Lab_8

QRME Cohort!

11/10/2021

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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

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.

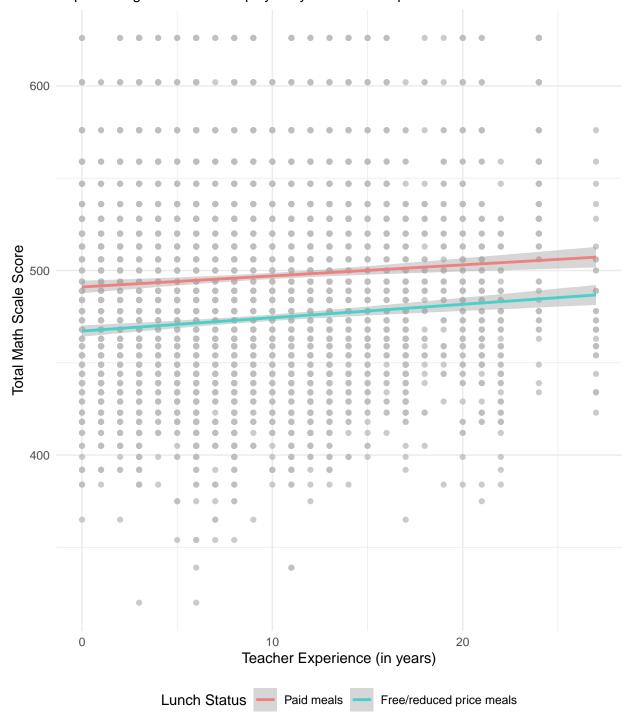
This paper utilized here (Müller 2020), janitor (Firke 2021), rio (Chan et al. 2021), knitr (Xie 2014), and tidyverse (Wickham et al. 2019) packages from R for data cleaning and analysis.

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
$_{ m girl}$	no	501.21	45.96	448.54	34.52
girl	yes	477.51	46.30	430.80	27.42

Relation between teacher experience and math scores Separate regression lines displayed by free/reduced price lunch status



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.

 $2. \ \, {\rm Students \ with \ a \ lunch \ status \ of "Paid meals" \ score \ more \ than \ those \ on "Free/reduced \ price \ meals"}$

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