Instructions for Reproducing Analysis

Mohsen Monji

2024-09-16

Introduction

This document provides an overview of the steps required to reproduce the analysis of disparities in self-rated mental health among young adults (aged 18-39) in Canada using the 2017 General Social Survey-Public Microdata Files. The analysis is organized into three stages using three R scripts:

1. `Data Wrangling`: Cleaning and recoding variables.
2. `Descriptive Statistics`: Producing frequencies and proportions of self-rated mental health by various socio-demographic variables among young adults (aged 18-39).
3. `Chi-Square Tests and Logistic Regression`: Analyzing associations between self-rated mental health and predictors using chi-square tests and logistic regression.

Step 1: Clone this Repository

Clone this repository to your local machine using the following command in your terminal or Git Bash:

git clone https://github.com/Mohsnmonji/Inequalities-in-Young-Adults-Mental-Health-in-Canada.git

All necessary R scripts will be included in the cloned repository.

Step 2: Download the GSS 2017 Dataset

The GSS-2017 dataset is not included in the repository due to licensing restrictions. Download it from ODESI at [https://odesi.ca/] and follow the steps below:

1. Unzip the file and rename it to `gss2017.csv`. 2.Move the `gss2017.csv` file to the main directory of the cloned repository (where the R scripts are located).

Step 3: Run R Scripts

Follow the steps below to reproduce the analysis:

3.1 Data Wrangling

First, run the `Code for Data Wrangling.R` script. This will recode the variables of interest, drop all cases with missing values list-wise, and output a cleaned dataset with only the selected variables named (`gss_2017_selected.csv`), which is used in the subsequent analysis. The `gss_2017_selected.csv` will be saved in the main directory where the R scripts are located.

3.2 Descriptive Statistics

Second, run the `Code for Descriptive Statistics.R` script. It will first filter the saved dataset from the previous step to include only young adults (aged 18-39) and then will create a sample characteritics table(table 1) and calculate the frequencies and percentages of self-rated mental health by all predictors such as sex, marital status, household income, etc(table 2).

3.3 Chi-Square Tests and Logistic Regression

Third, run the `Code for Logistic Regression.R` script. It will perform chi-square tests for associations between self-rated mental health and the categorical predictors. It will also fit a logistic regression model to further explore these associations adjusting for confounders. The script will display the results of the chi-square tests and the logistic regression model, and will create a table of the logistic regression output(table 3).

Conclusion

This study explored the associations between self-rated mental health and socio-demographic characteristics among young adults aged 18-39 in Canada, using data from the 2017 General Social Survey, Public Microdata Files. After adjusting for age, household income, and other confounders, the results showed that being **female** (OR = 1.49, 95% CI: 1.23, 1.80, $p < 0.001$) and **single** (OR = 1.86, 95% CI: 1.48, 2.35, $p < 0.001$) or **divorced/ widowed** (OR = 1.98, 95% CI: 1.24, 3.06, $p = 0.003$) were significantly associated with higher odds of reporting poor or fair mental health compared to males and those who were married or in common-law relationships, respectively.

In contrast, **higher household income** was protective against poor/fair mental health, with those in households earning $100k or more having significantly lower odds (OR = 0.60, 95% CI: 0.47, 0.77, $p < 0.001$) compared to individuals in households earning less than $50k. Being an **immigrant** was also associated with lower odds of reporting poor or fair mental health compared to non-immigrants (OR = 0.67, 95% CI: 0.46, 0.97, $p = 0.036$).

Regarding education, having a **university degree** was significantly associated with lower odds of poor mental health compared to individuals with less than a high school education (OR = 0.55, 95% CI: 0.37, 0.85, $p = 0.003$). No significant associations were found for **visible minority status** (OR = 0.83, 95% CI: 0.61, 1.23, $p = 0.227$), **middle household income** (OR = 0.86, 95% CI: 0.67, 1.13, $p = 0.211$), or **educational attainment** at the high school/trade/college level (OR = 0.76, 95% CI: 0.54, 1.07, $p = 0.124$) compared to less than high school.

Final Words

By following the steps outlined above, you will be able to reproduce the analysis of disparities in self-rated mental health among young adults (aged 18-39) in Canada using the 2017 General Social Survey data. Ensure the dataset is placed in the correct directory, and run the R scripts to reproduce this analysis.

If you encounter any issues, feel free to reach out for assistance!