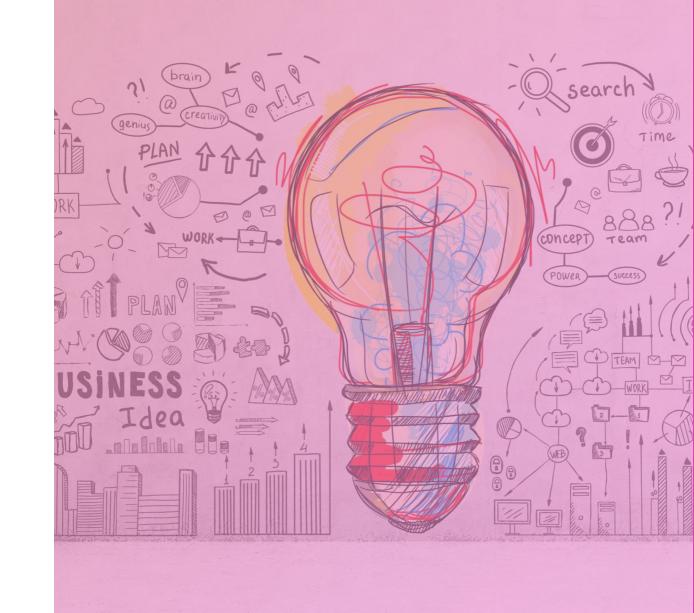
#### April 6, 2022 Austin G. Oswald

## Learning the Basics of R



# Agenda

- Check in
- Discussion of readings
- Small group work



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#### Goals for the Class

- To introduce you to R, build your confidence/comfort using statistical software, and explore why R could be useful to you as a social work researcher
- To gain hands on experience working with datasets, selecting variables, running descriptive, creating graphs, and bivariate statistics in R

### My Disclaimer

- I am not a statistician, but I've taken a lot of statistics courses
- I am not an expert in R, but I am familiar with the statistical program and multiple others
- Data analysis software, both qualitative and quantitative, have unique affordances and constraints
  - It's up to you to decide which works best for your research goals!

#### What is R? Why Should I Use It?

- Free, open-source statistical program that was designed to democratize access to statistical software
- Uses object-based programming language for statistical analysis
- Available on all operating systems

### Other Types of Statistical Programs

- SPSS
- SAS
- Stata
- Mplus

....all cost a lot of money!

### Language

- Comprehensive R Archive Network (CRAN): this is the place where you download software and packages. Select the CRAN location nearest you.
- Packages: a program that tells R how to run a particular test
  - To install the package "haven", type the following in the console window > install.packages("haven")
  - In order to use the package, you need to use the following statement > library(haven)
- Objects: everything in R is an object
  - Create/assign value to object with <- command, like Object <- 10 or combine a set of numbers like Object3 <- c(10, 20, 30)</li>
- Script file: where you write and save programming
  - Opening a script file: File > New File > R Script
  - To run a particular code, simply select the command and click "run" at the upper righthand corner of script file

#### Working in RStudio



#### 2.1 What are R and RStudio?

For much of this book, we will assume that you are using R via RStudio. First time users often confuse the two. At its simplest:

- R is like a car's engine
- RStudio is like a car's dashboard



#### **R: Engine**

#### **RStudio: Dashboard**



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R is a collaborative project with many contributors. Type 'contributors()' for more information and 'citation()' on how to cite R or R packages in publications. Type 'demo()' for some demos, 'help()' for on-line help, or 'help.start()' for an HTML browser interface to help. Type 'q()' to quit R. >	The search string was "foriegn" No results found FILES/PLOTS/PACKAGES/HEL P: This is where you view plots,
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### Hands on Experience

#### Thank You!

