SOCI 385 - Social Statistics

Fall 2021

Problem Set 1

This assignment is due via Canvas by 5:00 PM on Friday, October 15, 2021.

Show all your code, order factor variable levels as appropriate, format your tables using Kable, write your responses in complete sentences, and label axes and plots. Submit your knitted pdf and the R Markdown (.Rmd) file for your notebook. Remember to include your name in the header.

REMINDER: Problem sets must be completed individually. No collaboration with other students is allowed.

This problem set requires the `ps1.csv` file on Canvas which includes data from the 2014 wave of the General Social Survey. Your dataset should have 733 observations and 12 variables. The variables are:

`id`: a unique identifier for each respondent;

`age`: respondent's age, from 18-89;

`sex`: respondent's sex, categorized as Female or Male;

`racehisp`: respondent's self-reported race and Hispanic identification, categorized as Black, Hispanic, Other, or White;

`educ`: respondent's education in years, from 2-20;

`degree`: respondent's highest educational category, coded as Less Than HS, HS Diploma, Some College, College Degree, Grad/Prof Degree;

`class`: respondent's self-reported social class, categorized as Lower, Working, Middle, or Upper;

`polviews`: respondent's political views, coded 1 for extremely liberal, 2 for liberal, 3 for somewhat liberal, 4 for moderate, 5 for somewhat conservative, 6 for conservative, 7 for extremely conservative;

`joindem`: respondent's report of whether they have taken part in a political demonstration, categorized as In Past Year, Before Last Year, No But I Might, No And I Will Not;

`attrally`: respondent's report of whether they have attended a political rally or meeting, categorized as In Past Year, Before Last Year, No But I Might, No And I Will Not;

`num_action`: the number of political actions respondents participated in during the last year, from 0-8. This measure considers the following activities to be political actions: attended political rally or meeting, joined a demonstration, signed a petition, avoided buying a product for political reasons, contacted a government office to express views, gave a political donation, appeared in the media to express political views, expressed political views on the internet;

`racespeech`: respondent's answer to the following survey question: "If a person wanted to make a speech in your community claiming that members of some race groups are inferior, should he be allowed to speak, or not?" Responses coded as Allowed, or Not allowed.

Questions

1. In a paragraph, describe the responses to the `racespeech` question. Your paragraph should include:

   - The overall proportion of respondents who agree and disagree
   - The proportion of respondents in each race/hisp category who agree and disagree
   - The proportion of respondents in each degree category who agree and disagree

2. In a figure, describe how the age distribution differs for respondents who do and do not agree with the `racespeech` question. Interpret your figure in words, and offer a possible sociological explanation for the results. (Possible sociological explanation means a simple hypothesis; no outside reading is expected!)

3. In a sentence or two, describe male-female differences in attendance at a political rally or meeting. What is an additional variable you would want to have in order to explain the relationship between these variables? Why might this additional variable be important?

4. In a few sentences, describe class differences in demonstration participation. What is an additional variable you would want to have in order to explain the relationship between these variables? Why might this additional variable be important?

5. Collapse the seven values of political views into three categories: any liberal, moderate, any conservative. Create a figure showing how the average number of political actions varies across the three categories of political views. Interpret this figure in a few sentences.

6. In a sentence or two, interpret the correlation between years of education (use `educ` not `degree` here) and number of political actions. (No figure required.)