Fixed-effect Regression

White, M. P., Alcock, I., Wheeler, B. W., & Depledge, M. H. (2013). Would you be happier living in a greener urban area? A fixed-effects analysis of panel data. *Psychological Science*, *24*(6), 920–928. https://doi.org/10.1177/0956797612464659

Summary

White et al. (2013)

Causal Question

Should I pretend to do econometrics while I have no idea what I am doing?

Validity

Construct Validity

Living next to green space consists of two constructs: 1. willingness to live in a green area and 2. ability to live in a green area. Assuming people are either indifferent or universally attracted to green space, what this paper picked up is actually the ability to live there, i.e., ability to afford mortgage or rent. In real estate: location location location, so the authors were not actually measuring green, but wealth.

Internal Validity

Both being able to live in green areas and happiness are the outcome of the confounding variable income/wealth.

External Validity

1 standard deviation is a huge difference. beta estimates are marginal effect, meaning at the tangent point, a little bit to the left, a little bit to the right, you can expect this much increase or decrease. This linear approximation gets lousier the farther away you move from the tangent line. 1 SD is half a world away and none the estimates can be used for such discrete changes.

Statistical Conclusion Validity

Control vars are high correlated. Coefficients do not have cetaris paribus interpretation

Appropriateness of Methods

You can throw whatever into STATA and get some output, but having a bunch of numbers in itself does not buy you legitimacy. You used STATA's panel data functionality but didn't actually run a panel analysis.

Conclusion

This paper should get burnt at the review stage. Even the author themselves admitted this paper cannot prove causal. What a waste of time and trees.