

Are American People Happy?

Exercise 6)

To measure the psychological state of Americans, a psychology researcher devised three questions put to 3443 Americans from different walks of life. He asked them whether they were happy. They could answer only *yes* or *no* to each question. By today's standards the study is quite simple, and he did no formal statistical analysis of his data. The frequency data (number of yes and no responses within each employment category) from this study are in the file **americandata.csv**

You are hired (as a rogue freelancer data analytics skillster side quester) to use the data and answer one question, that is, “**Are American people happy?**”

Report the χ^2 statistic, the degrees of freedom and the significance value, in addition to the contingency table. Also, explain the results and try to draw some insights/conclusions from the standard residuals.

TIPS:

- If you want to test the relationship between **two categorical variables** you can do this with the chi-square test.
- Look at the crosstabulation table to work out what the relationship between the variables is. Better still, look out for **significant standardized residuals** (values outside of ± 1.96)