



Natural  
Environment  
Research Council



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# Why do we dig gardens?

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# Introduction

There is growing evidence of small-scale nature-based interventions for improving health outcomes

But **how** do nature-based activities impact management and outcomes of common mental health disorders, **and what affects their relative success and failure?**

There is no research exploring how the effectiveness of Green/nature-based programmes for mental health vary with **environmental quality**, and how this in turn affects nature connectedness and any association with mental health outcomes.



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# Exploring the sensory quality of the intervention environment

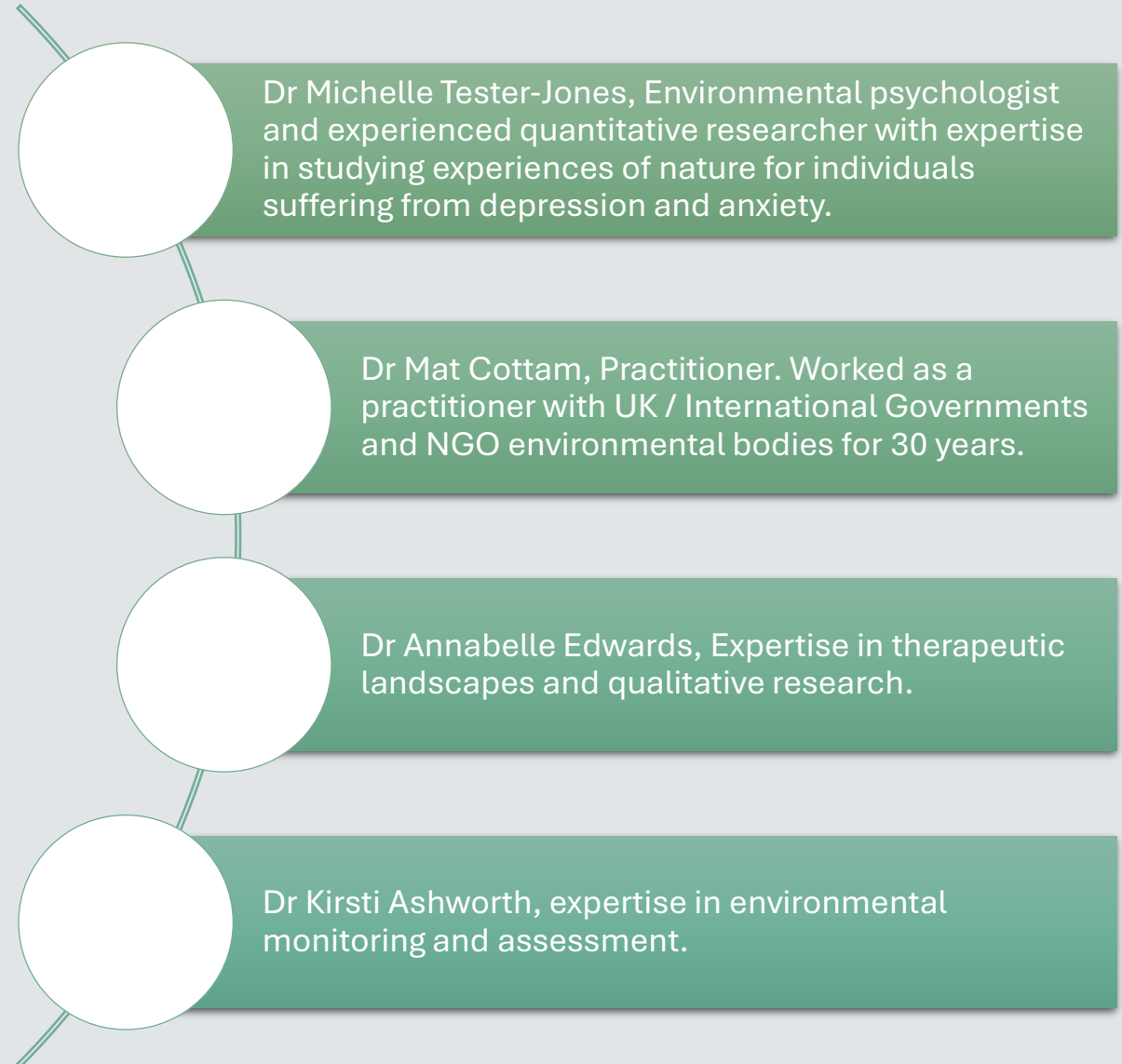
Our environment inevitably affects the way we feel and behave and holds the potential to facilitate psychological and physical interaction.

Some settings could be more conducive to facilitating symptom improvement compared to others (e.g. sites near busy roads or exposed to other urban noise vs more rural ones, or ones with a specific colour palette or optimum temperature?)

Could these qualities facilitate greater connection to nature and subsequently more positive emotions, thoughts and actions?

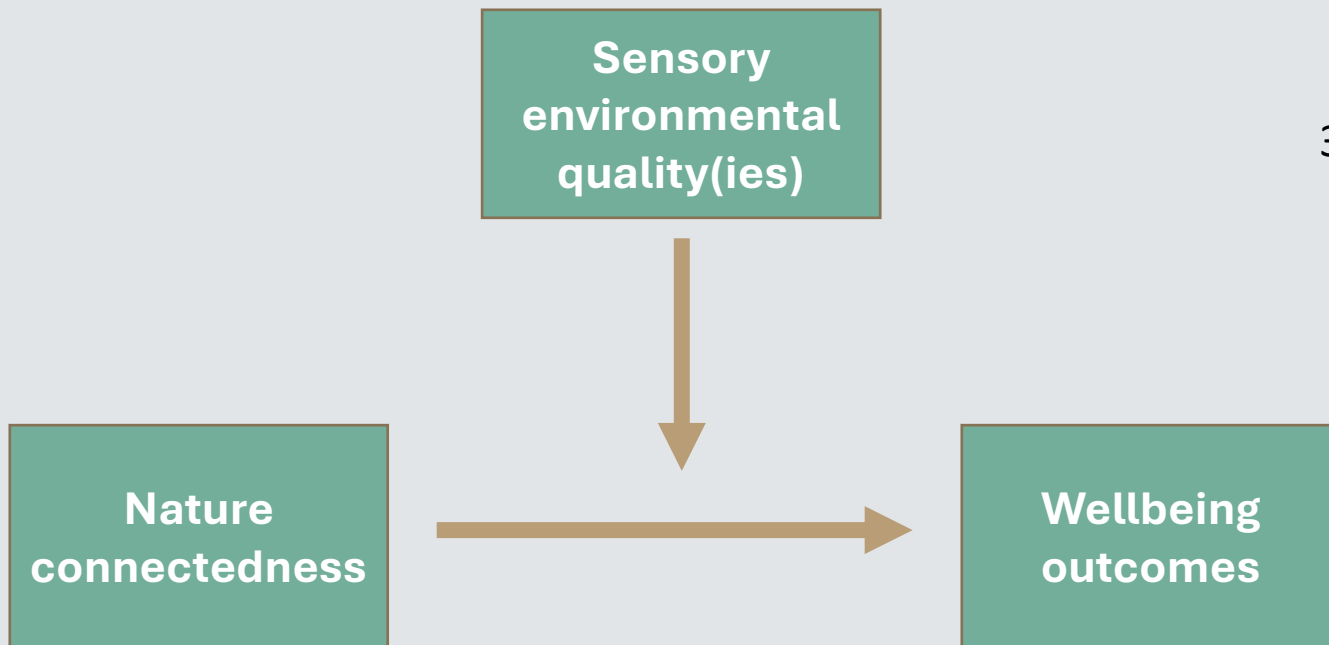
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# An interdisciplinary project team



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# Research questions



1. Is there an association between nature connectedness and wellbeing scores in Green Gym members?
2. Does sensory environmental quality moderate the relationship between nature connectedness and wellbeing outcomes in Green Gym users? If so, which qualities are associated?
3. What is the role of perceived safety as a subjective aspect of environmental quality, in the relationship between participating in the green gym and wellbeing outcomes?

## Green Gym improves physical wellbeing

On average, volunteers said they spent 50% more time engaged in vigorous and moderate activities by the end of the 3 month study period. Volunteers were walking more too. Nine out of ten attributed their higher physical activity to participation in Green Gym.

Volunteers increase the amount of time spent in vigorous and moderate activities

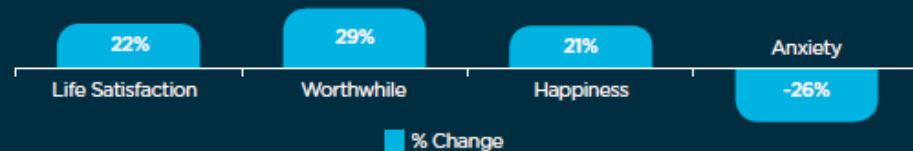


n=92 (baseline)  
n=79 (2nd follow-up)

## Green Gym improves mental wellbeing

Mental wellbeing scores improved over 3 months with a quarter of volunteers reporting a decrease in anxiety.<sup>1</sup>

Wellbeing Improves; anxiety reduces



n=92 (baseline)  
n=79 (2nd follow-up)



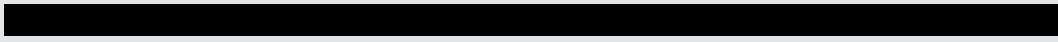
TCV's national network of Green Gyms will provide our study sites. Green Gyms are individually tailored challenging physical work outdoors, in a social setting. Activities range from veg gardening to parks and countryside management. Green Gyms start with a warm-up, end with a cool-down, and have a chat and tea and biscuits in the middle.

# Design

- Mixed methods

# Participants

- Volunteers at 3 Green Gym sites, attended at least 8 sessions, experienced low wellbeing/mood on joining, n= 12
- ~30% of participants in the Green gym report lower wellbeing and/or symptoms of depression and anxiety



# Methods

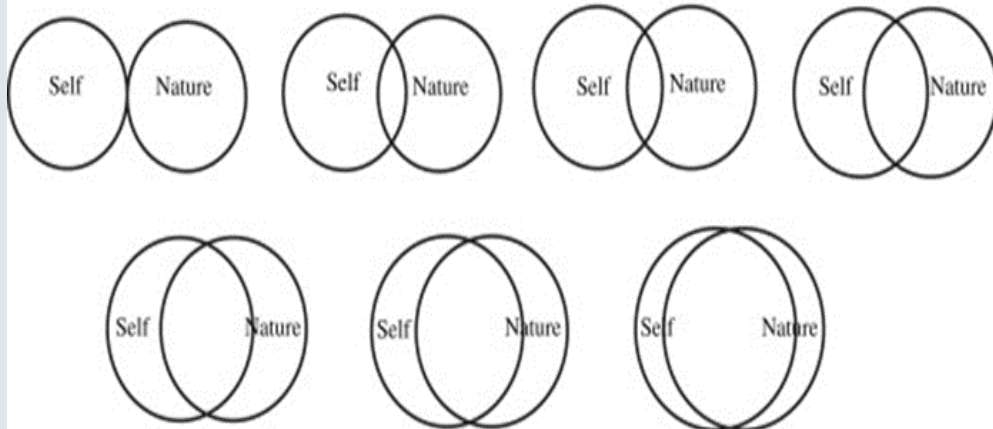


# The Warwick-Edinburgh Mental Wellbeing Scales - WEMWBS



## Monitoring of Engagement with the Natural Environment (MENE)

Please circle the picture below that best describes your relationship with the environment (nature) (self = you; nature = the environment):



Statements	1 = Strongly disagree	2	3	4	5	6	7 = Strongly agree
I always find beauty in nature							
I always treat nature with respect							
Being in nature makes me very happy							
Spending time in nature is very important to me							
I find being in nature is really amazing							
I feel part of nature							

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# Sensory Environmental quality

*Sight – imaging, vegetation cover, biodiversity*

*Smell – air quality / pollution / aromatics / GC-MS*

*Sound – audio recording / anthropogenic v natural*

*Touch – temperature, wind, humidity*





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## Data Collection: July – September 2022

- Sites:
  - Whitby Park, Ellesmere Port, average group of 5 participants
  - Countess of Chester Country Park, Chester, average group of 9 participants
- Methods:
  - Auto-ethnography during 4 Green Gym sessions at each park
  - Semi-structured interviews with 9 participants of Green Gyms
  - Length: 16 – 70 minutes



## Emerging theme: Affective belonging

- Group, nature, and local community belonging
- Community belonging appears only at Whitby Park
- Countess provided beneficial social interaction, but Whitby Park involved care for the local area

**“It’s definitely more personal here ... because it is my home town. ... it is different, definitely feels different.”**

- Giving back to the community was a motivating factor and positively impacted on wellbeing

**“Ellesmere Port born and bred ... I like giving back ... it’s nice to see people coming into the park and enjoying some of the work we’ve done in the park.”**

- Participants appreciated positive feedback from the public and found joy in people using the park
- Looking after the park has provided a sense of worth, purpose and meaningful activities







**WHITBY PARK**





**WHITBY PARK**





**ANY QUESTIONS?**

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