

Lab_8

QRME Cohort!

11/10/2021

Contents

Commit 1	2
Commit 2	3
Commit 3	4
Commit 4	5
References	7

Commit 1

schidkn	sex	frl	reg_size	reg_size_aid	small_size	white	black	other	totexp	tmathss	treadss
63	girl	no	0	0	1	1	0	0	7	473	447
20	girl	no	0	0	1	0	1	0	21	536	450
19	boy	yes	0	1	0	0	1	0	0	463	439
69	boy	no	1	0	0	1	0	0	16	559	448
79	boy	yes	0	0	1	1	0	0	5	489	447
5	boy	yes	1	0	0	1	0	0	8	454	431
16	girl	yes	0	1	0	0	1	0	17	423	395
56	girl	no	1	0	0	1	0	0	3	500	451
11	girl	no	0	0	1	0	1	0	11	439	478
66	girl	no	0	0	1	1	0	0	10	528	455

Commit 2

Prior literature that explores environmental factors that influence academic achievement finds that economic status (Barry 2006; Considine and Zappalà 2002) and gender (Hubbard 2005; Kukulu et al. 2013) significantly influences academic achievement.

Barry (2006) shows correlation between economic status and academic achievement in their study.

This paper utilized here (Müller 2020), janitor (Firke 2021), rio (Chan et al. 2021), knitr (Xie 2014), and tidyverse (Wickham et al. 2019) packages from R for data cleaning and analysis.

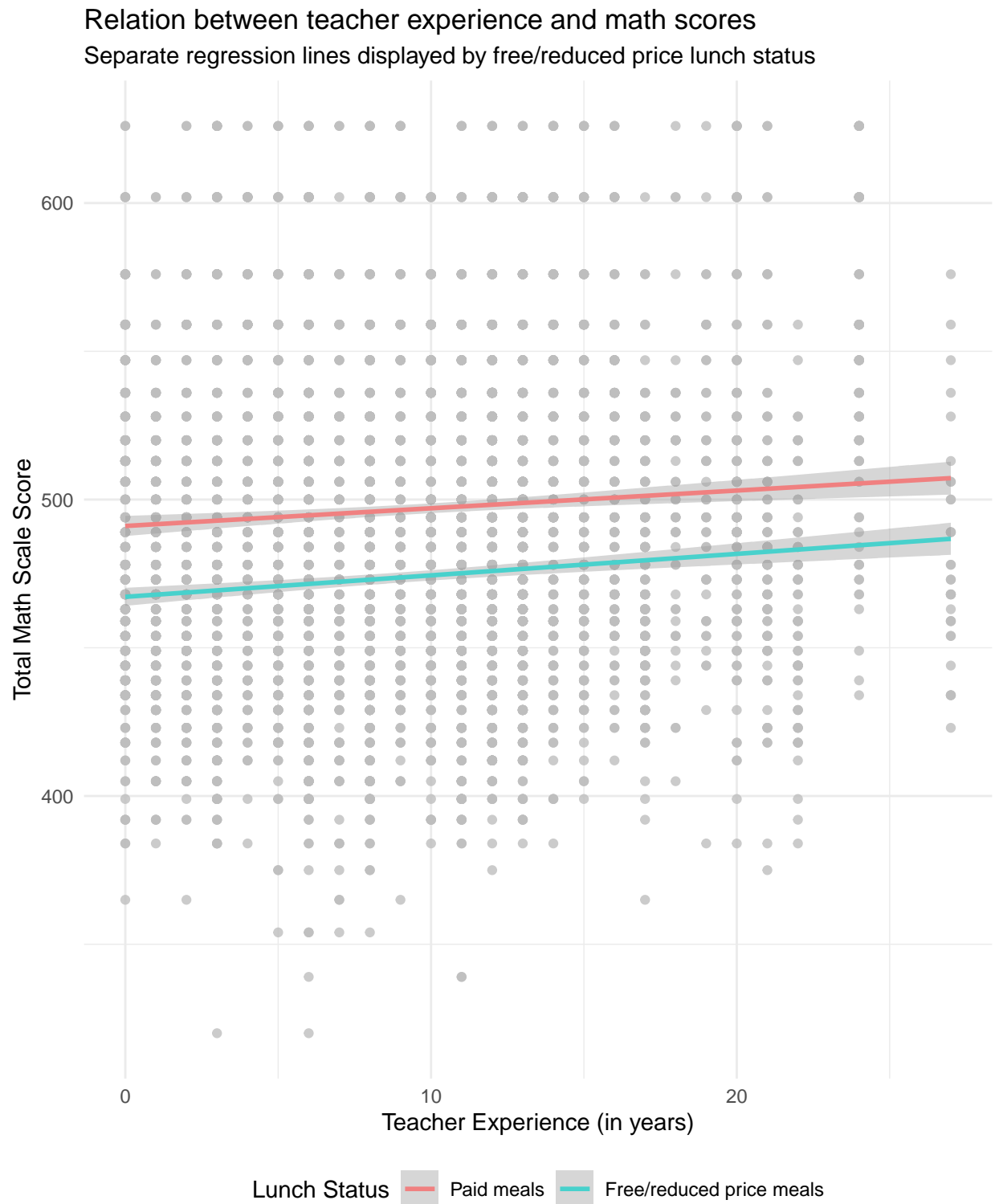
Commit 3

Summary statistics for students based on sex and free reduced lunch status

On average, students from low-income families with free/reduced lunch status regardless of their sex scored lower both in Math and Reading tests than their higher-income peers.

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

Commit 4



Description:

1. Though the regression lines have a positive slope, it almost looks flat. We can say that teacher's experience doesn't have much affect on student's math scale scores.

2. Students with a lunch status of “Paid meals” score more than those on “Free/reduced price meals” status.

References

- Barry, Jennifer. 2006. “The Effect of Socio-Economic Status on Academic Achievement.” PhD thesis.
- Chan, Chung-hong, Geoffrey CH Chan, Thomas J. Leeper, and Jason Becker. 2021. *Rio: A Swiss-Army Knife for Data File i/o*.
- Considine, Gillian, and Gianni Zappalà. 2002. “The Influence of Social and Economic Disadvantage in the Academic Performance of School Students in Australia.” *Journal of Sociology* 38 (2): 129–48.
- Firke, Sam. 2021. *Janitor: Simple Tools for Examining and Cleaning Dirty Data*. <https://CRAN.R-project.org/package=janitor>.
- Hubbard, Lea. 2005. “The Role of Gender in Academic Achievement.” *International Journal of Qualitative Studies in Education* 18 (5): 605–23.
- Kukulu, K, O Korukcu, Y Ozdemir, A Bezci, and C Calik. 2013. “Self-Confidence, Gender and Academic Achievement of Undergraduate Nursing Students.” *Journal of Psychiatric and Mental Health Nursing* 20 (4): 330–35.
- Müller, Kirill. 2020. *Here: A Simpler Way to Find Your Files*. <https://CRAN.R-project.org/package=here>.
- Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D’Agostino McGowan, Romain François, Garrett Grolemond, et al. 2019. “Welcome to the tidyverse.” *Journal of Open Source Software* 4 (43): 1686. <https://doi.org/10.21105/joss.01686>.
- Xie, Yihui. 2014. “Knitr: A Comprehensive Tool for Reproducible Research in R.” In *Implementing Reproducible Computational Research*, edited by Victoria Stodden, Friedrich Leisch, and Roger D. Peng. Chapman; Hall/CRC. <http://www.crcpress.com/product/isbn/9781466561595>.