

A review of urban health, health inequalities and the role of urban forestry in Britain

Health inequalities among different sectors of society can be entrenched, particularly in some areas of Britain. The causes of urban health inequalities are associated primarily with:

- socio-economic status/income/poverty/deprivation levels
- unemployment, incapacity/worklessness
- skills and educational level/attainment
- housing conditions/tenure
- social mobility and life chances

The Marmot Review, set up by the government to strategically review health inequalities, identified a role for trees and green space in reducing health inequalities. This finding acknowledges the importance of green infrastructure for urban healthy living and encouraging physical activity for recreation and travel. The review suggests the need for investment in quality green space, particularly street trees in deprived areas, and advocates that the health system should promote contact with nature. In 2009 two members of Forest Research's Social and Economic Research Group worked in partnership with an academic from the University of Melbourne, Australia, to carry out a literature review of the role of urban forestry and its potential effect on urban health inequalities.



Background

The literature review explored urban health issues and health inequalities and identified the links between urban forestry and health in urban populations. It outlined current gaps in research and potential opportunities for a focus on urban forestry and health and well-being in urban areas.

The importance of green space, trees and woods for health is now referred to in a number of health strategies in England, Scotland and Wales. This is important for organisations such as the Forestry Commission (FC) that seek to promote the use and enjoyment of trees and woods for health. The FC's forestry strategy for each country – England, Scotland and Wales – emphasises the important role woods can play in improving the health and well-being of individuals and communities.

Objectives

The review aimed to:

- identify urban health issues and health inequalities
- examine the role of urban forestry
- explore the links between urban forestry and health inequalities
- identify gaps in research that will provide clearer evidence of the links between urban forestry and health
- identify potential opportunities for the Forestry Commission to focus on health and well-being in urban areas

'Green space and green infrastructure improve mental and physical health and have been shown to reduce health inequalities. Well designed and maintained green spaces can encourage social interaction, exercise, play and contact with nature.'

(Marmot Review: *Fair society, healthy lives*, 2010).

Methods

The methods used in this scoping review included carrying out a literature review of peer-reviewed research exploring the links between health and nature, and using documentary analysis methods to identify relevant government strategies and policy documents. We focused primarily on the salutogenic (e.g. positive) aspects of how woods can contribute to people's health, rather than focus on environmental health issues such as air pollution. Search terms used included health inequality terms and environmental terms:

- Health inequality terms: health, mental health, mortality, life expectancy, physical activity, obesity, well-being, health inequality, socio-economic, women, ethnicity, poverty, deprivation.
- Environmental terms: green space, forests, woods, woodlands, urban forestry, trees, public open space, parks.

Findings

Empirical research (from 93 peer-reviewed papers) reviewed in this report identified the key health benefits of urban forestry as:

- long- and short-term physical benefits associated with increased life expectancy and reduced obesity, heart rate and blood pressure
- cognitive benefits associated with restoration, mood and self esteem
- physical activity benefits associated with the use of green space
- self-reported benefits in terms of health and life satisfaction
- community cohesion benefits through social contact fostered by urban forestry

Our review identified four major mechanisms for explaining the relationship between green space and health:

- physical action: filtering pollutants, reducing heat or noise etc.
- physical activity: encouraging physical exercise

- social support: providing a space that promotes social interaction and inclusion
- restoration: reducing stress and restoring cognitive function

Key messages from the review suggest the following.

- Evidence that green space promotes health by encouraging exercise is not consistent. This is potentially due to a range of factors such as the quality of green spaces, concerns by some groups about personal safety, and confidence in accessing such spaces.
- There is stronger and more-consistent evidence for the restorative benefits of green space and the facilitation of social contact through green space use to explain the relationship between green space and health.
- There is little understanding of the components of urban forests that promote health.
- There is some evidence that proximity, size and amount of green space influence physical and mental health outcomes.
- Urban forests immediately around homes and workplaces are important for health outcomes.

Recommendations

In reviewing the evidence from research undertaken to date we suggest that an urban forestry approach to targeting urban health inequalities could focus on the:

- restorative benefits of urban forests, particularly those in immediate residential surroundings
- facilitation of social contact through urban forest use

Two groups that could especially benefit are children and poor communities.

Potential opportunities for the FC could include working in partnership with organisations that have specific experience of and links to the two target groups. There could be a focus on the quality of spaces and their accessibility, as these are complex issues in urban deprived areas. Ensuring that urban forests are included as part of urban regeneration is important, as well as the remediation of brownfield and under-used land to create woodlands in urban areas. Targeted grants and targeting specific groups and areas can provide a range of opportunities for encouraging people to use urban forests for health. Community activities and outreach are important for engaging hard-to-reach groups as they need support in accessing and benefiting from trees and woods.

Partners

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Reports and publications

Marmot Review. 2010. *Fair society, healthy lives: a strategic review of health inequalities in England*. Marmot Review, London.

O'Brien, L., Williams, K. and Stewart, A. 2010. *Urban health and health inequalities and the role of urban forestry in Britain: a review*. Report to the Forestry Commission.

Available at: www.forestresearch.gov.uk/fr/INFD-83EHVX