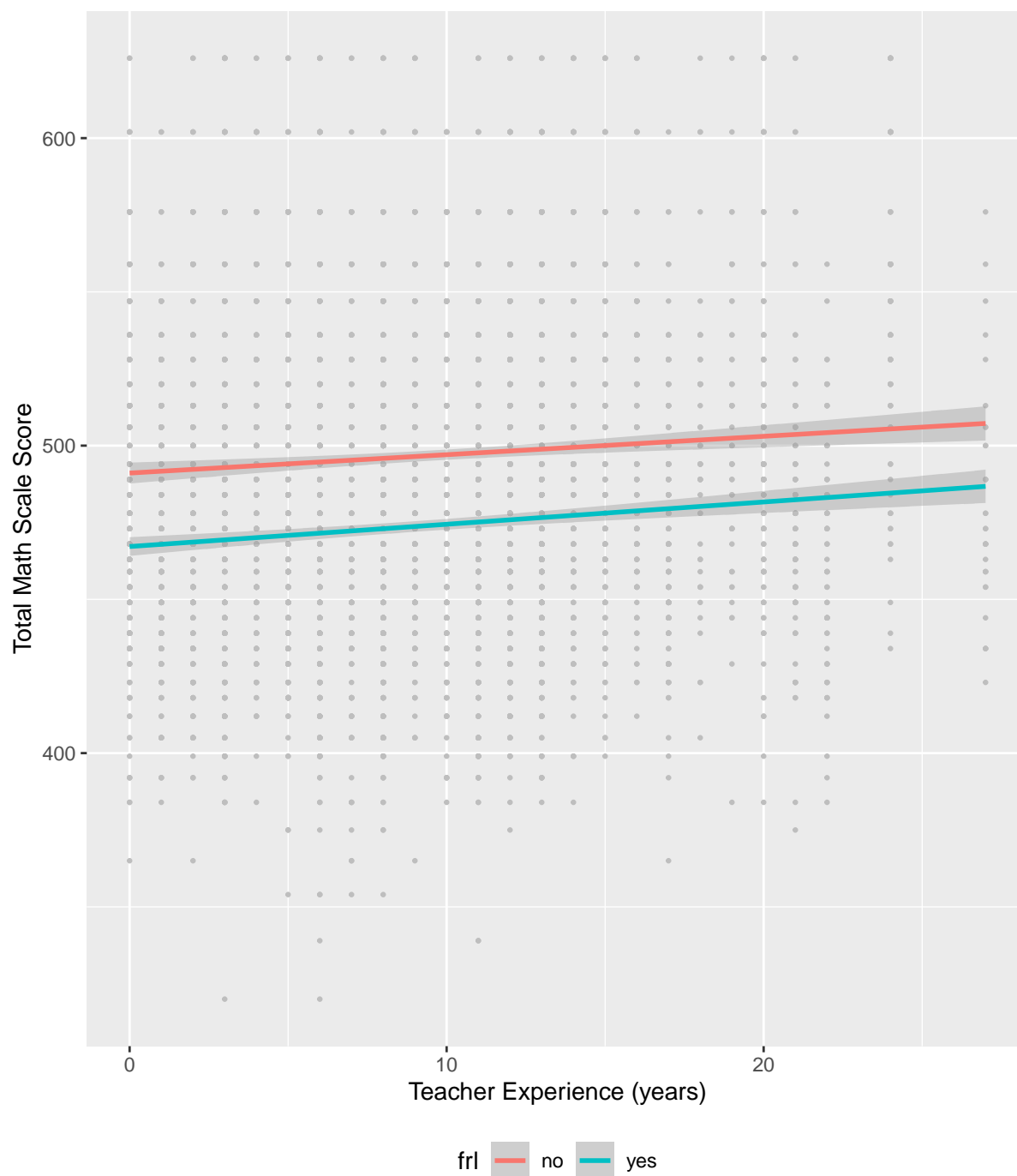# Homework 6

Ben Pfingston, Leah Peterson, and Alexus Rock

We are using R for this assignment (R Core Team 2023). To import the data, Müller (2020) created a package that helps us find the file we want to use in the assignment. Additionally, we are using the tidyverse to help organize our data (Wickham et al. 2019). Then, to create the figure, Wickham (2016) made a comprehensive package that allows us to make graphs and figures with multiple different formating options.

sex	frl	math_mean	math_sd	rdg_mean	rdg_sd
boy	no	492.85	46.34	441.46	32.32
boy	yes	469.87	46.09	425.38	26.63
girl	no	501.21	45.96	448.54	34.52
girl	yes	477.51	46.30	430.80	27.42

This is a table of the summary statistics for the mean of total math score, the standard deviation of total math score, the mean of total reading score, and the standard deviation of total reading score by sex and by if free reduced lunch (frl) is received.

Relation between teacher experience and math scores

Separate regression lines displayed by free/reduced lunch price status

This is a plot of the relationship between teacher experience and student math scores for students who receive free/reduced lunch and those that do not.

References

Müller, Kirill. 2020. *Here: A Simpler Way to Find Your Files.* https://CRAN.R-project.org/package=here.

R Core Team. 2023. *R: A Language and Environment for Statistical Computing.* Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.

Wickham, Hadley. 2016. *Ggplot2: Elegant Graphics for Data Analysis.* Springer-Verlag New York. https://ggplot2.tidyverse.org.

Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D'Agostino McGowan, Romain François, Garrett Grolemund, et al. 2019. "Welcome to the tidyverse." *Journal of Open Source Software* 4 (43): 1686. https://doi.org/10.21105/joss.01686.