

Homework 1

SOCI 502B: Graduate Statistics (Fall 2017)

10 points

Due: December 13, 2017

Overview:

In this assignment, you'll be completing 1 problem using SPSS (or R). This problem covers topics from Chapter 18 in your textbook.

Problem 1 (*Chi-Square Test of Independence*)

- Using the GSS 2014 data set (`GSS2014_final`)¹, report a bivariate table for the relationship between the “race” variable (`race`) and the “beliefs about racial inequality” variable (`racdif4`).
- First, recode the variables as such:
 - race: 1 = white; 2 = black; 3 = other
 - racial inequality: 1 = racial inequality because blacks lack motivation; 2 = racial inequality **NOT** because blacks lack motivation²
- Include a clustered bar chart demonstrating the bivariate relationship.
- Given the number of rows and columns in your table, report the degrees of freedom for the bivariate relationship between the “race” variable (`race`) and the “beliefs about racial inequality” variable (`racdif4`).
- What is the value of the Chi-Square statistic?
- Correctly and fully report and interpret the Chi-Square statistic (using the example from our lecture slides, including the X^2 value, the degrees of freedom, and the p-value)

¹For SPSS, use `GSS2014_final.sav`. For R, use the R script and `GSS2014_final.csv`

²The survey question reads: “On the average (Negroes/Blacks/African-Americans) have worse jobs, income, and housing than white people. Do you think these differences are... because most (Negroes/Blacks/African-Americans) just don’t have the motivation or will power to pull themselves up out of poverty?”