

9

Writing about Distributions and Associations

SUGGESTED COURSE EXTENSIONS

■ A. REVIEWING

1. In a journal article, find a description of univariate distributions for each of the following types of variables. Critique it, using the criteria described in chapter 9 of *Writing about Numbers*.
 - a. A nominal variable
 - b. An ordinal variable
 - c. An interval or ratio variable with many possible values
2. Refer to each of the descriptions in question A.1.
 - a. Identify the criteria the author is using to choose which value 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 why.
3. Find examples of each of the following types of bivariate associations. Critique them, using the principles in chapter 9.
 - a. A bivariate 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 textbook or a journal article, find a description of a table or chart portraying time trends for two or more subgroups or outcomes (e.g., values of several different stocks over a few weeks, or trends in unemployment rates for two or more states or regions).
 - a. Critique the description.
 - b. Rewrite it using the “generalization, example, exceptions” (GEE) approach.

■ B. APPLYING STATISTICS

1. Repeat questions A.1 and A.2 using frequency distributions on one nominal, one ordinal, and one interval or ratio variable from your own data set.
2. Repeat question A.3 based on bivariate associations among variables in your data set.

3. Repeat question A.4 based on a three-way association among variables in your data set.

■ C. WRITING

1. In your textbook or a journal article, find a table or chart showing the distribution of each of the following types of variables. Write a brief description of each distribution, emphasizing the modal value. Summarize, then report key indicators of central tendency.
 - a. A nominal variable
 - b. An ordinal variable
 - c. An interval or ratio variable with many possible values
2. Rewrite each of the descriptions in question A.1 to highlight a value of interest other than the mean or mode, such as a minority group, unusual value, or most recent value.
3. In a textbook or a journal article, find tables or charts depicting the following types of associations. Write a brief description of each type of pattern, using the principles in chapter 9 of *Writing about Numbers*.
 - a. Two categorical variables
 - b. An association between a categorical predictor and a continuous outcome variable
 - c. Bivariate correlations among a series of continuous variables
4. In a textbook or a journal article, find a table or chart portraying time trends in two or more related concepts (e.g., values of several different stocks over a few weeks, or trends in unemployment rates for two or more states or regions). Describe the pattern, using the GEE approach.
5. In a textbook or a journal article, find a chart depicting a three-way association such as a clustered bar chart or simple bar chart with two or more panels. Describe the pattern, using the GEE approach.

■ D. REVISING

1. Critique and rewrite your descriptions of univariate statistics (distributions, central tendency), using the principles in chapter 9 of *Writing about Numbers*.
2. Critique and rewrite your descriptions of bivariate associations statistics (cross-tabulations, differences in means, correlations) using the principles in chapter 9.
3. Critique and rewrite your descriptions of three-way associations using the principles in chapter 9.
4. Peer-edit the original and revised versions of these descriptions.