

# Introduction to R

## Focusing on Twin Data

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# Housekeeping / Overview

- A little prior experience is assumed and we hope we have something for everyone
- Instructors are really here to help- no question is too silly!
- Don't forget about the Electronic Question Box
- Classmates are your new community and R/OpenMx network

# Session Objectives

- By the end of the morning, you will be able to:
- Review the basic functionality of R and Rstudio
- Apply basic R functions for twin-focused data management and graphics

# Using R and R Studio

- R is the engine
- People build things around the engine
- R Studio is a user interface to make it easier to communicate and work with R
  
- So...let's take a look at R and R Studio!

# R Studio Console

The screenshot shows the RStudio interface with several key components highlighted and annotated:

- Text Editor:** The central pane shows a script with comments and code. A red box highlights it with the text: "Text Editor Where you write and save your work Open your files here."
- Environment:** The top-right pane shows the current environment with variables like 'A', 'B', 'fit', 'fit2', 'fit3', and 'fit4'. A red box highlights it with the text: "Important Tabs: Reminds you of prior code You wrote Identifies objects you have In your working directory".
- Files:** The bottom-right pane shows the file explorer. A red box highlights it with the text: "Important Tabs: Help files Packages you have stores Graphs you produce File explorer".
- Console:** The bottom-left pane shows the command history. A red box highlights it with the text: "Console- Similar to SAS log".

```
1 #####
2 # Program: IntroToR2017.R
3 # Author: Elizabeth Prom-Wormley; Jordyn Wallenborn; James Clifford
4 # Date: July 31, 2017
5 #
6 # Questions???
7 # Just ask in person or virtually by e-mail
8 # Elizabeth.Prom-Wormley@vcuhealth.org
9 #
10 #
11 # This script will help you learn enough R
12 #
13 #
```

```
> # Setup overall background to make transfer to slides prettier
> par(bg = "white")
> par(mfcol=c(1,2))
> ## Making a bloxplot
> boxplot(BMXHT~GENDER,data=fulldataLatino, main="Height by Ge
+       xlab="Sex", ylab="Height", col = "gray")
> hist(fulldataLatino$BMXHT, main = "Height Distribution in Latinos",
+     col = "magenta", xlab = "Height in Centimeters")
> dev.off()
RStudioGD
  2
> ?ifelse()
>
```

# Let's Play!

Open

IntroToR.R