Chapter 8 exercises: Coder edition

Use the data from this chapter and the appropriate tests to examine males and females in school and basic water access.

1. Import the water.educ data frame as shown in this chapter.
2. Make a table of descriptive statistics for all the variables in the data frame except for country. Be sure to use appropriate statistics for each variable.
3. Use a graph to examine the relationship between male.in.school and female.in.school (Achievement 1).
4. Use a graph to examine the relationship between male.in.school and perc.basic2015water (Achievement 1).
5. Based on the graphs from Questions 3 and 4, make predictions about what you would find when you conduct Pearson correlation analyses for male.in.school and female.in.school and for male.in.school and perc.basic2015water (Achievement 1).
6. Conduct a Pearson’s *r* correlation analysis for each pair of variables. Interpret each *r* statistic in terms of direction, size, and significance (Achievements 2 and 3).
7. Compute and interpret the coefficient of determination for each pair of variables (Achievement 4).
8. Check assumptions for the Pearson’s *r* for each pair of variables (Achievement 5).
9. If assumptions are not met for the Pearson’s *r*, conduct and interpret a Spearman’s correlation analysis, including assumption testing (Achievement 6).
10. Conduct the appropriate partial correlation (Pearson or Spearman) examining the relationship between male.in.school and perc.basic2015water accounting for perc.1dollar. Check any assumptions not previously checked and interpret your results accordingly (Achievement 7).
11. Write a paragraph explaining what you found and how it compares to the correlation analyses for females in school and water access.

Chapter 8 exercises: Hacker edition

Complete #1 through #9 of the coder edition, then complete the following:

1. Create a new variable by recoding the perc.1dollar variable into 10 categories: 0 to < 10, 10 to < 20, 20 to < 30, and so on. The new variable should have a logical name and clear labels.
2. Conduct the partial correlation between females in school and basic water access accounting for poverty by including this new variable. Use the appropriate kind of partial correlation (Pearson’s or Spearman’s) given the variable type for the new variable.
3. Check assumptions and interpret your results (Achievement 7).
4. Write a paragraph explaining what you found and how the results differed (or did not differ) once you were using the new ordinal version of the poverty variable (Achievements 5 and 7).