

Statistics Assignments Using Excel®

Assignment #12: Chi-Square Tests

Part I: Label a worksheet “IU Data”

the following example is from Aron, Aron, & Coups (1994)

Riehl (1994) examined whether Indiana University students who were the first generation in their family to attend college were more at risk of dropping out during their first semester than other students. The table below shows the observed frequencies:

| | <u>First Generation Students</u> | <u>Other Students</u> |
|-------------------------|---|------------------------------|
| Dropped Out | 73 | 89 |
| Did Not Drop Out | 657 | 1226 |

1. Using Excel, conduct a Chi-square test of independence on these data.
2. Report the results in a textbox. Be sure to provide both a statistical and research conclusion.

Part II: Label a worksheet “BSU Data”

A researcher hypothesizes that the percentage of Ball State University students who sleep 8 or more hours per night is lower than the general population of adults. Previous research has found that 40% of adults sleep 8 hours or more per night. In a recent survey of Ball State students, the researcher found that 38 students reported sleeping 8 hours or more and 82 students reported sleeping less than 8 hours. Do the Ball State student sleep habits differ from those expected of the general population of adults?

1. Using Excel, conduct a Chi-square goodness of fit test on these data.
2. Report the results in a textbox. Be sure to provide both a statistical and research conclusion.

Do a final save and submit your work.

Aron, A., Aron, E. A., & Coups, E. J. (2006). *Statistics for psychology* (4th Ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Riehl, R. J. (1994). Academic preparation, aspirations, and first year performance of first-generation students. *College and University*, 70, 14-19.

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Microsoft Excel is a trademark of the Microsoft group of companies.

The following textbook contains detailed instructions for using spreadsheets in an introductory statistics class:
Tagler, M. J. (2009). *Understanding basic statistics with spreadsheets*. New York, NY: Pearson Custom.