**ASSIGNMENT 9: CHI-SQUARE**

Due: Wednesday, December 10th at midnight

**Part 1: SPSS Instructions**

(1) Open the dataset in SPSS. (Data can be found at the end of this document, too)

(2) Analyze 🡪 Click Descriptives 🡪 Click Cross tabs

🡪 Move “Found\_DidntFind” to Row(s)

🡪 Move “Mailed\_LeftLetter” to Column(s)

(3) Click “Exact…” button

🡪 Choose “Exact” 🡪 Check Time limit per test: “5” minutes 🡪 Click Continue

(4) Click “Statistics…” button

🡪 Choose “Chi-square” 🡪 Click Continue

(5) Click “Cells” button

🡪 Counts 🡪 Check “Observed” and “Expected”

🡪 Z-test 🡪 Check “Compare column proportions”

🡪 Noninteger Weights 🡪 Check “No adjustments”

🡪 Continue

(6) Click “OK”

(7) Output Tables

1. Case Processing Summary

2. Found\_DidntFind \* Mailed\_LeftLetter Crosstabulation

3. Chi-Square Tests

(8) Copy & Paste or Screenshot these 3 tables into a Word Document. Then, answer the following questions. You should upload both the SPSS output and the answers to the questions by Wednesday, December 10th at midnight.

**Part 2: Questions**

(1) What is the total number of observations (N) in the dataset? \_\_\_\_\_\_\_\_\_\_\_

(2) How many categories that we were interested in in this Chi-square analysis? \_\_\_\_\_\_\_\_\_\_\_\_

(3) What is the formula for the degrees of freedom in this Chi-square analysis? \_\_\_\_\_\_\_\_\_\_\_

(4) What were the degrees of freedom for this Chi-square analysis? ­­\_\_\_\_\_\_\_\_\_\_\_

(5) Fill in the following table:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Mailed Letter | Left Letter | Total |
| Found Dime | Observed |  |  |  |
| Expected |  |  |  |
| Did not find dime | Observed |  |  |  |
| Expected |  |  |  |
| Total | Observed |  |  |  |
| Expected |  |  |  |

(6) What are the Marginal Sums?:

🡪 Mailed Letter: \_\_\_\_\_\_\_\_\_\_\_

🡪 Left Letter: \_\_\_\_\_\_\_\_\_\_\_

🡪 Found Dime: \_\_\_\_\_\_\_\_\_\_\_

🡪 Did Not Find Dime: \_\_\_\_\_\_\_\_\_\_

(7) Are the Marginal Sums the same or different for the Observed and Expected Counts? \_\_\_\_\_\_\_\_\_\_\_\_\_

(8) What is the Pearson Chi-Square statistic for this analysis? \_\_\_\_\_\_\_\_\_\_\_\_\_

(9) Is this Chi-square statistic significant [Hint: Asymp. Sig. (2-sided)]? \_\_\_\_\_\_\_\_\_\_\_\_\_

(10) What is the Fisher’s Exact Test, and why would you use it? [Note: you will need to look this up on your own.]

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Dataset**

|  |  |  |
| --- | --- | --- |
| Gender | FoundvDidntFind | MailedvDidntMail |
| 1 | 1 | 1 |
| 1 | 1 | 1 |
| 1 | 1 | 1 |
| 1 | 1 | 1 |
| 1 | 1 | 1 |
| 1 | 1 | 1 |
| 1 | 1 | 0 |
| 0 | 1 | 1 |
| 0 | 1 | 1 |
| 0 | 1 | 1 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 0 | 1 |
| 1 | 0 | 1 |
| 1 | 0 | 1 |
| 1 | 0 | 0 |
| 1 | 0 | 0 |
| 1 | 0 | 0 |
| 1 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |