



Collaboration for Environmental Evidence

THE IMPORTANCE OF NATURE FOR HEALTH: IS THERE A SPECIFIC BENEFIT OF CONTACT WITH GREEN SPACE?

Review Summary

Lead Reviewer: Diana Bowler

Postal Address: Centre for Evidence-Based Conservation
School of the Environment and Natural Resources
Bangor University
Bangor
LL57 2UW

E-mail Address: d.bowler@bangor.ac.uk
Telephone: +44(0) 1248 382953

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Cover Sheet

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Contact address	Centre for Evidence-Based Conservation, Bangor University, Bangor, Gwynedd, UK, LL57 2UW
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Summary

1. Background

There is increasing interest in the potential role of the natural environment in human health and well-being. Natural environments could impact on health through a number of pathways, either acting directly on health and therefore having a specific benefit, or acting indirectly, for instance, by promoting health-enhancing behaviour such as participation in physical activity. Despite the discussion on this topic, the evidence for there being a specific and direct benefit from contact with the natural environment has not been systematically reviewed.

2. Objectives

To address the question: how effective is direct accessing of natural environments in the promotion of health and well-being compared with other forms of 'exposure' to the natural environment or with accessing 'synthetic' environments?

3. Methods

We searched for literature in relevant databases, websites of specialist organisations, internet search engines, and references from bibliographies. Predefined inclusion criteria were applied to each article in order to identify the subset relevant for the review. For an article to be included in the review it must have compared a health or well-being outcome following activity (passive or otherwise) in a natural environment with activity (passive or otherwise) in a synthetic environment and/or viewing a natural environment. 'Natural environment' was used in a broad sense to include any environment with green space. The methodology of studies included in the review was critically appraised and the most commonly measured health/well-being outcomes were synthesized with meta-analysis.

4. Main results

Our broad search captured over 20,000 articles, however, after applying the inclusion criteria, only 28 studies were identified as relevant for the review. These studies mainly fell into two main pools: 1) studies comparing activity in the natural environment with an indoor environment or 2) studies comparing activity in the natural environment with an outdoor, built environment. Studies were diverse in terms of the types of participants and health/well-being outcomes measured. Most studies were short-term crossover trials and took measurements before and after exposure to the different environmental settings. Meta-analyses were conducted on several physiological parameters such as blood pressure, pulse and cortisol concentrations: these showed no evidence of an effect. There was also no evidence of a consistent effect on measures of attention or concentration. The most common outcome types measured were of mood/emotions, and based on these data, there was some evidence of a positive benefit on mood after a walk or run in a natural environment when compared to a different environment.

5. Conclusions

There is some evidence that activity in a natural environment compared to a different environment can have a positive impact on mental well-being. However, this is primarily drawn from short-term tests on self-reported feelings such as 'anger/aggression', 'sadness/depression' and 'fatigue/tiredness'. The validity of these

psychological scores as measures of mental well-being is not clear. There is little evidence of an impact on physiological outcomes but this is limited by the low number of studies available which measured similar outcomes. There was insufficient data to allow comparison of differences types of exposure to nature. Clearly, a 'natural environment' has many components. It is likely that further investigation on this topic and the design of more appropriate studies would be aided by refining the hypotheses on how specifically nature might impact on health and which specific attributes are the most important. The evidence is suggestive that nature may be used within the context of public health promotion interventions but we require a more comprehensive evidence-base in order to make appropriate and effective use of natural resources.