**Phone Survey Incentives**

Singer, Hoewyk and Maher[[1]](#footnote-1) studied different incentives to encourage individuals to participate in phone surveys. The Survey of Consumer Attitudes used random digit dialing to select 395 participants in November, 1996. Of those 395 participants, 204 were randomly assigned to be in a control group. The remaining participants (191) received a $10 incentive to participate in the phone survey.

The cooperation rate was calculated for each group. Cooperation rate is defined as the number of completed interviews divided by the total number of completed interviews and respondent refusals. The cooperation rate for the control group was 73% and for the incentive group was 74.9%. In other words, the number of participants who cooperated in the control group was 149 and the number who cooperated in the incentive group was 143.

**Discuss the Following Questions**

1. Was the study conducted and observational study or experiment?
2. What would be an appropriate research question for this study?
3. What is the statistic that is of interest in the research question?
4. What statistical method might you use to help answer this research question?
5. What would be the null and alternative hypothesis statements that would be used to answer the research question? Write out the hypothesis statements in both words and symbols.

H0:

Ha:

1. Did you choose to make a one-tailed or two-tailed hypothesis test? Why?
2. What is the value of the statistic for this data set?
3. Conduct the simulation using <http://lock5stat.com/statkey>. Sketch a plot of the randomization distribution below. Make sure to choose the correct randomization method.
4. Describe what the plot of the randomization distribution represents.
5. Where is the plot centered? Why does this make sense?
6. Where does the location of the sample statistic fall in the plot?
7. Based on your answer to the previous question, would you expect to see a small or large *p*-value?
8. Find the *p*-value.
9. Provide an answer to the research question.
10. Can you generalize these results to all individuals who were contacted to participate in the phone survey? Why or why not?
11. For this particular study, what would it mean if you had a Type I Error?
12. For this particular study, what would it mean if you had a Type II Error?
13. Which type of error would you be more concerned about in this particular study? Explain.
14. For this particular study, what type of error would be possible?

**EXTENSIONS**

1. What kind of study design would allow you to make cause and effect conclusions?
2. Why would you need to look at the cooperation rate and not just the number of individuals that cooperated?
3. How would you control for a Type I error?

1. Singer, E., Hoewyk, J. V., & Maher, M. P. (2000). Experiments with incentives in telephone surveys. *Public Opinion Quarterly, 64*, pp. 171-188. [↑](#footnote-ref-1)