The health and well-being impacts of participating in environmental enhancement/conservation activities: a systematic review of quantitative and qualitative evidence

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The National Institute for Health Research is a partnership between the Universities of Sheffield, Bristol, Cambridge, UCL, The London School for Hygiene and Tropical Medicine, The Peninsula College of Medicine and Dentistry, the LlCoC collaboration between the Universities of Liverpool and Lancaster and Exeter, The Centre for Translational Research in Public Health, a collaboration between Newcastle, Durham, Northumbria, Sunderland and Teesside Universities.

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Work to date
We convened the project reference group & held the first workshop to:
• Initiate the development of the theoretical framework to identify the mechanisms through which the activities are believed to have health effects (see Figure);
• Refine our definition of “environmental enhancement activities”;
• Develop search terms and inclusion criteria.
• Contacted more than 200 organisations in the UK to identify grey literature. 245 documents obtained which, after screening, yielded 12 quantitative and eight qualitative studies for inclusion in the review.
• These twenty studies have been data extracted and quality appraised.
• Developed the search strategy for use in the electronic databases.
• We have registered the title with the Cochrane Public Health Group and are currently negotiating the final protocol.

Proposed mechanisms of action
Various hypotheses have been proposed to explain the potential health and well-being impacts of involvement in these activities. These include formal, academic theories as well as lay, “everyday theories” understood by participants and organisers.

Academic theories include BIOPHILIA which suggest an evolutionary connection between humans and the natural world which causes individuals to seek out contact with nature and for them to experience negative health impacts when unable to do so (Wilson 1984). ATTENTION RESTORATION THEORY was developed by psychologists and posits that contact with nature can reduce levels of mental fatigue and stress (Kaplan & Kaplan 1989; Ulrich et al 1991).

The project reference group suggested a number of possible mechanisms of action which we found reflected the Foresight project’s 5 WAYS TO WELL BEING (Aked & Thompson 2008). We have used this in the draft model above, as an initial conceptual structure to frame the proposed mechanisms. This initial model is simple and linear, and we hope to elucidate possible interaction between elements through the remainder of the review.

Review aims
The review will investigate the impacts of being involved in environmental enhancement activities on health and well-being related outcomes for different groups of people.

The project will use theory-driven systematic review methods to understand the proposed mechanisms by which environmental enhancement is thought to affect health and well-being, and to assess the empirical evidence to support them. We will include evidence about activities across a range of settings and population groups in order to examine both whether these activities can have positive impacts, but also to understand how and why these occur, and in what contexts these effects can be optimised.

We will review and synthesise quantitative and qualitative research evidence and develop, where data allow, a logic model which describes the nature and potential interactions of impacts.

Review questions
• What are the health and well-being impacts (both positive and negative) of taking part in environmental enhancement/conservation activities for different groups of people?
• How do these activities achieve these impacts?
• Are there any particular impacts on different groups of people?
• What are the contextual factors contributing to these differing impacts?

Possible mechanisms of action

- Civic pride
- Giving back to the community
- Increased self-esteem
- Increased knowledge
- New skills acquired
- Increased physical activity
- Increased social interaction
- Increased community cohesion
- Improved quality of life
- Improved mood score
- Improved wellbeing
- Improved exposure to natural environments
- Improved restorative function
- Improved Activity levels
- Improved Mood score
- Improved quality of life
- Improved self-esteem

Five ways to well-being

1. Be active
2. Keep learning
3. Give
4. Connect
5. Take notice

Example possible health-related outcomes

- Changes in:
  - Physical Activity levels
  - Resting heart rate
  - BMI
  - Unintentional injury
  - SF 36 score
  - Mental health
  - Mood score
  - Self esteem
  - Wellbeing

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