# Longitudinal Review of Confidence in the Military

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# Longitudinal Review of Confidence in the Military

This project examines data on confidence in the military and other institutions among the general population. The data utilized was pulled from The General Social Survey (GSS) over 46 years from 1973 to 2018. It was used in this study to compare self-reported levels of confidence in the U.S. military compared to an individual’s age, gender, years of education, work status, and income. It also compared confidence in the military with their confidence in ten other institutions.

## Hypotheses and Research Questions

H1: An individual’s level of confidence in the military can be predicted by their level of confidence in other institutions along with the year and their age, gender, years of education, work status, and income.

H2: Confidence in the military has increased over the past 46 years.

H3: Confidence in the military increases with age.

H4: Confidence in the military increases with more years of education.

H5: Males will have a higher level of confidence in the military than females.

# Method

## Open Science Materials

A link to mybinder, a functional web-based binder where the code can be executed using the same libraries and R version I did, can be accessed here: <https://mybinder.org/v2/gh/merha013/psy8712-final.git/HEAD?urlpath=rstudio>

Materials can also be accessed via a public repository titled psy8712-final on github at this link: <https://github.com/merha013/psy8712-final> Upon accessing this repository, start by reading the README file, which explains what is located where and why. The README.md file is located in the main folder.

## Participants

The participants consisted of 42,796 adults between the age of 18 and 89 who were surveyed by the GSS.

## Measures

The demographic data utilized included year (1973-2018), gender (1 = male, 2 = female), years of education (from 0 to 20), work status (), and income ().

The institutions judged by each participant were banks, major companies, organized religion, education, federal government, organized labor, press, medicine, U.S. Supreme Court, scientific community, congress, and the military. Each of these were ranked on a 3-point scale. The GSS assigned 1 = a great deal, 2 = only some, and 3 = hardly any. However, for my analysis I reversed this code so that 3 = a great deal and 1 = hardly any in order to make the graphs and charts more intuitive with higher values being better.

## Procedures

The GSS collected the data via personal-interview surveys designed to monitor changes in both social characteristics and attitudes in the United States. The data can be found at this website: <https://gss.norc.org/get-the-data/spss> in the first file under ‘Cumulative Data Set (cross-sectional samples from all years)’ titled ‘GSS 1972-2018 Cross-Sectional Cumulative Data (Release 3, May 27, 2020)’.

# Analyses

## Descriptive Statistics and Static Visualizations

The following figures and table depict the differences in confidence levels between institutions over multiple years as well as confidence in the military compared to years, age, education level, and gender.

**Figure 1:** Average Confidence across Organizations by Year (H1)

A graph of a graph of a graph

Description automatically generated with medium confidence

**Figure 2:** Average Confidence in Military by Year

A graph of a graph showing the average confidence levels

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**Figure 3:** Average Confidence in Military by Age

A graph of a graph showing the average confidence levels in the military by age

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**Figure 4:** Average Confidence in Military by Education

A graph of a graph showing the average confidence levels

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**Figure 5:** Average Confidence in Military by Gender

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**Table 1:** Correlation Matrix between Confidence in the Military and Individual Demographics

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## Interactive Visualization

I chose to produce a web application/dashboard to allow a closer look at the data since there is a lot of information, more than can be properly displayed in paper format. An interactive view can enable readers to take a closer look at specific pieces of the data they are interested in. The shiny web app can be found here: <https://merha013.shinyapps.io/final/>

## Data Cleaning

I chose to Explain your data cleaning procedures and justify the general strategy you took (max 1 paragraph).

## Analysis

I chose For each of your Hs, provide a formal written test. The entire sentence explaining the results of this test must be copied directly from R from the Publication section of your code. RQs do not require this. However, each of your Hs or RQs must be accompanied by at least one figure or table.

# Reflection

In this final section, provide up to one paragraph explaining what you have learned in Data Science that you will take back with you to your own research. Explain what specific strategies you will adopt. Will you be adding new procedures/approaches? Will you be changing anything you were previously doing a different way? What did you find most valuable?