

Dominating Lab 8

Jenn Lewis, Yoel Everett, & Jackie O'Brien

School of R

Author Note

Correspondence concerning this article should be addressed to Jenn Lewis, Postal address. E-mail: my@email.com

Abstract

We will rock this lab and show that we are master's of R.

Keywords: Rockstars, Science Rules

Dominating Lab 8

Setup packages to be used**load data****Methods**

We report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures in the study.

Participants**Material****Procedure****Data analysis**

We used R (Version 3.5.1; R Core Team, 2018) and the R-packages *dplyr* (Version 0.7.6; Wickham, François, Henry, & Müller, 2018), *forcats* (Version 0.3.0; Wickham, 2018a), *ggplot2* (Version 3.0.0; Wickham, 2016), *here* (Version 0.1; Müller, 2017), *papaja* (Version 0.1.0.9842; Aust & Barth, 2018), *purrr* (Version 0.2.5; Henry & Wickham, 2018), *readr* (Version 1.1.1; Wickham, Hester, & Francois, 2017), *rio* (Version 0.5.10; C.-h. Chan, Chan, Leeper, & Becker, 2018), *stringr* (Version 1.3.1; Wickham, 2018b), *tibble* (Version 1.4.2; Müller & Wickham, 2018), *tidyr* (Version 0.8.1; Wickham & Henry, 2018), and *tidyverse* (Version 1.2.1; Wickham, 2017) for all our analyses.

Results

Discussion

References

- Aust, F., & Barth, M. (2018). *papaja: Create APA manuscripts with R Markdown*. Retrieved from <https://github.com/crsh/papaja>
- Chan, C.-h., Chan, G. C., Leeper, T. J., & Becker, J. (2018). *Rio: A swiss-army knife for data file i/o*.
- Henry, L., & Wickham, H. (2018). *Purrr: Functional programming tools*. Retrieved from <https://CRAN.R-project.org/package=purrr>
- Müller, K. (2017). *Here: A simpler way to find your files*. Retrieved from <https://CRAN.R-project.org/package=here>
- Müller, K., & Wickham, H. (2018). *Tibble: Simple data frames*. Retrieved from <https://CRAN.R-project.org/package=tibble>
- R Core Team. (2018). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from <https://www.R-project.org/>
- Wickham, H. (2016). *Ggplot2: Elegant graphics for data analysis*. Springer-Verlag New York. Retrieved from <http://ggplot2.org>
- Wickham, H. (2017). *Tidyverse: Easily install and load the 'tidyverse'*. Retrieved from <https://CRAN.R-project.org/package=tidyverse>
- Wickham, H. (2018a). *Forcats: Tools for working with categorical variables (factors)*. Retrieved from <https://CRAN.R-project.org/package=forcats>
- Wickham, H. (2018b). *Stringr: Simple, consistent wrappers for common string operations*.

Retrieved from <https://CRAN.R-project.org/package=stringr>

Wickham, H., & Henry, L. (2018). *Tidyr: Easily tidy data with 'spread()' and 'gather()' functions*. Retrieved from <https://CRAN.R-project.org/package=tidyr>

Wickham, H., François, R., Henry, L., & Müller, K. (2018). *Dplyr: A grammar of data manipulation*. Retrieved from <https://CRAN.R-project.org/package=dplyr>

Wickham, H., Hester, J., & François, R. (2017). *Readr: Read rectangular text data*. Retrieved from <https://CRAN.R-project.org/package=readr>

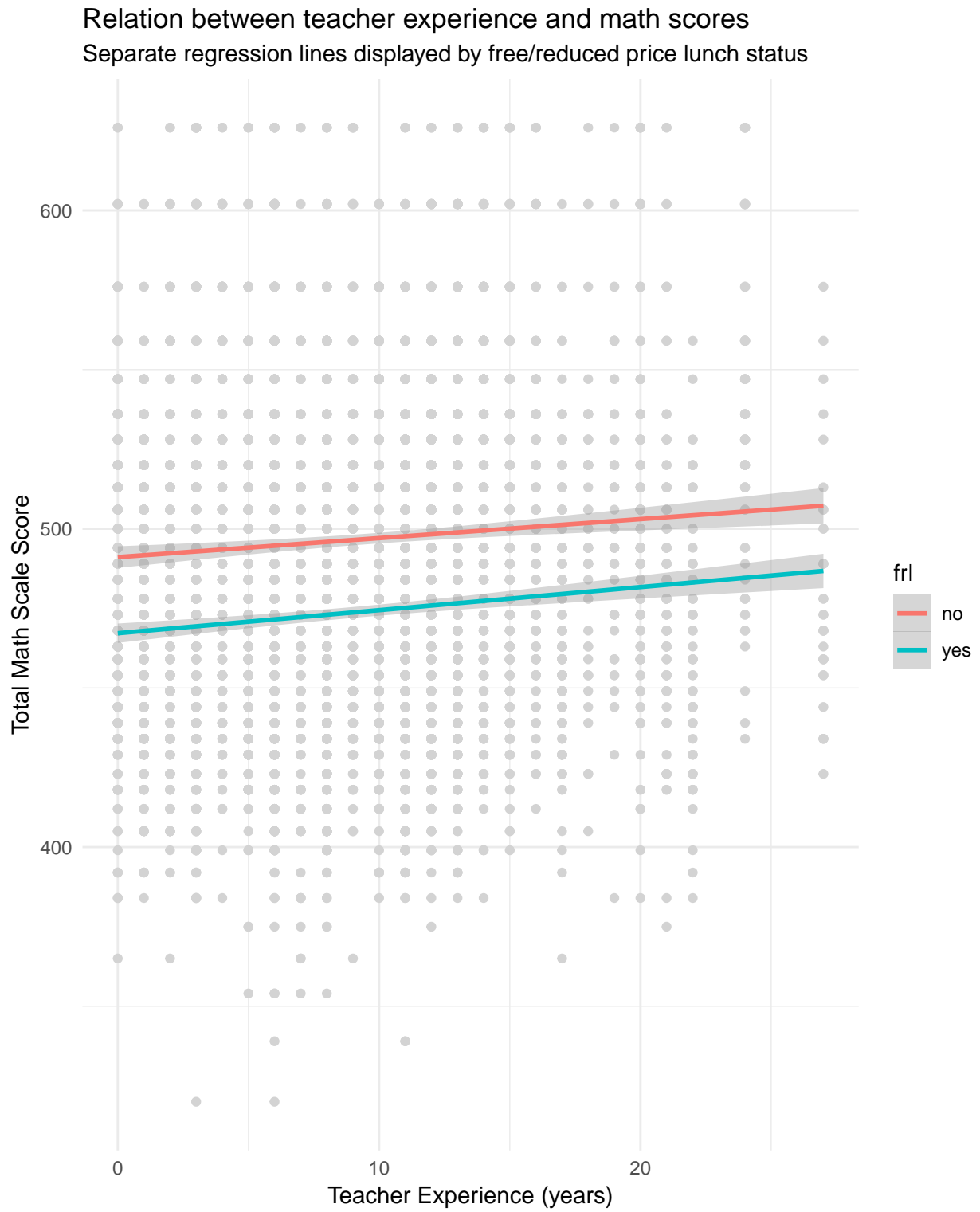
Commit 4: Table

Boys from non-low income families have an average math score of 492.85 (46.34) and an average reading score of 441.46 (32.32). Boys from low income families have lower average scores in math and reading, 469.87 (46.09) and 425.38 (26.63), respectively. Girls results follow a similar pattern, such that compared to girls from low-income families, girls from non-low income families have higher scores in math, 501.21 (45.96) vs. 477.51 (46.31) and reading, 448.54 (34.52) vs. 430.80 (27.42).

Commit 5: Plot

It appears that there is a main effect of lunch status, such that those who receive paid means exhibit higher total math scores than those who receive free/reduced price meals. There is also a main effect of teacher experience, such that as teacher experience increases, total math scores for students increases, regardless of lunch status. There is no interaction.

| sex | frl | math_mean | math_sd | rdg_mean | rdg_sd |
|------|-----|-----------|----------|----------|----------|
| boy | no | 492.8523 | 46.33845 | 441.4553 | 32.31828 |
| boy | yes | 469.8716 | 46.09285 | 425.3794 | 26.62931 |
| girl | no | 501.2057 | 45.96210 | 448.5353 | 34.52403 |
| girl | yes | 477.5084 | 46.30459 | 430.8029 | 27.42125 |

*Figure 1*