

13

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 13 of *Writing about Multivariate Analysis*.
 - 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 13.
 - a. An association between two categorical variables
 - b. An association between a categorical and a continuous variable
 - c. Bivariate correlations among a series of continuous variables
4. In a journal article in your field, find a description of an interaction between two independent variables and a continuous dependent variable.
 - a. Critique the description.
 - b. If the authors did not include a table or chart to present the net effect of the interaction, create one.
 - c. Rewrite the description of the interaction using the “generalization, example, exceptions” (GEE) approach as explained in chapter 13 and appendix A of *Writing about Multivariate Analysis*.

■ B. APPLYING STATISTICS AND WRITING

1. Using variables from your own 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 own 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 13 of *Writing about Multivariate Analysis*.
 - a. An association between two categorical variables
 - b. An association between a categorical and a continuous variable
 - c. Bivariate correlations among a series of continuous variables
3. Using variables from your own 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 chapter 13 and appendix A.
4. Using variables from your own 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 chapter 13 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 13.
2. Critique and rewrite descriptions of bivariate statistics (cross-tabulations, differences in means, or correlations) from the same paper, using the criteria in chapter 13.
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 chapter 13 and appendix A.
4. Peer-edit the revised versions of these descriptions.