

“Strengthening heart and mind”: using woodlands to improve mental and physical well-being

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In the United Kingdom, a number of efforts to improve people's health and well-being focus on the value of trees and woodlands.

One of the British Government's major concerns is the health and well-being of the population: “The government is absolutely committed to achieving better health for everyone” (Department of Health, 2004a). Wanless (2004) defined public health in broad terms as “the science and art of preventing disease, prolonging life and promoting health through the organised efforts and informed choices of society, organisations, public and private, communities and individuals”.

This article highlights some of the ways in which woodlands and green spaces can contribute to improving people's health and well-being and provides examples of some current projects. While the focus is on Great Britain and the examples provided are primarily from England, similar work is being undertaken in many other European countries.

PROMOTING PHYSICAL AND MENTAL HEALTH

The recent white paper *Choosing health* published in 2004 for England sets out how the government will provide opportunities, information and support to enable people to choose health and adopt healthier lifestyles (Department of Health, 2004a). Key issues of current concern regarding the health of the population cover coronary heart disease, diabetes, physical inactivity, cancer and obesity. There is a strong focus on preventing ill health rather than only treating illness. An important element of the white paper is to tackle health inequalities because health tends to be poorer at the lower end of the social scale. Mental as well as physical health problems are

known to be more common in areas of social deprivation.

According to the World Health Organization (WHO) stress and depression are increasing. WHO has estimated that by 2020 depression and depression-related illnesses will be the greatest source of ill health. In England the cost of mental health problems has been estimated at £32 billion (46.8 billion euros) with more than a third of this attributed to loss of employment and productivity (Mental Health Foundation, 2006). Approximately 9.2 percent of adults in Great Britain experience mixed anxiety and depression (British Heart Foundation, 2004).

Emotional well-being is a strong predictor of physical good health, as shown by research in a range of countries (Goodwin, 2000; Seymour, 2003). The British Heart Foundation suggests that physical activity can improve mood and may protect against the development of mild forms of depression. Young people's self esteem in particular is said to improve with regular physical activity. Berger (1996) identified four psychological benefits linked to physical activity:

- higher quality of life,
- enhanced mood,
- stress reduction,
- a more positive self-image.

WHO has rated physical inactivity as one of the major causes of death in the developed world. The estimated cost of physical inactivity in England is thought to be £8.2 billion (12 billion euros) annually (Department of Health, 2004a). This figure includes costs to the National Health Service as well as costs related to people's absence from work. The number

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More information about the projects described in this article is available on the Web site of Forest Research: www.forestresearch.gov.uk/fr/INFD-5Z5ALT

of clinically defined obese people has tripled between 1980 and 2002 and there are concerns that life expectancy may fall as a result (Pretty *et al.*, 2005). According to the Department of Health, only 37 percent of men and 24 percent of women are active enough to gain any health benefit (Department of Health, 2005). The Chief Medical Officer for England (Department of Health, 2004b) recommends that adults should undertake at least 30 minutes of moderate intensity exercise five days a week, and young people one hour a day.

The British Government has invoked targets, activities, interventions and funding to try to bring about improvements in the mental and physical well-being of the British population, as WHO has done for the global population. These are being developed through a consultative approach rather than the traditional top-down approach. As the white paper noted, “the first and critical stage was to listen to the views of the people in England, to get in touch with their real concerns and to ask what they wanted and how they could be helped to realise their aims” (Department of Health, 2004a). The government recognizes that citizens need help and advice from a range of organizations if they are to choose and adopt healthier lifestyles.

CONTRIBUTION OF WOODLANDS AND NATURAL SPACES TO HEALTH AND WELL-BEING

Many studies and literature reviews from countries such as Australia, Japan, the Netherlands, Norway, Sweden, the United Kingdom and the United States have outlined the contributions of trees, woodlands and green spaces to people’s overall health and well-being (Ulrich *et al.*, 1991; Kaplan, 1995; Henwood, 2001; de Vries *et al.*, 2003; Tabbush and O’Brien, 2003; O’Brien, 2005; Pretty *et al.*, 2005). The benefits have been categorized in a range of ways but primarily include physical, psychological and social well-being. Such studies

have shown that benefits can be gained not only by being active in nature (e.g. walking or cycling), but also by viewing nature, for example from a window, or being near it in the course of everyday activities.

To enhance these benefits, in 2005 the Forestry Commission (the government department responsible for forestry in Great Britain) signed a health concordat with a range of countryside agencies in England. It outlined specific activities that these organizations will undertake to promote the use of the outdoors for health purposes. The Forestry Commission has also launched, early in 2005, an “Active woods – naturally good for you” campaign which aims to establish an association in people’s minds between health and well-being and woodlands, to promote physical activity among forest users and to help foster healthier lifestyles.

Attention restoration theory (Kaplan, 1995) suggests that people recover from directed attention (focusing on specific tasks such as work) through involuntary attention that requires no effort. Kaplan (1995) notes that natural environments are particularly helpful in

restoring attention, as they are gently stimulating to the senses and offer a range of interest such as sights, smells and sounds. Kaplan argues that “soft fascination – characteristic of certain natural settings – has a special advantage in terms of providing an opportunity for reflection, which can further enhance the benefits of recovering from directed attention fatigue” and that health and well-being can be promoted by providing opportunities for people to gain access easily and quickly to green spaces such as woodlands that support restoration. Hartig, Mang and Evans (1991) suggest that this may be particularly important in urban areas; thus it would be especially relevant in Great Britain, where approximately 80 percent of the population is now urban, a proportion that is above the global average. The United Kingdom ranks fifth among European Union member countries in urban population

Participants in COST Action E39 visit a “healing garden” in Alnarp, Sweden – helping researchers interested in forestry, health, environment and the social sciences learn from those in other participating countries



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The Route to Health Project at Cannock Chase Forest created a one-mile community arts trail of artworks inspired by mental and physical health topics

CANNOCK CHASE DISTRICT COUNCIL, L. SHIPHARD

rate (United Nations, 2002). Even with only 11.6 percent woodland cover (a proportion lower than in 16 of 20 major European countries) (Forestry Commission, 2003), the woodlands and trees are culturally important to the population and are extensively used.

Social well-being and the generation of social capital (i.e. the social networks, norms and trust that facilitate cooperation among people for mutual benefit) are also important (Putnam, 2000). Many of the interventions to encourage people to relax, eliminate stress and be active in woodlands and green spaces allow people the opportunity to meet others and extend their social networks. This social factor often motivates people to keep up their involvement in outdoor activities in the long term.

CURRENT EXAMPLES OF HEALTH AND WELL-BEING PROJECTS

COST Action E39

The European Commission-funded COST (Co-operation in the field of Scientific and Technical Research) Action programme is an intergovernmental framework that allows for coordination at the European level of nationally funded research. A range of themes is funded. Within the forestry theme, COST

Action E39 focuses on forestry and human health and well-being. It started in 2004 and will run for four years. Its aim is to increase the body of evidence on the contribution of forests, trees and natural spaces to health and well-being. Nineteen countries are participating. Five working groups focus on:

- physical and mental health and well-being;
- forest products, forest environment and health;
- therapeutic aspects including rehabilitation and outdoor education;
- evaluation in terms of best practice and economic contribution;
- physical activity, well-being and prevention of illness.

One of the key aims of COST Action E39 is for participating countries to learn from each other about current European projects, activities and research. A network of researchers and research institutions interested in forestry, health, environment and the social sciences is being developed.

Route to Health Project

The Route to Health Project involves a partnership between the Forestry Commission, the local Primary Care Trust (which focuses on improving people's

health) and the District Council in Staffordshire, England. The project set out to develop a one-mile community arts trail in Cannock Chase Forest managed by the Forestry Commission. A range of organizations, individuals and local artists worked together to create artworks inspired by mental and physical health topics of importance. The artworks are then placed along the arts trail and are enjoyed by the thousands of people who walk the trail every year. The aim of the project is to help tackle health inequalities. Artworks have been created by young people with emotional and behavioural difficulties (many from disadvantaged areas where health and access to health care services is often poorer), a day care centre that caters for adults with physical and mental health difficulties, young law offenders and patients from the local hospital. Health messages have included, for example, bicycling to combat stress and anger, and being active as a family unit. The artworks are regularly changed along the trail to maintain community engagement and address more health issues. All of the participants, their families, friends and the public are invited to an annual event to celebrate the project's achievements. The event includes health checks, advice on health, relaxation classes and children's activities.

An evaluation of the project has shown that visitor numbers along the one-mile trail have substantially increased. All of the partner organizations are using the work to deliver their own objectives. A more diverse range of visitors is using the trail, and the enthusiasm of the community to get involved has been shown by people's willingness to participate in the long term.

Chopwell Wood Health Project

Chopwell Wood is a 360 ha mixed woodland managed by the Forestry Commission and situated near Gateshead in northeastern England. The health project was designed to use the public forest

estate to contribute to the government's health agenda. The aim of the project is to improve health within local communities surrounding the wood. The project is run by a steering group that includes health promotion specialists from Gateshead Primary Care Trust and Derwentside Primary Care Trust along with the Forestry Commission, the Friends of Chopwell Wood (a voluntary organization) and Forest Research. The project has two distinct elements:

- **A general practitioner-based referral scheme.** Doctors can recommend that their patients increase their physical activity levels if they are overweight or mildly depressed, and patients can then be referred to a leisure centre or to Chopwell Wood. In the wood they can choose among activities such as walking, tai chi, cycling and conservation work. Referred patients agree to undertake a 13-week programme of activities.
- **School visits in support of the Healthy Schools Standard.** The Healthy Schools Standard is a government initiative to promote pupils' health and emotional well-being. Four schools have each made four visits to the wood. Two visits focused on physical activities such as orienteering. The third visit focused on nutrition and healthy eating, and the fourth visit explored complementary

therapy such as massage and stress-reduction techniques.

The project thus involves people from a wide range of socio-economic groups and from childhood to old age.

A qualitative and quantitative evaluation of the project, managed by Forest Research, showed that those who participated in the project increased their overall activity rates. When general practitioners refer patients to leisure centres or gyms, completion rates are often low. In contrast, 91 percent of the people referred to Chopwell Wood finished the 13-week programme of activities. The reason for the high completion rate was explained in interviews and focus groups, during which participants described the benefits of being out in the beautiful woodland surroundings, relaxing and being physically active. The title of this article comes from a survey undertaken in the wood: when asked to name the benefits of using Chopwell Wood, one respondent replied that it "strengthens heart and mind".

HEALTH WOODLAND IMPROVEMENT GRANT

The Forestry Commission administers a Woodland Improvement Grant which funds capital investment in woodlands to increase public benefits. Since 2003, part of the grant scheme has been used to deliver more public access and con-

tribute to the health and well-being of people in the West Midlands region of England. This area was chosen to pilot the programme because of the high rates of obesity in its population. Woodland owners or partnerships of organizations could bid for the grant.

Seven projects received funding in the first year. The money was used to improve infrastructure, install benches, create new trails for users of all abilities, set up walking schemes and provide information and interpretation in a number of different woodlands. One project produced 10 000 copies of a calendar highlighting woodland trails in the local area, their length and the number of calories that would be burned in walking them. The calendars were distributed to doctors' surgeries, libraries and local mental health teams.

An evaluation of the project indicated that walk leaders played an important part in encouraging people to get involved in healthy walks and to stay active. People started walking for a variety of reasons, including health concerns, encouragement to get involved and the desire to meet new people.

Wye Wood: the Wider Wood Project

The Wider Wood Project focuses on improving the health and well-being of people in rural areas of Herefordshire and Shropshire in England. A health



Creating artwork for the Route to Health Project is therapeutic for people whether they have health problems or not



In the Chopwell Wood Health project, patients referred by their doctors participate in outdoor physical activities such as cycling and tai chi

development worker has been employed to work with doctors and other health professionals in the area to develop a range of options and opportunities to get people active. This new project will include production of a young people's activity pack to motivate them to undertake exercise. Health walks will be organized in specific woodlands and targeted to those who are inactive and socially isolated. Family arts activities will be organized to familiarize families with the accessibility of woodlands and the fun projects in which they can participate in their area. The Forestry Commission is funding the project as a national rural demonstration.

CONCLUSIONS

There is a high level of interest in Great Britain in using woodlands and green spaces to improve people's mental and physical well-being in both urban and rural areas. As the population in western

societies undertakes less physical activity, becomes more obese and suffers from increasing levels of stress, changes in lifestyle are needed. The few projects outlined here provide a flavour of the wide range of activities currently taking place. Monitoring and evaluating how these projects work, to whom they are targeted and their impact on different groups of people is important.

A key issue is what can motivate people to become more active. The projects outlined in this article, and past research, have shown a relationship between access to nature and improvements in people's health and well-being. Less work has been done on the effects and impacts of different types of nature such as woodlands, parks or other green spaces. However, previous research highlights a number of particular advantages of woodlands:

- Woodlands and individual trees can hold specific cultural meanings for people; they are seen as representing nature, particularly in the urban environment.
- The age of veteran trees provides a link between the past, present and future.
- Woodlands offer a range of options for various types of activity.

- Many woodlands can host large numbers of people without seeming crowded.
- An attractive woodland may act as a motivating factor for taking up and continuing physical exercise.
- Woodlands can screen out noise, for example from nearby traffic.

The following are some key considerations for future work to further the use of woodlands and natural spaces as an option in enabling and encouraging people to improve their mental and physical well-being.

Health improvement needs to be made fun. A social and cultural approach to project development is needed to give people skills and confidence as well as a positive attitude to maintaining a healthy, active lifestyle. People require opportunities and information so that they have a range of options from which to make an informed choice. Fun is a big motivator, and enjoyment experienced through contact with woodlands and green spaces can help to change behaviour in the long term.

Reaching children and young people is critical. Research has shown that children are more likely to be active if their parents are active. They are also more likely to use woodlands and green spaces

as adults if they used these spaces as children. Yet opportunities for children to connect with nature are increasingly being lost as children spend more time indoors because of parents' concerns about their safety outdoors and increased computer and television use.

Finally, developing partnerships to include environmental and health sector organizations and local authorities is important and is often key to the success of projects. The activities outlined above have all involved partnerships between a range of organizations. The projects were designed to ensure that each organization could meet some of its own objectives. The work has often been developed through key individuals with a specific interest and the enthusiasm and willingness to get projects off the ground. From the evaluations of the projects outlined above, it is clear that health professionals who focus on preventing as well as treating ill health can readily engage with forestry organizations such as the Forestry Commission. Information about improving health and well-being can be adapted to show people how they can make a difference to their own mental and physical health in their everyday lives. ♦



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