

Edps 590BAY
Fall 2019
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Homework 3
Due September 18, 2019

Below is data from the 2006, 2016 and 2018 General Social Survey where respondents indicated whether they favor or oppose a law which would require a person to obtain a police permit before he or she could buy a gun. Note that these are cross-sectional data (i.e., different respondent each year).

Year	Response	
	favor	oppose
2006	1568	395
2016	1330	528
2018	1102	439

Use a Monte Carlo methods to determine the following. how your determined your answer

1. Is the proportions who favor the law in years 2016 greater than the proportion in 2018?

i.e.,

$$p(\text{favor}|2006) > p(\text{favor}|2018)$$

2. Is the “relative risk” of favoring the law greater than 1 in 2016 than in 2018?

i.e.,

$$\frac{p(\text{favor}|2006)}{p(\text{favor}|2018)}$$

3. Is the odds ratio greater than 1?

i.e.,

$$\frac{p(\text{favor}, 2006)p(\text{oppose}, 2018)}{p(\text{oppose}, 2006)p(\text{favor}, 2018)} > 1$$

4. Comment on the results? Anything surprising? Are they what you expected?