

a) What percentage of women in Armenia do not access any of the three media at least once a week?

b) What age group of women are most likely to read a magazine or newspaper weekly?

c) Compare women in urban areas to women in rural areas—which group is more likely to listen to the radio weekly?

a) 5.8% of women do not access any of the three media weekly.
b) Women age 25-29—28.5%
c) Women in urban areas—20.9% listen to the radio weekly, compared to 7.0% of women in rural areas.

Example 2: Prevalence of Anemia
Comparing and Understanding Patterns

Step 1: Read the title and subtitle. In this case, the table presents anemia prevalence among children age 6-59 months.

Step 2: Identify the information presented in the table—highlighted in green in the table to the right. The first column of data is children age 6-59 months with any anemia. The next three columns represent different classifications of anemia: mild, moderate, and severe.

Step 3: Look at the row headings to identify the background characteristics. In this table, anemia is presented by child's age in months, sex, urban-rural residence, region, mother's educational level, and wealth quintile.

Step 4: Look at the row in the bottom of the table to determine the total proportion of children age 6-59 months with anemia This shows that 15.6% of children age 6-59 months in Armenia have any anemia.

Table 12.13 Prevalence of anemia in children 1

Percentage of children age 6-59 months classified as having anemia, according to background characteristics, Armenia 2015-16

Background characteristic 3	Anemia status by hemoglobin level: Any anemia (<11.0 g/dl)	Mild anemia (10.0-10.9 g/dl)	Moderate anemia (7.0-9.9 g/dl)	Severe anemia (< 7.0 g/dl) 2	Number of children age 6-59 months
Age in months					
6-8	24.4	15.8	8.6	0.0	66
9-11	34.7	20.6	14.1	0.0	77
12-17	30.5	20.2	8.2	2.0	155
18-23	21.7	15.4	6.3	0.0	142
24-35	13.0	10.4	2.3	0.3	309
36-47	10.4	8.6	1.8	0.0	299
48-59	6.3	3.8	1.8	0.7	301
Sex					
Male	15.8	11.7	3.5	0.6	718
Female	15.4	10.2	4.9	0.3	631
Residence					
Urban	13.6	9.9	3.0	0.7	721
Rural	18.0	12.3	5.5	0.1	628
Region					
Yerevan	10.4	6.9	1.9	1.6	331
Aragatsotn	11.5	9.7	1.8	0.0	58
Ararat	10.3	9.7	0.0	0.5	159
Armavir	7.4	5.3	2.1	0.0	172
Gegharkunik	48.8	41.7	7.1	0.0	64
Lori	33.6	19.5	14.1	0.0	52
Kotayk	20.2	11.9	8.3	0.0	207
Shirak	21.4	13.5	7.9	0.0	153
Syunik	9.8	6.6	3.2	0.0	53
Vayots Dzor	15.1	10.6	4.5	0.0	34
Tavush	11.2	9.8	1.4	0.0	66
Mother's education[1]					
Basic	16.6	10.1	6.5	0.0	82
Secondary	18.9	13.5	5.3	0.1	571
Secondary special	13.4	8.8	3.5	1.1	280
Higher	12.6	9.5	2.6	0.5	411
Wealth quintile					
Lowest	18.8	14.7	3.9	0.3	285
Second	14.4	8.6	5.8	0.0	292
Middle	19.9	12.8	6.2	0.8	250
Fourth	13.8	9.2	3.6	0.9	219
Highest	11.6	9.7	1.6	0.4	302
Total	4 15.6	11.0	4.2	0.4	1,349

Note: Table is based on children who stayed in the household on the night before the interview and who were tested for anemia. Prevalence of anemia, based on hemoglobin levels, is adjusted for altitude using formulas in CDC, 1998. Hemoglobin in grams per deciliter (g/dl).
[1] For women who are not interviewed, information is taken from the Household Questionnaire. Excludes children whose mothers are not listed in the Household Questionnaire.

Interpretation: In Armenia, 15.6% of children age 6-59 months have any anemia, but a closer look at the table shows how anemia varies throughout Armenia. To gain a better understanding of differences in the prevalence of anemia, consider the following questions:

- Is anemia more common among girls or boys? Prevalence of anemia is nearly the same among boys (15.8%) and girls (15.4%).
- Now, compare anemia by urban and rural residence. Anemia prevalence is 18.0% among rural children and 13.6% among urban children.
- What are the lowest and the highest percentages (range) of anemia by region? Just 7.4% of children age 6-59 months in Armavir are anemic, compared to a high of 48.8% of children in Gegharkunik.
- Look for patterns: Does anemia vary by other background characteristics? For example, is there a clear pattern of anemia by age in months? By mother's education? By wealth quintile?

  Answers:

  - Anemia is most common among children age 9-11 months (34.7%), while it is lowest among children age 48-59 months (6.3%).
  - Anemia generally decreases as mother's educational level increases. Prevalence is higher among children whose mothers have basic (16.6%) or secondary education (18.9%) and lower among children whose mothers have secondary special (13.4%) or higher education (12.6%).
  - There is no clear pattern in anemia prevalence by household wealth. Anemia is highest among children in households in the middle quintile (19.9%) and lowest among children living in households in the highest wealth quintile (11.6%).
- By looking at patterns by background characteristics, we can see which groups are more in need of interventions to address anemia. Resources are often limited; looking for patterns can help program planners and policymakers determine how to most effectively use resources.

Example 3: Knowledge of HIV or AIDS
Minimum Number of Cases Necessary for Reliable Results

Table 13.1 Knowledge of HIV or AIDS 1

Percentage of women and men age 15-49 who have heard of HIV or AIDS, according to background characteristics, Armenia 2015-16

Background characteristic 3	Women (a) 2		Men (b)	
	Have heard of HIV or AIDS	Number of women	Have heard of HIV or AIDS	Number of men
Age				
15-24	82.0	1,653	70.0	813
15-19	73.6	725	63.4	345
20-24	88.6	928	74.9	467
25-29	92.3	1,099	91.8	464
30-39	92.8	1,874	95.4	802
40-49	91.0	1,490	96.2	676
Marital status				
Never married	83.6	1,830	76.3	1,190
Ever had sex	* 4	12	88.3	630
Never had sex	83.5	1,818	62.7	560
Married/living together	91.6	3,895	96.3	1,506
Divorced/separated/widowed	93.7	390	(89.5) 4	59
Employment abroad[1]				
Worked abroad	96.3	81	94.4	334
Did not work abroad	89.3	6,035	86.5	2,419
Spousal employment abroad[2]				
Only respondent worked abroad	*	18	96.0	220
Only spouse worked abroad[2]	86.7	834	*	10
Both worked abroad	(94.6)	32	*	6
Neither worked abroad	92.9	2,998	96.2	1,264
Residence				
Urban	94.0	3,657	89.6	1,558
Rural	82.4	2,459	84.7	1,197
Region				
Yerevan	97.3	2,001	89.4	833
Aragatsotn	64.0	315	77.1	159
Ararat	92.8	552	84.4	290
Armavir	91.0	586	95.1	268
Gegharkunik	50.4	478	68.8	235
Lori	89.4	355	75.1	184
Kotayk	97.7	678	100.0	299
Shirak	87.4	510	87.9	201
Syunik	96.7	238	91.4	104
Vayots Dzor	94.3	119	90.5	56
Tavush	92.4	283	96.7	126
Education				
Basic	71.6	396	78.1	360
Secondary	83.7	2,444	85.3	1,250
Secondary special	93.5	1,360	91.9	403
Higher	97.6	1,910	93.7	736
Wealth quintile				
Lowest	79.9	1,081	84.1	523
Second	86.3	1,242	86.0	583
Middle	87.5	1,142	84.8	521
Fourth	94.6	1,287	92.0	566
Highest	96.3	1,365	89.9	562
Total 15-49	89.4	6,116	87.5	2,755

Note: Total includes 2 men missing information about employment abroad, 13 women and 7 men missing information about spousal employment abroad, and 5 women and 5 men with no education. 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] "Employment abroad" refers to working abroad during the three years before the survey for three or more months at a time.

[2] Currently married respondents only; information on spouse's employment abroad is based on respondent's report.

Step 1: Read the title and subtitle. In this case, the table is about knowledge of HIV or AIDS among two separate groups: (a) all women age 15-49 and (b) all men age 15-49.

Step 2: Identify the two panels. First, identify the columns that refer to all women (a), and then isolate the columns that refer to all men (b).

Step 3: Look at the row headings to identify the background characteristics. In this case, the table presents knowledge of HIV or AIDS by age, marital status, employment abroad, spousal employment abroad, urban-rural residence, region, educational level, and wealth quintile.

Step 4: Look at the second panel. What percentage of divorced, separated, or widowed men age 15-49 have heard of HIV or AIDS? It's 89.5%. This percentage is in parentheses because there are fewer than 50 men (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.)

Now look at the first panel. What percentage of never married women age 15-49 who have ever had sex have heard of HIV or AIDS? There is no number in this cell—only an asterisk. This is because fewer than 25 never married women age 15-49 who ever had sex (unweighted) were interviewed in the 2015-16 ADHS . Results for this group are not reported. The subgroup is too small, and therefore the data are not reliable.

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.

Example 4: Understanding Sampling Weights in ADHS Tables

A sample is a group of people who have been selected for a survey. In ADHS surveys, the sample is designed to represent the national population age 15-49. In addition to national data, most countries want to collect and report data on smaller geographical or administrative areas. However, doing so requires a minimum sample size per area (e.g., about 800 women per area). For the 2015-16 ADHS, the survey sample is representative at the national and regional levels and for urban and rural areas.

To generate statistics that are representative of the country as a whole and the 11 regions, the number of women surveyed in each region should contribute to the size of the total (national) sample in proportion to size of the region. However, if some regions have small populations, then a sample allocated in proportion to each region's population may not include a sufficient number of women from each region for analysis. To solve this problem, regions with small populations are oversampled. For example, let's say that you have enough money to interview 6,116 women and want to produce results that are representative of Armenia as a whole and its regions (as in Table 3.1). However, the total population of Armenia is not evenly distributed among the regions: some regions, such as Yerevan are heavily populated while others, such as Vayots Dzor, are not. Thus, Vayots Dzor must be oversampled.

A sampling statistician determines how many women should be interviewed in each region in order to get reliable statistics. The blue column (1) in the table at the right shows the actual number of women interviewed in each region. Within the regions, the number of women interviewed ranges from 383 in Syunik to 1,055 in Yerevan. These numbers of interviews are sufficient to get reliable results in each region.

Table 3.1 Background characteristics of respondents

Percent distribution of women and men age 15-49 by selected background characteristics, Armenia 2015-16

Background characteristic	Women		
	Weighted percent	Weighted number	Unweighted number
Region			
Yerevan	32.7	2,001	1,055
Aragatsotn	5.2	315	453
Ararat	9.0	552	597
Armavir	9.6	586	642
Gegharkunik	7.8	478	551
Lori	5.8	355	337
Kotayk	11.1	678	659
Shirak	8.3	510	536
Syunik	3.9	238	383
Vayots Dzor	1.9	119	405
Tavush	4.6	283	498
Total 15-49	100.0	6,116	6,116

3 2 1

With this distribution of interviews, some regions are overrepresented and some regions are underrepresented. For example, the population in Vayots Dzor is about 2% of the population in Armenia, while Yerevan region is about 33% of the population in Armenia. But as the blue column shows, the number of women interviewed in Vayots Dzor accounts for about 7% of the total sample of women interviewed (405/6,116) and the number of women interviewed in Yerevan region accounts for 17% of the total sample of women interviewed (1,055/6,116). This unweighted distribution of Armenian women does not accurately represent the population.

In order to get statistics that are representative of Armenia, the distribution of the women in the sample needs to be weighted (or mathematically adjusted) such that it resembles the true distribution in the country. Women from a less populated region, like Vayots Dzor, should only contribute a small amount to the national total. Women from a large region, like Yerevan, should contribute much more. Therefore, DHS statisticians mathematically calculate a "weight" which is used to adjust the number of women from each region so that each region's contribution to the total is proportional to the actual population of the region. The numbers in the purple column (2) represent the "weighted" values. The weighted values can be smaller or larger than the unweighted values at provincial level. The total national sample size of 6,116 women has not changed after weighting, 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 take into account the probability that a woman was selected in the sample. If you were to compare the red column (3) to the actual population distribution of Armenia, 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 Armenia. The weighted number of women in the survey now accurately represents the proportion of women age 15-49 who live in Vayots Dzor and the proportion of women age 15-49 who live in Yerevan region.

With sampling and weighting, it is possible to interview enough women to provide reliable statistics at national and provincial levels. In general, only the weighted numbers are shown in each of the ADHS tables, so don't be surprised if these numbers seem low: they may actually represent a larger number of women interviewed.