Are infections affecting the functional ability of daily activities in older adults?

A cross-sectional analysis of the Mexican Health and Ageing Study (MHAS)

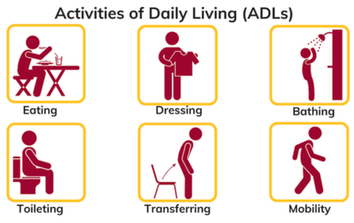
Contributor Credits:

Charlotte Warren-Gash
Georgia Gore-Langton
Kwabena Asare
Danny Turton

Introduction and Objective

- Does infection cause in the total number or presence of difficulties in activities of daily living.

causes ↑ in difficulties



Methods and Definitions

Mexican Health and Ageing Study:
- Longitudinal study that collects health and socioeconomics of older adults in Mexico in waves
- This analysis utilised the data from wave 3, 4 and 5 (2012, 2015 and 2018)

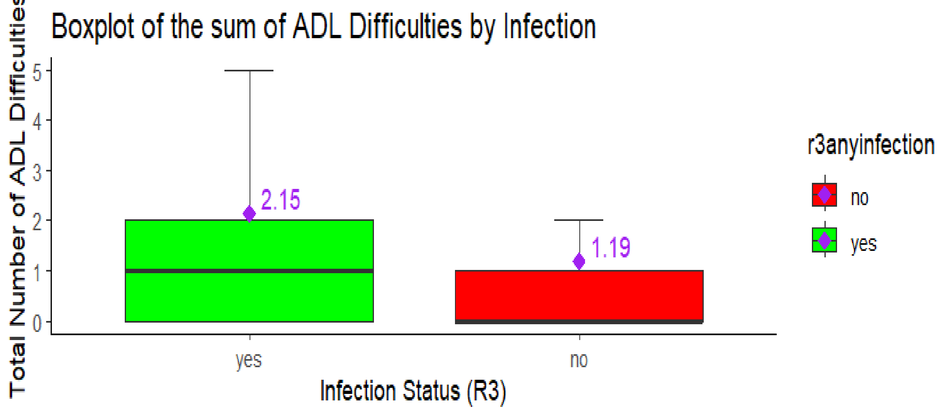
Analysis
- Linear and logistic regression carried out from 3,465 observations
- Adjusted for socioeconomic and health factors

Exposure:
- Infection was given as a binary input – having any infection or not.

Outcome:
- Activities of daily living are normal everyday tasks
- Difficulties in activities of daily living was both binary and numerical

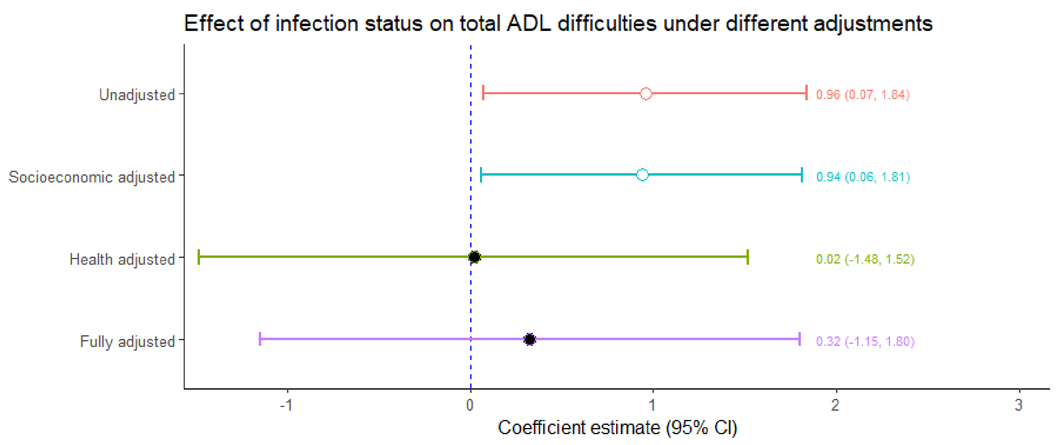
Results: Infection and Number of ADL Difficulties

- Box plot on the total number of ADL difficulties against the presence of an infection and T-test results
- T-test p value < 0.05

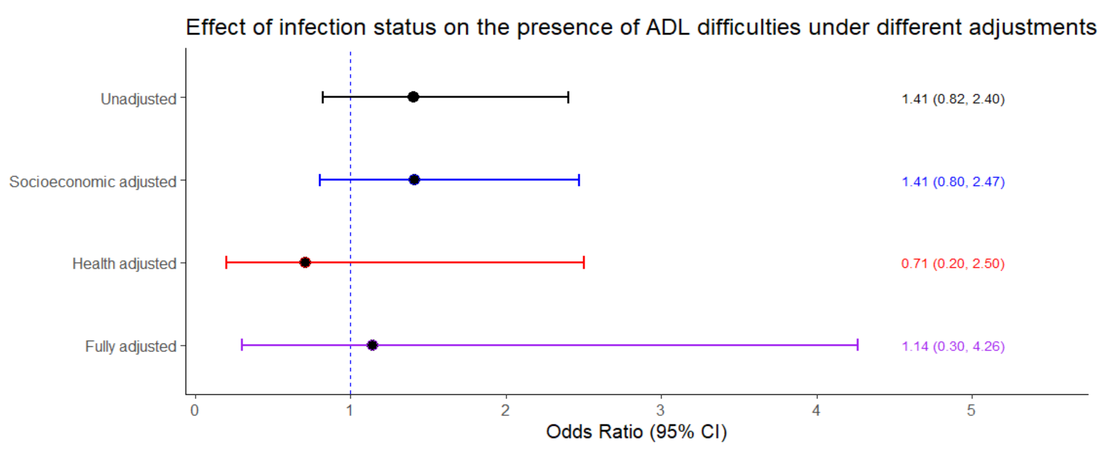


Results: Linear Regression and Odds of Any ADL Difficulty

Linear regression:



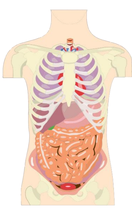
- Unadjusted: shows a significant positive correlation. Infection is associated with 1 ADL difficulty
- Socioeconomic-adjusted: Maintains a similar association to the unadjusted model
- Health-adjusted: infection shows almost no association
- Full-adjusted: infection also shows almost no association



- Unadjusted: OR = 1.41 (not significant)
- Socioeconomic-adjusted: Like linear regression, OR is similar to unadjusted
- Health-adjusted: association flips direction with a wider CI
- Full-adjusted: OR = 1.14, effect was attenuated

Conclusion and Next Steps

- After adjusting accordingly, there is not enough evidence to support that infection causes ADL difficulties
- Other confounders, such as health factors like diabetes or heart attack, may be the main drivers of the presence and number of ADL difficulties.



Next Steps:
- Collecting more data to increase data size
- Distinguishing and looking at the effects of different types of infections
- Further investigations of confounding factors – especially health factors

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Contact: blossom.okparocha@pmb.ox.ac.uk