

# **hw\_6**

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## **Load packages**

## **Load data**

## **Citation examples**

Singh et al. (2025)'s work demonstrated altered brain rsFC among patients with major depressive disorders, which is consistent with existing evidence (Krug et al. 2022), (Swartz et al. 2021), (Ishikawa et al. 2022).

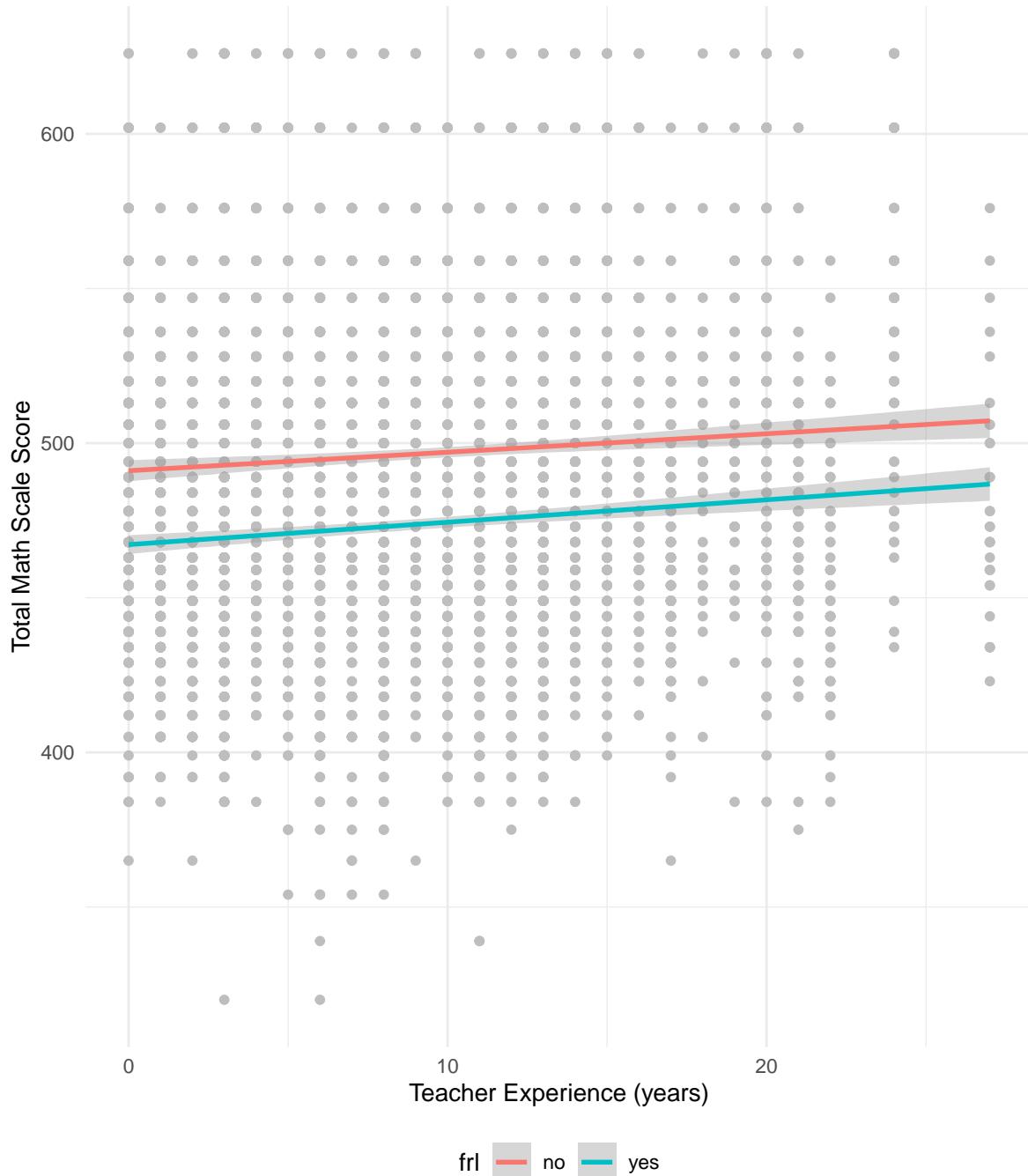
## **Summary statistics table**

| 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 table shows us the mean and standard deviation of both math and reading scores based upon the students sex and free-reduced lunch (FRL) status. From the table we can see that girls scores higher in both math and reading scores in comparison to their male counterparts who received or did not receive FRL. Secondly, we can see that students who do not receive FRL overall, have higher academic performance in these two areas, showing a discrimination between SES and academic outcomes.

## Plot

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



The plot above demonstrates the relation between teacher experience and math scores, include a linear regression line (gray bands represent standard errors). Separate lines are presented for students who are eligible for free and reduced lunch (blue) and those that are not (red). Based on visual analysis alone, the slope of the relation does not appear to substantially differ between the two groups. That is, as teacher experience increases, the average math scale score for students is higher, and this pattern is true for both groups. However, the line representing FRL-eligible students is below the non-FRL-eligible line, indicating that average math performance is lower in this group across teacher experience levels.

## Reference

- Ishikawa, Kazuhiro, Kiyotaka Nemoto, Yuki Shiratori, Noriko Sodeyama, Kikuko Kodama, Hitoshi Usuniwa, Noriko Yamada, et al. 2022. “Aberrant Resting-State Functional Connectivity of Major Depressive Disorder with Higher Risk of Suicide.” *Psychiatry and Clinical Neurosciences Reports* 1 (3): e35.
- Krug, Susann, T Müller, Özelem Kayali, Eerik Leichter, Stephanie KV Peschel, Niklas Jahn, L Winter, et al. 2022. “Altered Functional Connectivity in Common Resting-State Networks in Patients with Major Depressive Disorder: A Resting-State Functional Connectivity Study.” *Journal of Psychiatric Research* 155: 33–41.
- Singh, Paramdeep, Jawahar Singh, Sameer Peer, Manav Jindal, Sunil Khokhar, Abhilash Ludhiadch, and Anjana Munshi. 2025. “Assessment of Resting-State Functional Magnetic Resonance Imaging Connectivity Among Patients with Major Depressive Disorder: A Comparative Study.” *Annals of Neurosciences* 32 (1): 13–20.
- Swartz, Johnna R, Angelica F Carranza, Laura M Tully, Annchen R Knodt, Janina Jiang, Michael R Irwin, and Camelia E Hostinar. 2021. “Associations Between Peripheral Inflammation and Resting State Functional Connectivity in Adolescents.” *Brain, Behavior, and Immunity* 95: 96–105.