14. *Writing about Distributions and Associations*

SUGGESTED COURSE EXTENSIONS

A. Reviewing

1. In a journal article in your field, find descriptions of univariate distributions for each of the following types of variables. Critique them, using the criteria in chapter 14 of *Writing about Multivariate Analysis, 2nd Edition*.

   a. A nominal variable
   b. An ordinal variable
   c. An interval or ratio variable with many possible values

2. For each of the descriptions in question A.1

   a. Identify the criteria the author used to select which value(s) to highlight. Does that value match the research question and introductory material in the article?
   b. If all values are described with equal emphasis, assess whether one or more values should be featured and explain why.

3. In a journal article in your field, find descriptions of each of the following types of bivariate associations. Critique them, using the principles in chapter 14.

   a. An association between two categorical variables
   b. An association between a categorical independent and a continuous dependent variable
   c. Bivariate correlations among a series of continuous variables

B. Applying Statistics and Writing

1. Using variables from your data set, run frequency distributions on one nominal, one ordinal, and one interval or ratio variable.

   a. Write a brief description of each distribution, emphasizing the modal value. Summarize, then report key indicators of central tendency.
   b. Write a second description of each distribution, this time highlighting a value of interest other than the mean or mode, such as a minority group, unusual value, or most recent value.

2. Using variables from your data set, calculate one example of each of the following types of bivariate associations. Write a brief description of each pattern, using the principles in chapter 14.

   a. An association between two categorical variables
   b. An association between a categorical independent variable and a continuous dependent variable
   c. Bivariate correlations among a series of continuous variables

3. Using variables from your data set, run a three-way association among two categorical independent variables and a continuous dependent variable. Write a description of that association using the GEE approach explained in chapters 2 and 14 and appendix A.

4. Using variables from your data set, run a three-way cross-tabulation of two categorical independent variables and a categorical dependent variable. Write a description of that association using the GEE approach explained in chapters 2 and 14 and appendix A.

C. Revising

1. Critique and rewrite descriptions of univariate statistics (distributions, central tendency) from a paper you have written previously, using the criteria in chapter 14 of *Writing about Multivariate Analysis, 2nd Edition.*

2. Critique and rewrite descriptions of bivariate statistics (cross-tabulations, differences in means, or correlations) from the same paper.

3. Critique and rewrite a description of a three-way association from a results section you have written previously, using the GEE approach explained in chapters 2 and 14 and appendix A.

4. Exchange drafts of your answers to questions C1 through C3 with a colleague who is working with a different topic and data. Peer-edit each other's work and revise according to the feedback you receive.