

School for Public Health Research (SPHR)

Project Title	<i>What are the health benefits of taking part in environment/conservation activities for different groups of people?</i>
Project code	SPHR-PEN-PH1-ECA
Lead Researcher	Ruth Garside – Peninsula College of Medicine and Dentistry (PCMD); University of Exeter Medical School
SPHR Collaborators	Kerryn Husk, Rebecca Lovell, Chris Cooper - PCMD The following people from collaborating SPHR centres are part of an Expert Advisory Group: Mark Petticrew (LSHTM), Liddy Goyder, Sue Baxter (University of Sheffield; SchARR), Clare Bambra (Fuse; Durham University), Mima Cattan (Fuse; Northumbria University).
External Partners / Collaborators	In addition, representatives from the following organisations formed a project Reference Group: MIND, Natural England, Conservation Volunteers, Small Woods, DEFRA, N. Pennines AONB, Groundwork, and The Conservation Foundation.
Start Date	16 April 2012
End Date	15 April 2013
Outline	To conduct a theory-led systematic review and synthesis of the quantitative and qualitative research evidence in order to understand how and why involvement with outdoor activities, which also enhance the natural environment, impacts on people's health and well-being. As well as the nature and extent of these effects, we sought to understand <i>how</i> these activities have these effects, in what circumstances, and for whom, through the development of a conceptual framework which describes the nature and interactions of these impacts. SPHR poster presented: The health and well-being impact of participation in environmental enhancement/conservation activities: a systematic review of quantitative and qualitative evidence.
Findings	Twenty-three studies (reported in 32 papers) were included in the review, with evidence being primarily identified through grey literature searching which preceded the more traditional database searches. Across all outcomes, we found little quantitative evidence of positive or negative effects of participation in environmental enhancement and conservation activity. There was some limited evidence of positive effect in some studies, as well as some (also limited) evidence of negative effects. The quantitative evidence was generally poor, with high risk of selection and measurement biases. Studies were also often of small size, with short term follow up. The synthesis of qualitative data (which was of a better quality overall) revealed some complex mechanisms being discussed about the way in which activities might impact on health and well-being. We synthesised these mechanisms into a conceptual framework, which shows the ways in which participation may have an effect on mental and physical health and wellbeing outcomes. The final stage of the project sourced evidence for the conceptual framework is a key output of the project.



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Lay summary	<p>Contact with the environment is thought to have a range of impacts on our health and well-being, from better mental health amongst those living closer to green spaces to providing a place for healthy activities such as walking or cycling. Recognising these opportunities there has recently been a rise in projects which aim to use the environment as a means to improve individuals' health and well-being. Environmental enhancement or conservation activities are one way in which this is being achieved, and are those in which the aim is to benefit health through active participation in environmental improvements.</p> <p>We found 21 quantitative (based on numerical data) and qualitative (based on text from interviews) studies from the UK, Canada and Australia which had assessed whether taking part in environmental enhancement and conservation activities might improve health and well-being in adults.</p> <p>The quality of the available evidence was not sufficient to draw reliable conclusions, and the majority of the studies reported no effect on health and well-being outcomes. However there was limited evidence that participation had positive effects on individuals' self-reported health, quality of life and physical activity levels, but also some evidence reporting that participation led to increased mental fatigue and greater feelings of anxiety. The results of the studies need to be treated with caution because the research methods used were not very robust (i.e. they could not show definitively that participation caused any health change) and because the reporting of how the activities and the research were undertaken was inconsistent and lacking in crucial detail.</p> <p>The more detailed descriptions from the qualitative studies illustrate the experience of people taking part which may impact on health and well-being. Factors included: increased social contact (particularly for socially isolated individuals such as those experiencing mental ill health), opportunities for feeling a sense of achievement, experience of the natural world, and the provision of daily structure.</p> <p>Given the quality of the evidence, we are unable to draw any definite conclusions about the impacts of environmental enhancement activity. More reliable research is needed to understand exactly how and why these activities may benefit.</p>
Publications and outputs	<ol style="list-style-type: none">1. Review in process with Cochrane Public Health Group 2014. Updated searches and reviewer comments currently being incorporated.2. Full review submitted to BMC Public Health 2014 Lovell R, Husk K, Cooper C, Stahl-Timmins W, Garside R. Understanding how environmental enhancement and conservation activities may benefit health and wellbeing: a systematic review3. Review protocol registered with Cochrane Public Health Group 2013: Husk K, Lovell R, Cooper C, Garside R. Participation in environmental enhancement and conservation activities for health and well-being in adults (Protocol). <i>Cochrane Database of Systematic Reviews</i> 2013, Issue 2. Art. No.: CD010351. DOI: 10.1002/14651858.CD010351.4. Initial results presented at Environmental Health 2013: Garside, R., Husk, K., Lovell, R. and Cooper, C. (2013). 'What are the health and well-being impacts of participating in environmental enhancement activities? A systematic review of the quantitative and qualitative evidence.' <i>Environmental Health 2013</i>. Boston, MA. 3-6 March 20135. XVth International Symposium in Medical/Health Geography, East Lansing, Michigan, US. July 7-12, 2013 Lovell R, Husk K, Cooper C, Garside R. (2013). A theory led-systematic review of the health and wellbeing impacts of participating in environmental enhancement and conservation activities.



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	<p>6. Cochrane Colloquium Quebec, Canada 19-23 Sept 2013 Lovell, R. Husk, K., Cooper, C, and Garside, R. Using a theory driven mixed-method review to assess the benefits of complex environmental-health programmes. Cochrane Public Health Group review CD010351 (poster)</p> <p>7. Public Health Science, London, 19th November 2014 Abstract published in Lancet:</p> <p>Lovell R, Husk K, Cooper C, Stahl-Timmins W, Garside R. (2014). 'Environmental conservation activities for health: building on systematic review methods to consider a disparate, dispersed, and limited evidence base.' <i>The Lancet</i>, 384, S46</p>
Impact	<ol style="list-style-type: none">1. With input from our project reference group, we produced a 2 page summary about the report to be distributed to relevant groups in primary care, mental health teams, and those engaged in organising such activities.2. As well as existing outputs above, the systematic review will be published in the Cochrane Library;3. The full review, including targeted searches, has been submitted to BMC Public Health;4. Results presented at both: National Parks and Wildlife as Natural Health Service Providers, Snowdonia, 2014; and Healthy Landscapes, London Green Infrastructure Week, London, 2014; and Growing the evidence - Taunton, 2013.5. Conceptual model and review summary included in the EcoMinds report by Mind and Essex Sustainability Institute; and the Naturally Healthy Scoping Report by Devon Local Nature Partnership.
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Further information	Contact: Dr Ruth Garside R.Garside@exeter.ac.uk 01872 258148 Website: www.ecehh.org



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