



Association of objective sedentary behaviour and self-rated health in English older adults

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Background

- Evidence suggests that individuals with high levels of sedentary behaviour are more likely to age less healthily (De Rezende et al. 2014; *PLoS ONE*).
- Self-reported health assessments reflect an individual's perception of their own health status and are usually consistent with objective health measures (Wu et al. 2013; *BMC Public Health*).
- Using a single question to assess health status is more practical, easier to interpret and likely to be used more widely in both research and clinical practice compared with using questionnaires.

Background

- High levels of sedentary behaviour appear to be related to lower self-rated health (Meneguci et al. 2015; *BMC Public Health*).
- Most studies have used subjective tools such as sedentary behaviour and physical activity questionnaires which are subject to misclassification and recall bias.
- We know little about how objectively measured sedentary behaviour impacts on self-rated health in older adults.



Aim

To explore the associations between objectively measured sedentary behaviour and self-rated health in English older adults.



Methods

Data collection

- A random sub-sample of older adults (≥ 65 years old) from the 2008 Health Survey for England wore an ActiGraph GT1M accelerometer on the hip for seven consecutive days during waking hours only.
- Valid dataset: ≥ 600 min of wear-time per day over at least 4 days.
- Primary outcome: Percentage time and mean daily time in sedentary behaviour (i.e. < 200 counts per minute from the vertical axis).
- Sleep-time was excluded.



Methods

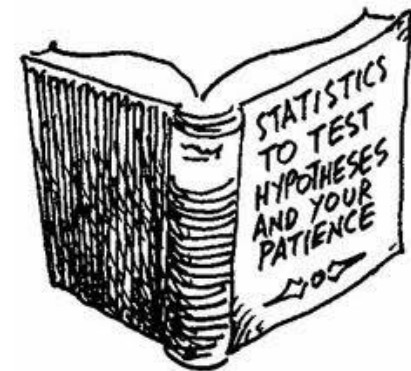
Data collection

- Self-rated general health was measured using the relevant item in the 12-item General Health Questionnaire (GHQ-12).
- Participants were asked to rate their health using the following: very good, good, fair, bad and very bad.



Methods

- Data**
- Linear regression models were used to test the associations between percentage time spent in each of the following categories and health, adjusting for relevant covariates:
 - BMI (kg/m²)
 - Education
 - Income (£)
 - Urban/Rural
 - Smoking status
 - Current alcohol drinker
 - All analyses were conducted using Stata 15.1, with Bonferroni correction:
 - Long standing health conditions
 - MVPA
 - Group 3 – Bad/very bad (n=53/578)
 - Statistical significance: $p < 0.05$.

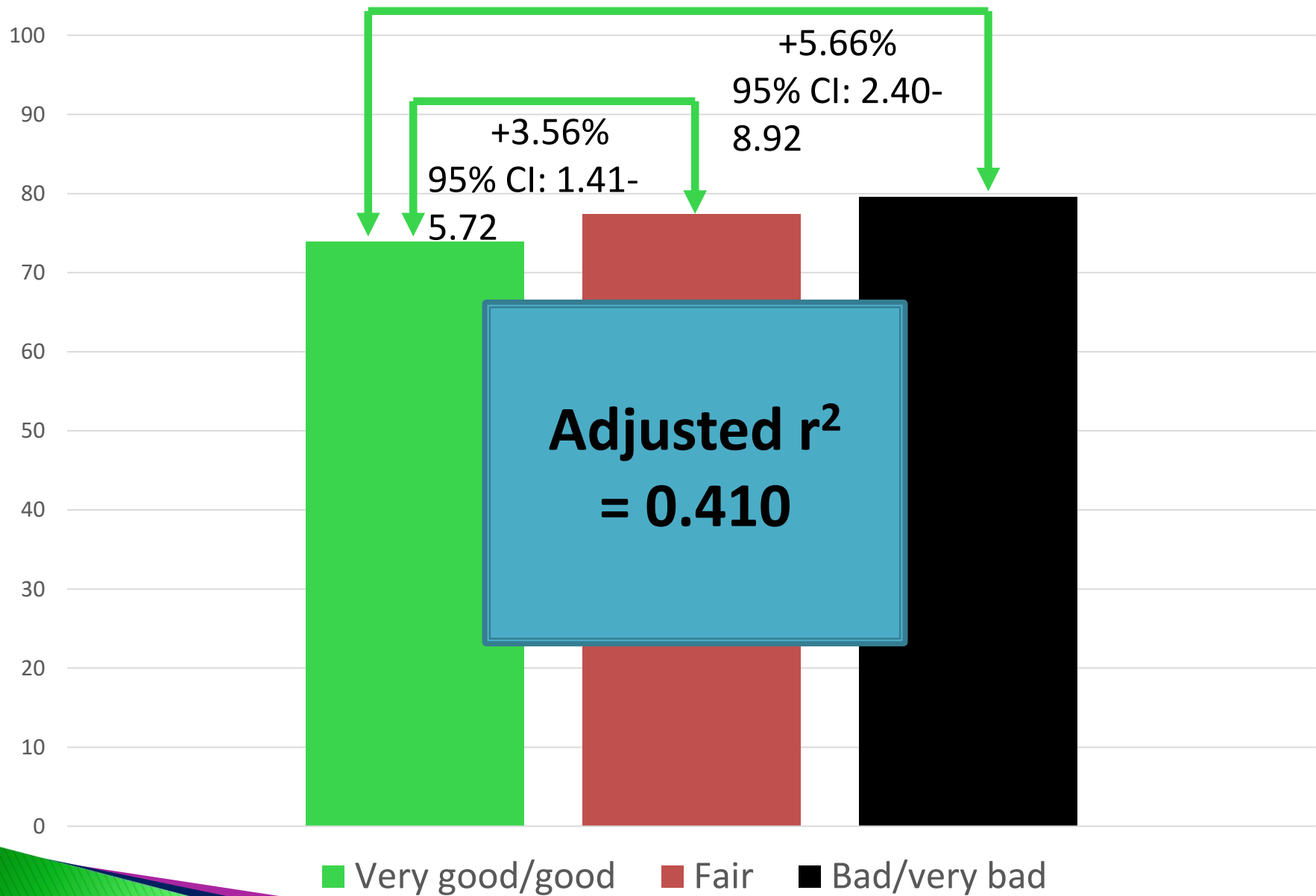


Results

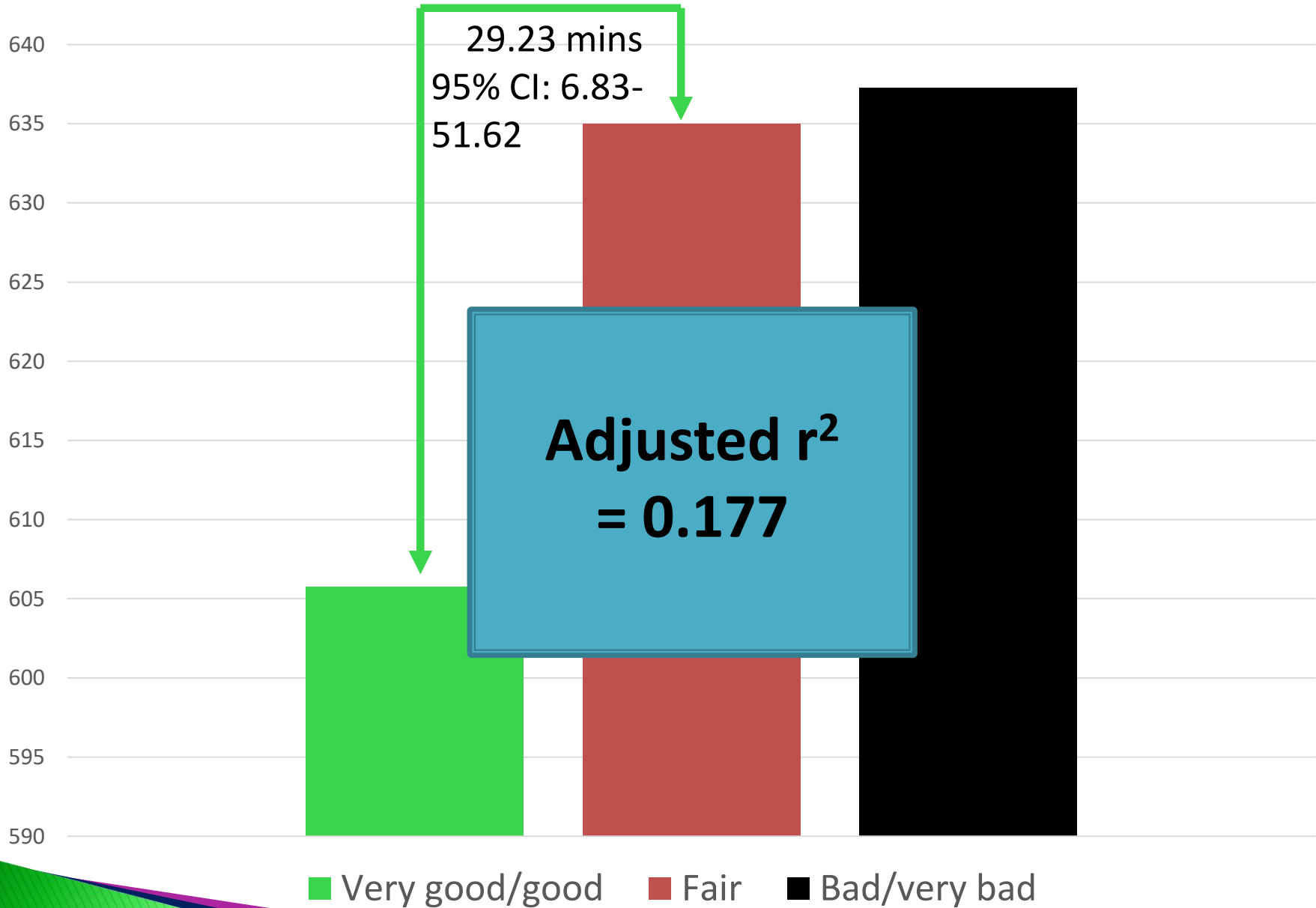
- 578/1250 participants with valid accelerometry data (46.2%)

Variables (n=578)	Mean (SD or %)
Age (years)	73.7 (6.4)
BMI (kg/m ²)	28.1 (4.8)
Females, n (%)	304 (52.6)
Current or regular smokers, n (%)	304 (52.6)
Current alcohol drinker, n (%)	459 (79.4)
Long standing illness, n (%)	177 (30.6)
Urban living, n, (%)	449 (77.7)
Self-rated health “very good/good”, n (%)	367 (63.5)

Percentage time in sedentary behaviour



Time spent in sedentary behaviour



Discussion

- Both percentage time and daily time in sedentary behaviour appear to be associated with self-rated health.
- Sedentary behaviour has consistently been shown to be an independent risk factor for physical and psychological health conditions.
- Positive health impacts of sedentary behaviour reduction interventions include improved chronic pain management, sleep quality, less perceived fatigue and feelings of better health.

Discussion

- Self-rated health is complex and may be variably impacted by different health problems and their functional consequences so these reflections are likely to have an important influence on how individuals rate their current health status.



vs.



Conclusions and Future Research Direction

- Sedentary behaviour could be a novel and important modifiable lifestyle variable to target for health improvement.
- More negative health ratings = more time in sedentary behaviour.
- Future research should plan for long-term follow-up in order to determine how changes in sedentary behaviour influence self-rated health as individuals' age.
- The findings suggest the potential for sedentary behaviour reducing interventions for improving the health of older adults.

RESEARCH NOTE

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Thanks for listening!!!

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