Evaluating the observable impact of urban green space on older adults’ physical activity and wellbeing

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Objective

To provide a robust evaluation of the effect of planned "greening" on physical, social and mental wellbeing, compared to matched unimproved areas
Why do this?

• Much evidence that amount of “green or blue infrastructure” is associated with physical activity and wellbeing

• Does not show that environment causes more physical activity and improved wellbeing

• Could be “third variables” e.g. income that is explaining both
Does greening influence wellbeing?

- Difficult to study causal effects of changing the environment on wellbeing
- **Natural experiments**: ‘real world’ events that cannot be manipulated by a researcher
- Designing and conducting studies around natural experiments is difficult – and often poorly done
- Most research in USA and Australia
- Very little with older people

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GHIA natural experiment

- Four green spaces (intervention sites) improved by Southway Housing Trust
- Small-scale interventions, e.g. planting new trees, putting tree socks on trees
- MINIMAL interventions
- 8 comparison sites were matched for area characteristics, e.g. social deprivation

Recommendations

• **Better quality** natural experiments should:

1. Better matched control sites;
2. Use of multiple control sites;
3. Controlling for **confounding** domains;
4. Publishing **study protocols** with a priori analyses;
5. Use of **adequate outcome measurements**;
6. Better reporting of samples and interventions;
7. Sample size calculations, and;
8. Measuring exposure to the intervention at individual level.

Intervention sites

Burton Road (Site 1)

Parbold Avenue (Site 2)

Dennison Avenue (Site 3)

Alford Avenue (Site 4)
When did we collect data?

4 intervention sites vs 8 similar comparison sites

- Baseline observations: September 2017
- Tree trail implemented: November 2017
- 1st Follow-up observations: Feb/March 2018
- 2nd Follow-up observations: September 2018

Qualitative interviews: July - November 2018
MOHAWk (Method for Observing Physical Activity and Wellbeing)

• An observation tool for measuring:
  1. Physical activity (sedentary, walking, vigorous)
  2. Connect (connecting with others)
  3. Take Notice (taking notice of the environment)

• Also measures demographics (gender, age, ethnicity), weather (precipitation) and site incivilities (e.g. graffiti, litter)

Results: number of older adults using the sites

(Average number of older adults per hour)
Results: amount of Take Notice behaviour in older adults

(Average number of older adults taking notice of the environment per hour)
Qualitative sub-study

• Investigating older adults’ experiences of changes to Old Moat
• Includes GHIA tree trail intervention sites but also includes other recent changes
• Walk-along interviews conducted which included as many changes as possible from natural experiment, but also other recent changes
• Only 4/15 noticed changes (2 new trees or flowers and 2 tree socks)

Where does this get us?

- Unlikely that changes like those introduced by Southway Housing in Old Moat will produce (discernible) change in older people
- These results are useful
- We understand why no change (mixed methods)
- Current guidance (e.g. NICE, 2014) does not say when will get effects and when will not get effects
Other outputs

• MOHAWK tool developed and we are keen for others to use

• Similar methods being applied to bigger environmental changes (Salford canal study and Grow Green study)
Thank you

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