

# The 'Growing a Healthy Older Population in Wales' project

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# Outline of talk

- Background to our research
- GHOP project overview
- The study
- Preliminary findings
- Lessons
- Future directions



Similarly, helping people to achieve these guidelines will require new and exciting partnerships to help create a more active society. Across the physical activity sector, we need to build upon the diversity of opportunities to be active including sport, active travel, dance, **gardening** and exercising in a natural environment – the list goes on.

### What is physical activity?

Physical activity includes all forms of activity, such as everyday walking or cycling to get from A to B, active play, work-related activity, active recreation (such as working out in a gym), dancing, **gardening** or playing active games, as well as organised and competitive sport.

Muscle strengthening	Weight training, working with resistance bands, carrying heavy loads, heavy <b>gardening</b> , push ups, sit ups
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probably best achieved by regular brisk walking, either as leisure walking or as part of shopping and social routines, and perhaps combined with recreational activity such as dance, **gardening**, swimming, cycling, moderate intensity sport or exercise classes tailored for older adults.

#### Everyday activity:

Active travel  
(cycling/walking)  
Heavy housework  
Gardening  
DIY  
Occupational activity  
(active/manual work)

## Start Active, Stay Active

A report on physical activity for health  
from the four home countries'  
Chief Medical Officers

Finally, being active (whether walking more frequently to the shops, dancing, playing bowls, taking part in led health walks, working on **allotments** or volunteering for work in the community) can be an important way for older adults to maintain independence and social engagement. This in turn can contribute to higher levels of mental well-being. Physical activity can therefore help to contribute to a higher quality of life, regardless of level of intensity.<sup>47</sup>

produce benefits. Muscle strengthening activities that load each of the main muscle groups provide the greatest benefits. However, activities that require hard muscle work such as **gardening**, badminton, tennis, stair climbing, hill walking, cycling and dance can also help maintain or even improve strength.

- active leisure pursuits, such as **gardening**, dancing, bowls or walking





# Why Gardening?



Produce

Interaction  
with Nature

Physical  
Activity



And much  
more ...

Life  
Satisfaction

Self-esteem





# Our previous findings

- Allotment gardeners report lower **perceived stress** than older adults who are active in non-gardening leisure
  - Hawkins et al. (2011), *HortTechnology*, 21(5), 577-585.
- Benefits of allotment gardening arise from ‘**doing**’ gardening activity and ‘**being**’ at the allotment site
  - Hawkins et al. (2013), *Ecopsychology*, 5(2), 110-125.
- Gardening tasks provide moderate to vigorous levels of **exercise intensity** for allotment gardeners aged over 60
  - Hawkins et al. (under review), *Journal of Aging and Physical Activity*.



# Our previous findings

## Exercise Intensity

- Replicated studies from the USA and Korea in Welsh population
- Digging, raking, weeding and mixing soil = moderate to vigorous intensity
- Tension and confusion reduced following gardening activity





# The GHOP project

- 2-year Welsh government-funded research study
- Exploring benefits of allotment and community gardening
- Partnership between Cardiff Metropolitan University and Cardiff University
- Registered with the Welsh Public Health Improvement Research Network and UK Clinical Research Network
- 4-month 'prospective' study with wait-list control





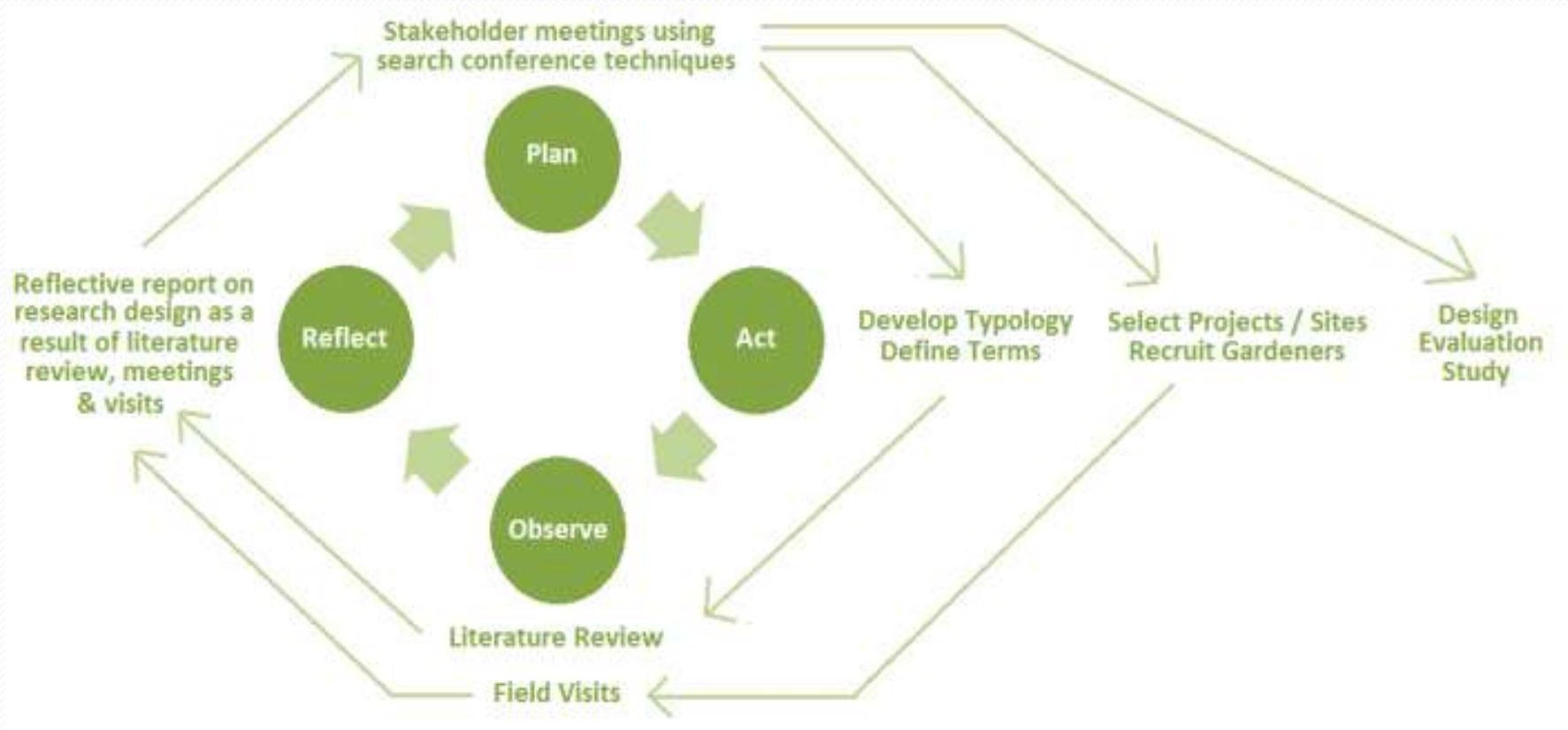
# Our aims and objectives

- Evaluate the role of community and allotment gardening for promoting healthy ageing
- Develop a methodology for evaluating the impact of community and allotment gardening for older people.
  - Analyse breadth and scope of gardening projects available in South Wales, and participation of people aged over 50
  - Develop appropriate tools for evaluating the impact of allotment and community gardening for over 50s
  - Conduct an intervention study to evaluate this impact





# An Action Research Process





# Research design & methodology

- Objective health and physiology measures
- Questionnaire measures
- Activity and experiences logs / diaries
- Interviews
- Three main collection points:
  - Baseline (April – July)
  - 2-month follow-up (June – September)
  - 4-month follow-up (August – November)





# Who were our participants?

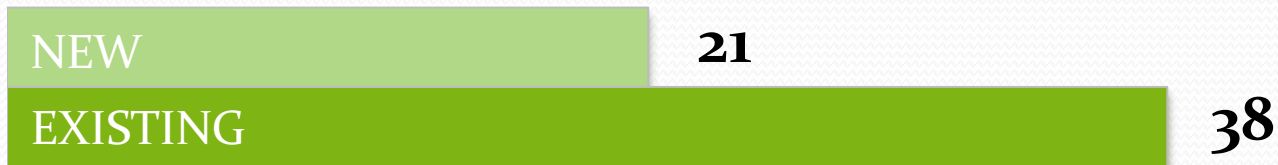
## Waiting List Participants



## Community Gardeners



## Allotment Gardeners







# Our sample (N=131)

- Youngest participant = 50 years old
- Oldest participant = 83 years old
  - Mean age = 62 years old
- 98% 'White British' ethnicity
- 60% Retired
  - Only 40% retired in waiting list group
- 58% Diagnosed illness
  - 19% cardiovascular
  - 17% musculoskeletal
  - 10% asthma





# What did we find?

## General Population Comparisons

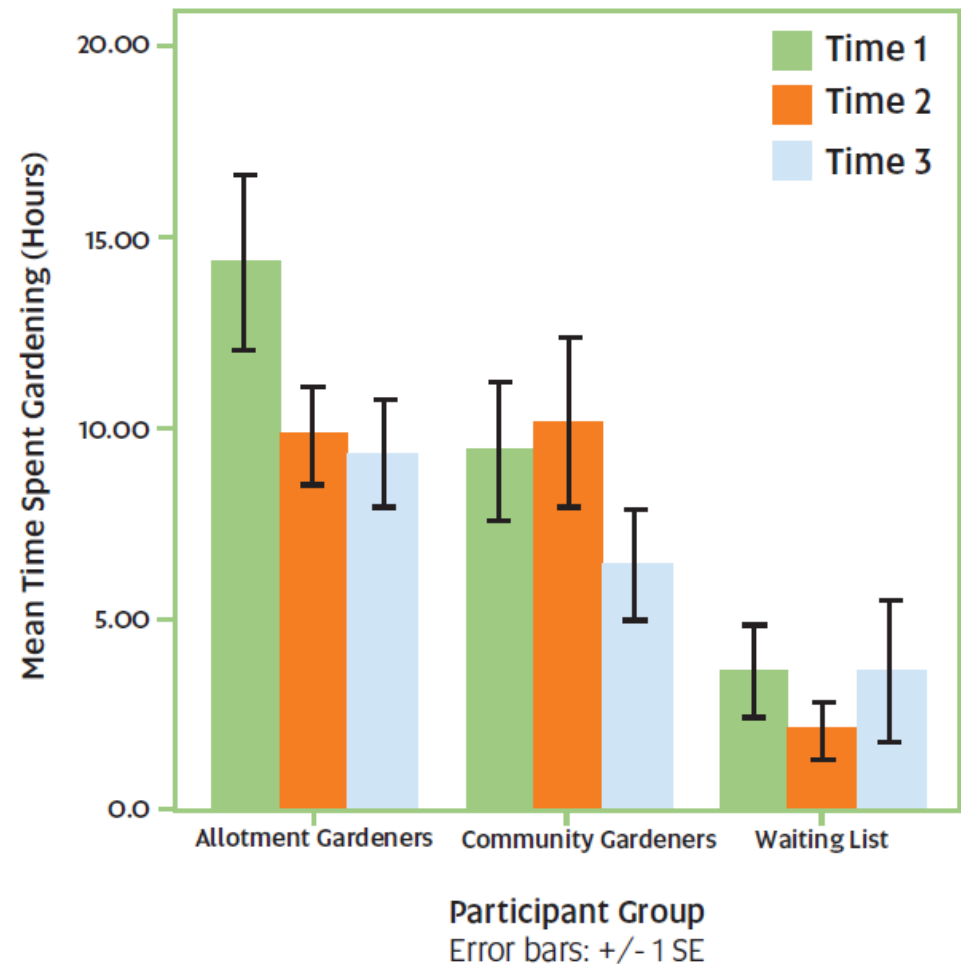
- Welsh Health Survey 2011
- Age-matched respondents
- Gardener participants were more active
- No differences in body mass index
- Gardeners had better self-reported physical health
- Females had better self-reported mental health



# What did we find?

## Time Spent Gardening

- *Seasonal effects?*
- *Weather effects?*



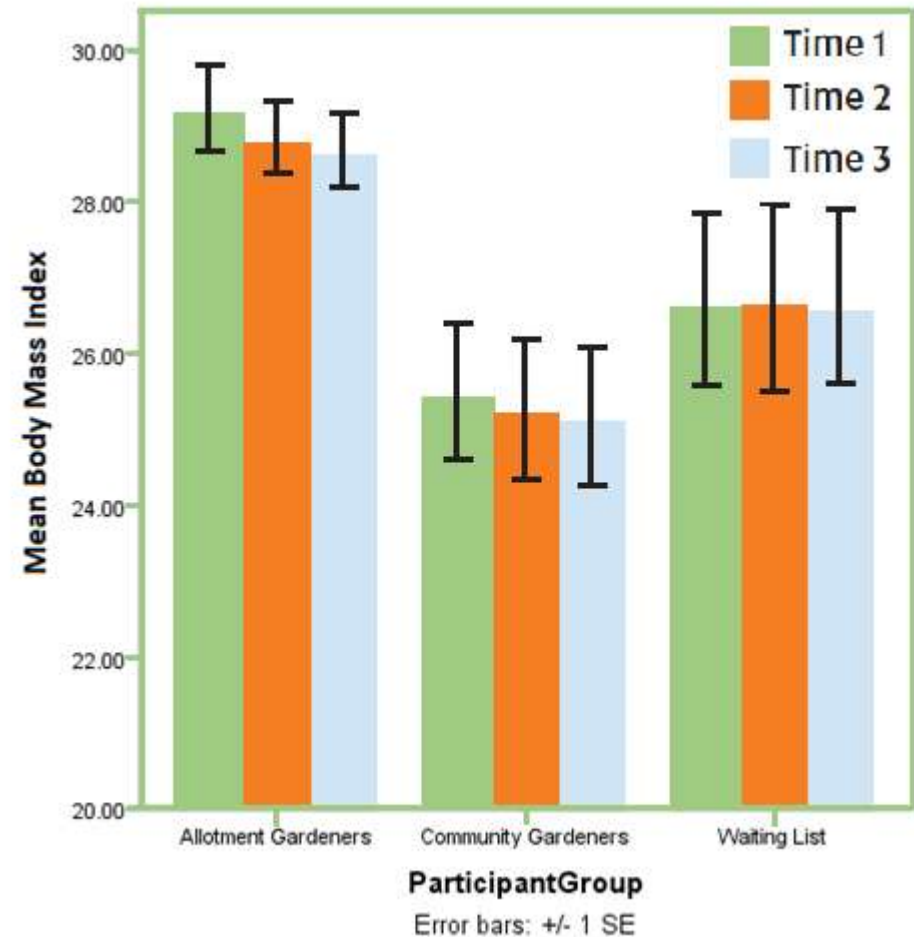




# What did we find?

## Body Mass Index

- Time spent gardening is important
- Only male community gardeners
- BUT waist circumference in women

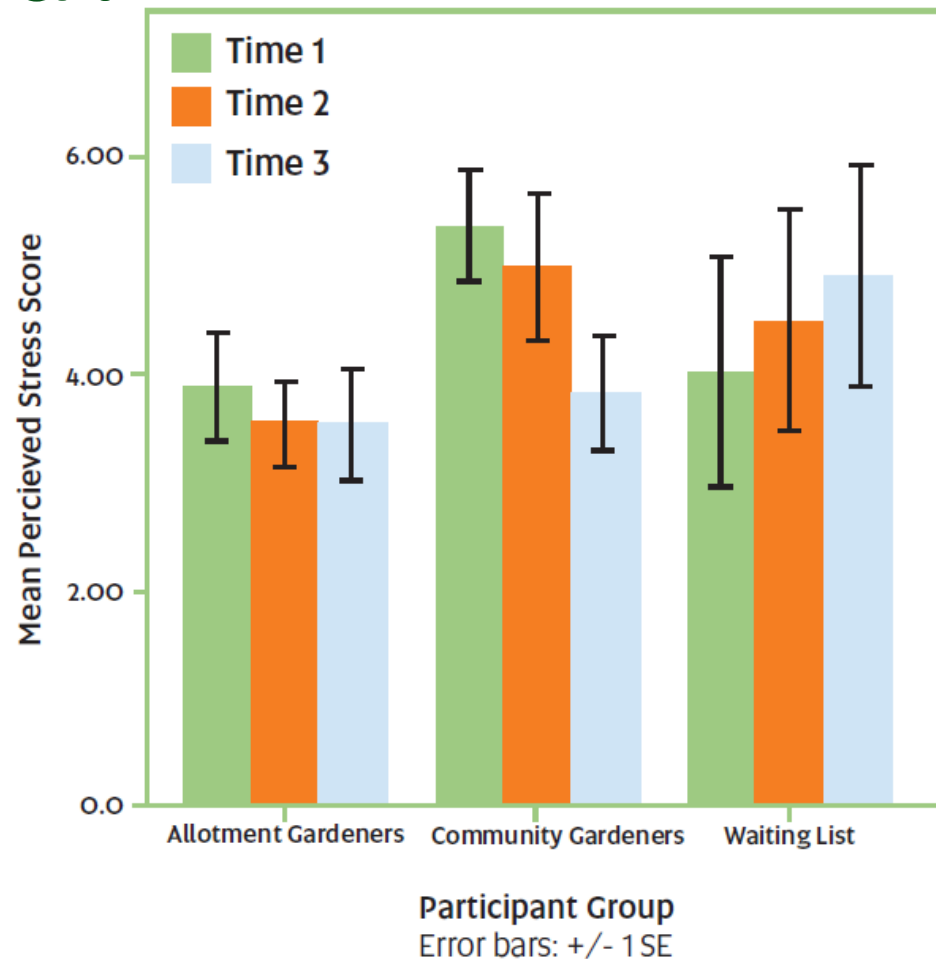




# What did we find?

## Perceived Stress

- Consistent with previous research
- Only statistically significant in community gardener group

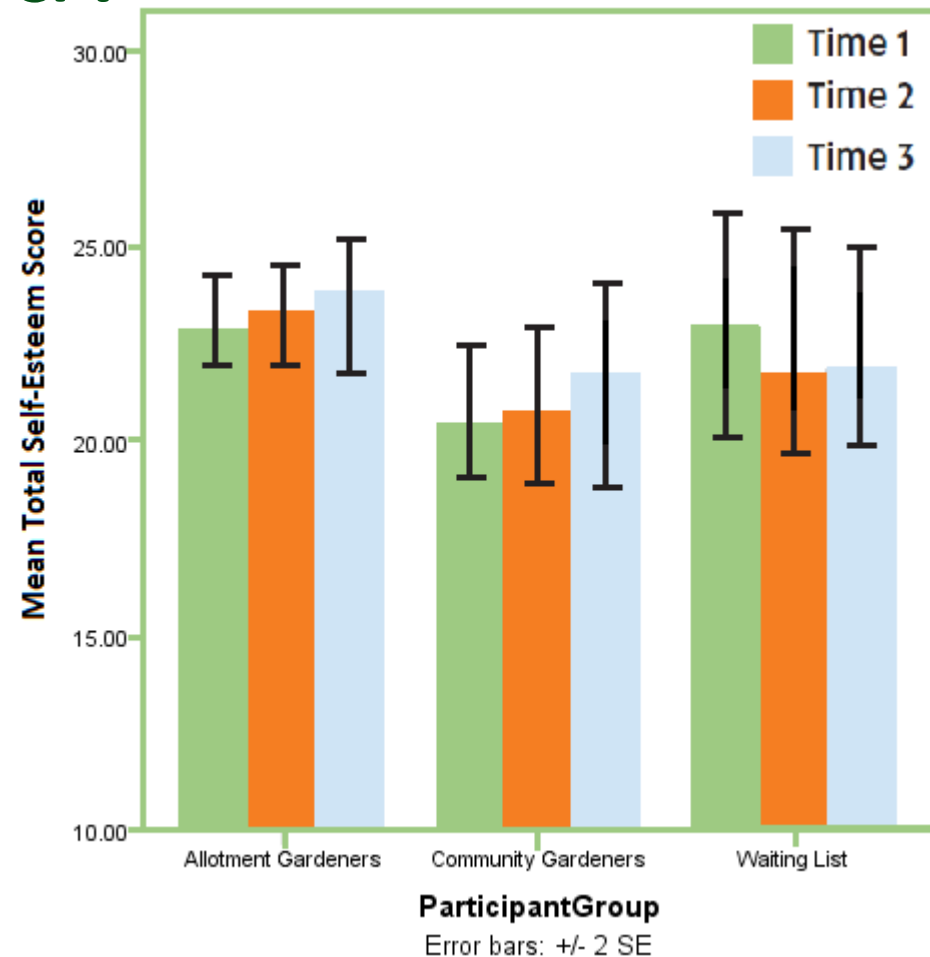




# What did we find?

## Self-Esteem

- Consistent with previous research
- Only statistically significant in female allotment gardeners
- Due to small numbers?







# What did we find?

## Female Allotment Gardeners

- Increases in self-esteem
- Increases in happiness
- Decreases in waist circumference



*“I lost so much weight; and I’m shocked, because I couldn’t lose weight by any other means. But now, I just go [to the allotment] every day and I can see my weight going which is so unusual you know because you’ve been dieting, you’ve been doing this, and your weight is still on. By going there ... you can feel it on your trousers, or whatever, that they become loose.”*



# Qualitative findings

Affords meaningful and productive activity

Creates a sense of community

Promotes mental well-being



Requires resilience

Offers escape into the natural environment

Provides physical activity



# What have we learned?

- WHAT WORKED:

- Collaborating with Cardiff council
- Working with 'key' individuals
- Recruiting participants/gardens at the RHS show
- Word of mouth promotion
- Engaging stakeholders in robust study design







# What did our participants think?

- Data from evaluation forms:

8.2

*“The study has been very enlightening – it reinforced my determination to carry on gardening.”*

*“I quite enjoyed the whole experience”*

*“A follow up in, say, two years time might be useful”*

*“Keeping the activity log was an interesting exercise – I’m surprised at what I got out of it.”*



# Future directions

- Publication of the results and wider dissemination
- Continued data analysis
- Continued working partnerships
- Future follow-up to look at long-term ageing outcomes
- Piloting of an 'evaluation toolkit'
- Creation of the Centre for Outdoor Activities and Leisure research (COAL) [coal@cardiffmet.ac.uk](mailto:coal@cardiffmet.ac.uk)
- Recommendation of gardening activity for health





# Big thanks to:



Federation of  
City Farms  
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Gardens  
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Sefydliad Cenedlaethol  
ar gyfer Ymchwil Gofal  
Cymdeithasol ac Iechyd  
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Health Research



PHIRN



To access the full report:

[www.cardiffmet.ac.uk/ghop](http://www.cardiffmet.ac.uk/ghop)



**Thank you for listening!**  
**Any questions?**



**GREEN CARE CONFERENCE**  
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