

Homework 6

Commit 2

I need to cite R Core Team (2023) and Wickham et al. (2019) Here are a few more references for your viewing pleasure (Nese et al. 2021; Gregori et al. 2022; Kratochwill et al. 2021)

Commit 3

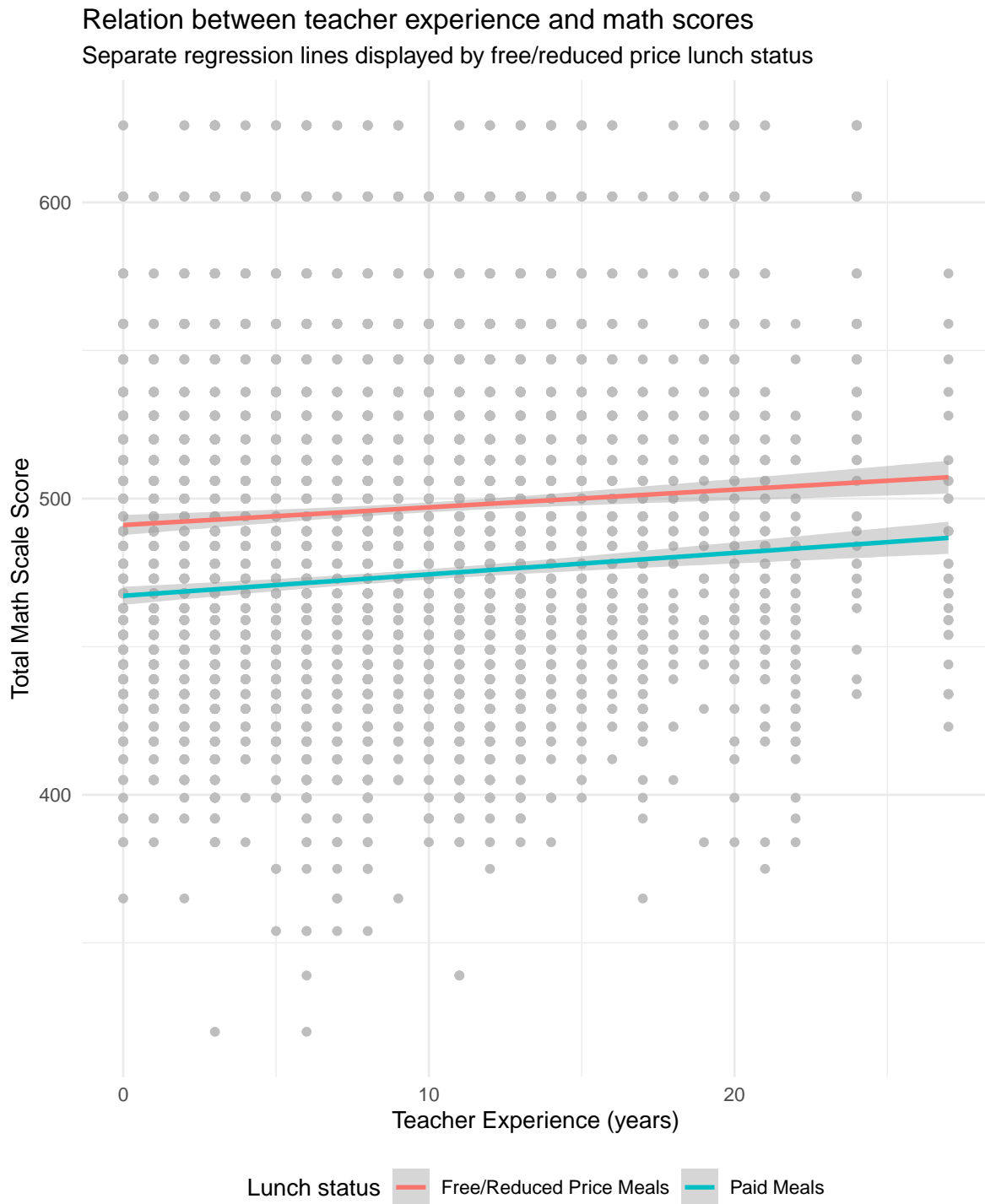
sex	frl	math_mean	math_sd	rdg_mean	rdg_sd
boy	no	492.85	46.34	441.46	32.32
boy	yes	469.87	46.09	425.38	26.63
girl	no	501.21	45.96	448.54	34.52
girl	yes	477.51	46.30	430.80	27.42

The table above shows us the means and standard deviations of math and reading performance for students grouped by sex and whether they receive free/reduced price lunch.

The mean of math score for boys who received free/reduced price lunch is 469.87 and the standard deviation is 46.09. Besides, they have a mean reading scores as 425.38 and the standard deviation is 26.63. Compared to this group, boys who didn't receive free/reduced price lunch performed better. Specifically, the average math score for them is 492.85, with the standard deviation as 46.34. The mean of their reading scores is 441.46, and standard deviation is 32.32.

Similar pattern was found among girls. For those who received free/reduced price lunch, the average score of math performance is 477.51 with a standard deviation as 46.30, and the mean score of reading performance is 430.80 with a standard deviation as 27.42. Girls who didn't received free/reduced price lunch reached higher mean scores for both tasks. To be specific, the mean score of math is 501.21 and the standard deviation is 45.96. The average of reading score is 448.54, and the standard deviation is 34.52.

Commit 4



The graph illustrates the relationship between teacher experience and math scores. In our sample, we observe a slight positive relationship between teacher experience and math scores for both students who receive free or reduced-price meals and those who do not. Specifically, regardless of student's status of free/reduced-price meal, more years of teaching experience are associated with higher total math scale scores for students. However, the graph also reveals that, on average, students receiving free or reduced-price meals tend to have lower math scores.

References

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- Nese, Rhonda N. T., Joseph F. T. Nese, Connor McCroskey, Paul Meng, Danielle Triplett, and Eoin Bastable. 2021. “Moving Away from Disproportionate Exclusionary Discipline: Developing and Utilizing a Continuum of Preventative and Instructional Supports.” *Preventing School Failure: Alternative Education for Children and Youth* 65 (4): 301–11. <https://doi.org/10.1080/1045988X.2021.1937019>.
- 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, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D’Agostino McGowan, Romain François, Garrett Golemund, et al. 2019. “Welcome to the tidyverse.” *Journal of Open Source Software* 4 (43): 1686. <https://doi.org/10.21105/joss.01686>.