

Executive Summary

Introduction

- This report reviews the research methods and approaches used to evaluate UK-based health interventions and programmes that are in, use, or seek to change the natural environment. It develops work established through the Outdoors and Health Network - OHN (www.outdoorshealthnetwork.co.uk)
- The review asks: *what measurement tools and research approaches are used in the evaluation of health interventions based in natural environments?*
- The results of this review are important for people and organisations conducting interventions and associated evaluations in the UK and may have international applicability.

Methods and search results

- A search strategy identified potentially relevant studies that were then tested against the following inclusion criteria:
 - *The intervention is UK based and has been evaluated*
 - *The evaluation was published between 2000 and 2010*
 - *The intervention has a stated health aim and/or wellbeing improvement or promotion*
 - *The intervention must be in, use, or seek to change/ improve the natural environment*
- Forty evaluations were found to meet the selection criteria. Interventions were categorised into three main types of intervention: multi-project – evaluation considers larger multi-project scheme (13); site-specific – evaluation considers one project (18); and research-led – evaluation established by researchers (9). Category of intervention, type of participant, intervention aims, natural environment setting and location were collected for all the interventions.

Health interventions and evaluations in natural environments

- Despite the complex relationship between individuals, natural environments and health being illustrated in many studies, there was limited use of methods and evaluation approaches adequate in design or application to address this complexity.
- Broad aims of interventions do not ‘lend themselves’ to current evaluation methods and approaches.
- Most evaluations were non-experimental in design.
- There was limited evidence of longitudinal approaches in data collection being used.
- Process evaluation documents and analyses the development and implementation of an intervention, highlighting what worked well and what did not. More process evaluations would increase the utility of the findings for the development and success of future interventions.

Measurement tools and research approaches

- A variety of quantitative and qualitative approaches were used. Some mixed methods were applied but the way in which the use of these approaches provided a truly mixed approach was questioned. If effectively used, mixed methods may overcome the methodological limitations of quantitative and qualitative approaches used alone. More rigorous approaches to quantitative evaluation techniques than qualitative approaches were found.
- In terms of quality and transparency, the content of evaluation reporting means that the ability to identify the application of robust techniques is often limited (particularly in qualitative studies).
- Validated health measures were used by two fifths of the evaluations. Validated physical activity measures were less commonly used.
- A lack of economic appraisal within evaluations and overall was identified.
- Key strengths and weaknesses of current methods and approaches are suggested. They illustrate key methodological problems and challenges evaluators of health and natural environment interventions face. These include: scale; generalisability; specific aims; demonstrating cause and effect; ensuring confidence in findings/evidence base.
- Intervention design should be appropriate for the delivery of the intended outcomes and the evaluation should examine whether the intervention is delivering these outcomes. Aims and objectives of both interventions and evaluations should be clearly stated and explained.
- It was recognised that all evaluations will have limitations (such as time, money, researcher expertise and capacity) but there were ways identified in which research approaches used in future evaluations could be improved.

Conclusions and Recommendations

The conclusions and recommendations highlight the ways that evaluation approaches and methods can be strengthened. The authors suggest these aspects are those that policy makers and funders should consider when commissioning or undertaking an evaluation:

- Clear and specific evaluation aims which match the overall objectives of the interventions.
- Use of robust and appropriate methods and approaches that, where possible, draw on evidence from previous evaluations to produce a strong evidence base.
- Evaluations which consider long-term impacts using a longitudinal approach to evaluation.
- Use of mixed-methods which are iterative in process, evaluation and analysis.
- Clear description of the way in which data are to be analysed so that the quality and transparency of data can be examined.
- Validity, representativeness and the generalisability of findings should be considered.
- Use of validated health and physical activity measures.
- Greater consideration given to the inclusion of economic evaluation methods and approaches.
- Training and development, provided by funders, to support those undertaking evaluations of interventions to learn from best practice and evidence, and develop evaluations as a result.

- Intention to widely disseminate findings and results so that the evidence base can be further developed.