

Academic Integrity Page

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Data Source

Data from HMS stored in Google Drive on 10/8/25: https://drive.google.com/file/d/1HHy2IRv18xQVeYTIVuPmxto8LV9sWwy/view?usp=drive_link. (If you need access, contact Maxine at maxdobbs32@gmail.com.)

Full citation: Healthy Minds Network (2007-2025). Healthy Minds Study among Colleges and Universities, 2007-2025 datasets. Healthy Minds Network, University of Michigan, University of California Los Angeles, Boston University, and Wayne State University. <https://healthymindsnetwork.org/research/data-for-researchers>.

Sources for Data Wrangling Code

We used the following sources to help complete this assignment (with access dates):

Guided us on how to save data sets in order to reduce file reading time (10/24/25):

- Rcrastinate. 2019. “How to save (and load) datasets in R: An overview.” *R-bloggers*, May 27. <https://www.r-bloggers.com/2019/05/how-to-save-and-load-datasets-in-r-an-overview/>.

Taught us function to read excel files (10/22/25):

- Geetansh. 2025. “How to read excel file in R?” *GeeksforGeeks*, July 23. <https://www.geeksforgeeks.org/r-language/how-to-read-excel-file-in-r/>.

Assisted us in reading large CSV files efficiently (10/20/25):

- Gulati, Jayita. 2025. “How to Handle Large Data Files Efficiently in R.” *Statology*, March 31. <https://www.statology.org/how-to-handle-large-data-files-efficiently-in-r/>.

Helped us use `if_else()` with `mutate()` to transform empty string values into 0s (10/24/25):

- dplyr authors. n.d. “Vectorised if-else.” *Tidyverse*. Accessed October 24, 2025. https://dplyr.tidyverse.org/reference/if_else.html.

Guided us on how to use `case_when()` with `mutate()` (10/24/25):

- dplyr authors. n.d. “A general vectorised if-else.” *Tidyverse*. Accessed October 24, 2025. https://dplyr.tidyverse.org/reference/case_when.html.

Confirmed for us that we can use `drop_na()` to drop rows with NA values if they appear in a specified column (10/26/25):

- Jagdale, Devang. 2025. “Remove rows with NA in one column of R DataFrame.” *GeeksforGeeks*, last modified April 11. <https://www.geeksforgeeks.org/r-language/remove-rows-with-na-in-one-column-of-r-dataframe/>.

Taught us how to group multiple states in a region for our Leaflet map (10/27/25):

- Jumble. 2023. “Outline multiple polygons R leaflet to show territories.” *Stack Overflow*, April 19. <https://stackoverflow.com/a/76054852>.

Informed us on how to merge several polygons (states) in our Leaflet map (10/28/25):

- SymbolixAU. 2018. “How do I merge polygon features in a shapefile with many polygons?” *Stack Overflow*, March 19. <https://stackoverflow.com/a/49354480>.

Helped us solve issue with an inconsistent datum (10/28/25):

- ColinB. 2019. “How to apply spatial polygons to leaflet map using .shp.” *Stack Overflow*, July 26. <https://stackoverflow.com/a/57224869>.

Sources for Shiny App Code

We acknowledge the following individuals with whom we worked on this assignment:

- Erika, a fellow student at Amherst College, helped us understand that the server and UI of a Shiny application need to be in the same file (app.R).

We used the following sources to help complete this assignment (with access dates):

Guided us on the use of various Shiny functions (10/27/25):

- Shiny. n.d. “Get Started.” Accessed October 27, 2025. Lessons start at <https://shiny.posit.co/r/getstarted/shiny-basics/lesson1/>.

Assisted us in grasping the general structure of a Shiny app (10/27/25):

- Shiny. n.d. “Navbar Example.” Accessed October 27, 2025. <https://shiny.posit.co/r/gallery/application-layout/navbar-example/>.

Helped us include a Leaflet map in our Shiny app (10/27/25):

- Leaflet authors. n.d. “Using Leaflet with Shiny.” *Leaflet*. Accessed October 27, 2025. <https://rstudio.github.io/leaflet/articles/shiny.html>.

Taught us how to add line breaks in descriptions (10/28/25):

- Santosh M. 2017. “helpText shown with extra lines (R Shiny).” *Stack Overflow*, November 1. <https://stackoverflow.com/a/47062690>.

Informed us on how to implement menus (10/28/25):

- Shiny. n.d. “Create a select list input control — selectInput.” Accessed October 28, 2025. <https://shiny.posit.co/r/reference/shiny/1.6.0/selectinput.html>.

Used to select color palettes for the Shiny Leaflet (accessed 10/29/25):

- Brewer, Cynthia, Mark Harrower, Ben Sheesley, Andy Woodruff, and David Heyman. n.d. “Color Brewer 2.0.” *The Pennsylvania State University*. Accessed October 29, 2025. <https://colorbrewer2.org/#type=sequential&scheme=RdPu&n=3>.

Assisted us in rounding decimals on the Leaflet popup (10/30/25):

- BioinformaticsB. 2022. “Forcing Visualizations in R to Have Only 2 Decimal Points.” *Stack Overflow*, August 4. <https://stackoverflow.com/a/73229300>.

Taught us how to remove NA values from the legend of the Leaflet (10/30/25):

- myfatson. 2021. “How do you exclude NA values from Leaflet legend?” *Stack Overflow*, May 24. <https://stackoverflow.com/a/67671407>.

Helped us format static text (10/30/25):

- Geovany. 2018. “R Shiny - Display static text outside sidebar panel.” *Stack Overflow*, September 27. <https://stackoverflow.com/a/52545209>.

Informed us on using plotly to show information when the mouse hovers over points (10/31/25):

- Shiny. n.d. “Plot (plotly).” Accessed October 31, 2025. <https://shiny.posit.co/r/components/outputs/plot-plotly/#relevant-functions>.

Showed us how to include plotly in our Shiny app (10/31/25):

- bretauv. 2020. “How to use plotly in R shiny.” *Stack Overflow*, February 19. <https://stackoverflow.com/a/60296836>.

Guided us on dodge2 for bar graphs to keep bars of the same year closer together (11/1/25):

- ggplot2 core developer team. n.d. “Dodge overlapping objects side-to-side.” *Tidyverse*. Accessed November 1, 2025. https://ggplot2.tidyverse.org/reference/position_dodge.html.

Helped us understand how to rename legend labels (11/1/25):

- onlyphantom. 2019. “how to rename a legend item in ggplot?” *Stack Overflow*, April 5. <https://stackoverflow.com/a/55529796>.

Taught us how to include static image in our Shiny app (11/1/25):

- Hatfield, Neil and Robert Carey. 2024. “Chapter 12: Static Images.” In *Building Shiny Apps the BOAST Way*. https://educationshinyappteam.github.io/Style_Guide/static_Images.html.

Guided us on incorporating Shiny themes (11/1/25):

- RStudio, Inc. 2014. “Shiny Themes.” <https://rstudio.github.io/shinythemes/>.

Helped us understand how to concatenate strings (11/1/25):

- Rainer. 2011. “How can two strings be concatenated?” *Stack Overflow*, August 26. <https://stackoverflow.com/a/7202211>.