

## Health and nature—new challenges for health promotion

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The time is right for health promoters to take a close look at the evidence of the impacts nature has on the health of individuals and communities. Why? Because we may actually be able to achieve more appropriate and sustainable conditions that support health than if we only address interventions that focus on a particular health issue, e.g. poor diet, sedentary behaviour or drug misuse.

The environment (and nature) have always featured as key components in health promotion models and concepts. Lalonde (Lalonde, 1974), Hancock and Perkins (Perkins, 1985), Kickbusch (Kickbusch, 1989) and many others incorporated ecological perspectives into their constructs of health. These models have been used to inform the development of health promotion practices and have been largely influential in the shaping of the extensive theoretical designs and implementation strategies of the settings movement (e.g. healthy cities, health promoting schools, health promoting worksites, etc.).

Yet, even with these holistic frameworks and maps, much of the emphasis of health promotion efforts have been driven by health jurisdictions, who see health promotion as a way of addressing specific mortality and morbidity outcomes. This is not surprising and there has been a well documented history of how the health sector has embraced health promotion principles and strategies to make major inroads in many countries and regions into areas such as safety, heart disease and alcohol (IUHPE, 1999).

Environmental factors, such as well-lit and safe walking places, have made substantial contributions to reducing injury and facilitating physical activity. There is considerable data on how the physical environment is a major contributor to individual and community health (IUHPE, 1999).

But what about the evidence for the effects of nature on health? Wilson has put forward a very strong argument about the health benefits

of nature over two decades (Wilson, 1984; Wilson, 2001). His 'biophilia hypothesis' i.e. 'the innately emotional affiliation of human beings to other living organisms' spawned research which suggested that our relationships with nature are a fundamental component of building and sustaining good health (Wilson, 1984; Heerwagen and Orians, 1993; Suzuki, 1997; Frumkin, 2001).

The evidence about the influence of nature on the health and well-being of individuals and groups has emerged from a number of traditional disciplines, e.g. psychology and biology, and recent fields of research such as recreation and leisure, and wilderness therapy.

The evidence tells us that the movement of humans from rural to urban environments across the globe within the last 200 years has facilitated their disengagement from the natural environment (Axelrod and Suedfeld, 1995). We do not experience the range of natural environmental stimuli of our ancestors—a built environment of concrete, cars, noise, high-rise housing and pollution has replaced it. The protective factors of nature for health improvement and sustainability have been reduced by our diminishing regular contact with nature.

It doesn't require much effort to address this problem. A considerable body of research shows that viewing natural scenes has a positive health impact. For example, Ulrich (Ulrich, 1984), in a landmark study, demonstrated that hospital patients who viewed natural scenes, e.g. trees and animals from their wards, recovered faster, spent less time in hospital, required fewer painkillers and had fewer post-operative complications than those patients whose ward views consisted of other buildings and which were devoid of any appearance of plants and animals. In prison, having a cell window with views of plants and animals, e.g. birds, lowered the number of sick calls of prisoners (Moore, 1981). A number of

studies have demonstrated that office workers experienced lower job stress, higher job satisfaction, and fewer illnesses if they had views of nature than if they did not (Kaplan and Kaplan, 1989; Lewis, 1996; Leather *et al.*, 1998).

Placing trees next to freeways and roads, and having roads pass through and by green areas, reduces driver stress as measured by blood pressure, heart rate and sympathetic nervous system changes (Parsons *et al.*, 1998). In addition to physical health improvements, there is considerable evidence to suggest that psychological health is enhanced when a person views flora and fauna. Rohde and Kendle (Rohde and Kendle, 1994) conducted a comprehensive literature review into psychological reactions to nature. They concluded that viewing nature reduces anger and anxiety, sustains attention and interest, and enhances feelings of pleasure.

The above benefits occur by *viewing* nature. Being *in* nature also impacts upon health. Many studies have shown significant health gains for those in contact with nature. Some of these relate to assisting new immigrants to a country to cope with the transition of migration. Wong (Wong, 1997) reported benefits such as increased empowerment, feelings of integration, and willingness to participate. Exposure to nature was shown to reduce mental fatigue, irritability and accidents, and improve problem solving ability and concentration in people from urban areas who are located in a natural environment for a few days (Herzog *et al.*, 1997).

Gardening is an international activity. For many it is propagating and growing one's own food supply and/or providing food for others. Millions of people who live in urban environments cultivate gardens of varying sizes. In many cities community gardens exist. Lewis (Lewis, 1996) and Furnass (Furnass, 1996) provide evidence to suggest that gardening reduces stress, encourages nurturing characteristics, builds social networks and enhances social capital. Even indoor plants have a positive effect. They have been shown to improve office air quality, increase productivity and facilitate relationships between workers (Randall *et al.*, 1992; Larsen *et al.*, 1998).

Animals have contributed to our health for thousands of years. In addition to providing a food source, they have been shown to contribute to lowering blood pressure, coping with stress and reducing minor health problems (Maller *et al.*, 2002). Companion animals are now an important part of enhancing recovery after

operations, particularly amongst elderly patients. A major study by Anderson *et al.* (Anderson *et al.*, 1992) demonstrated that pet owners had significantly lower blood pressure, cholesterol and triglyceride levels than non-owners. We have a strong desire to engage with animals, as evidenced by the fact that more people visited zoos and aquariums in the USA and Canada than attended sporting events in the early 1990s (Wilson, 1993). Some emerging research indicates that many people engage in feeding wild-life, e.g. birds, because they derive considerable personal satisfaction and comfort from the interaction (Howard and Jones, 2000).

What does this considerable body of evidence mean for health promotion? On the one hand it has confirmed the work of the early creators of health promotion models and frameworks. However, more importantly, it now emphasizes that we need to be even more vigilant in ensuring interactions with nature are uppermost in our health promotion policy development and interventions. As groups of professionals, we may need to be more proactive in making sure abundant open areas, where citizens can easily experience contact with plants and animals, service the communities in which we live. These can range from small parks in inner city areas to green belts between suburbs. We also need to be more proactive as a professional group in interacting with those who are responsible for the forests, plains and urbanized areas of our country or region. It is important that the considerable health benefits of nature are made clear to governments, farmers, developers and the general community.

New fields of study are emerging which draw on the benefits of nature to enhance or restore health. Ecopsychology or nature-guided therapy, wilderness experiences, horticultural therapy and animal assisted therapy all have a growing body of research data which points to the many health benefits of engaging with nature (Maller *et al.*, 2002). Some of these approaches appear to be just as effective in achieving health gains as traditional drug-oriented treatment regimens.

Sadly, most of this has been known for centuries. Our indigenous peoples and many ancient societies knew how closely humans were connected to and linked with nature. They also knew about the consequences of poor care and lack of respect for our natural environment and its animals and plants (Martin, 1996; Burns, 1998).

David Suzuki and David Attenborough are just two of the high profile international advocates who seek to promote respect of nature and all its components. In health promotion, we need to be more familiar with the evidence and, in many cases, more proactive in making sure our natural environments are protected. The health benefits are considerable. Physical, mental and spiritual health are all enriched when we engage with nature. It is a challenge for us to make sure it happens.

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