A research round-up on mental wellness

01/ Complex, biodiverse landscapes can offer visual connections with nature that support attention restoration for workers and are more sustainable workplaces.

IMAGE/ Kathleen Wolf

02/ Green stormwater infrastructure can be designed to achieve co-benefits of water management in streetscapes and to provide restorative experiences.

IMAGE/ Kathleen Wolf
Health is not only the absence of disease or infirmity, but is a state of physical, mental, and social well-being. While healthy lifestyle choices and access to quality healthcare are important for good health, the public health community has turned more attention to environmental quality and the influences of one’s surroundings.1

There is growing recognition of the benefits of having quality landscapes that are close to every person’s home and are safe and secure places to enjoy outdoor time.2 Nearly 40 years of research on the connections between health and nearby nature experiences is summarized on a website sponsored by the U.S. Forest Service, Green Cities, Good Health (www.greenhealth.washington.edu).

As director for the website project, I’ve enjoyed the opportunity to share the evidence generated by an international community of scientists, including my own research about the human dimensions of urban forestry and urban greening. An early set of my studies explored the connections between business-district tree canopy and shopper response—mostly positive! I also did studies on the relationship between trees and transportation safety in the U.S. As a collaborating social scientist with the U.S. Forest Service, Pacific Northwest Research Station, I have been doing studies about urban natural resources stewardship. In my latest research I’ve been working with economists to understand the value implications of nearby nature benefits in cities.3

In my work I’ve noted that an emerging health concern in many nations is mental health and function. The International Mental Health Research Organization finds that one in five people is afflicted by a mental health disorder, and that mental illness is the number one...
cause of adult disability across all nations. It is estimated that by the year 2020 mental health disorders will rise to 15 percent of the global burden of disease, and depression will constitute one of the largest health problems worldwide.4

Mental health and wellness is the result of personal and life conditions, and is also highly dependent on the natural and built environments that surround a person. Providing opportunities for respite and restoration, well-designed and maintained urban greenspaces have the potential to improve mental wellness and to be places of therapeutic healing.

The following are some highlights from scientific studies. The research has been done in metro nature—the term I use to describe the full range of urban nature conditions, such as parks, gardens, streetscapes, forest reserves, and healing gardens.

Improving General Mood and Attitude
Screening national health data in the U.K., a recent study found that, on average, individuals have both lower mental distress and higher well-being when living in urban areas that have more greenspace.5 Other investigators, using portable EEG (electroencephalography) recordings, have found evidence of lower frustration and increased brain activity that resembles meditation when moving in greenspace, versus being in retail and commercial areas having no trees.6

Many studies have focused on the connection between greenspace and physical activity, in response to concerns about obesity.7 Better mental health is another reward. A study compared meditative and athletic walking, in both forest and indoor settings.8 Meditative walking generated more positive psychological effects than athletic walking did in both environments.

The study found that meditative walking in the forest was the most effective at increasing happiness. Happiness, or the presence of a positive emotional mindset, broadens how a person thinks about and acts in the daily flow of life’s efforts, creating positive intellectual and psychological resources.

Studies examined the effects of exposure to nature on positive affect and ability to reflect on a life problem.9 Participants spent 15 minutes walking in a natural setting, a built setting, or watching videos of natural and built settings. Exposure to nature was found to increase: connectedness to nature, ability to direct attention, positive emotions, and ability to reflect on a life problem. The effects were stronger for actual nature than for virtual nature.

Improved Work and Creativity
Tasks that require a lot of concentration, like those at work or school, can lead to cognitive fatigue. When focused, a person must suppress mental distractions and impulses, but this directed attention can become exhausting over time. With greater fatigue we are unable to work as well, become irritable, and may feel a general tiredness. Short breaks in nature help to restore the mind, perhaps contributing to improved work performance and satisfaction.10 Attention Restoration Theory (ART)11 describes how nature provides restorative experiences, particularly greenspaces that are rich in qualities that allow directed attention to recover. Studies continue to support the notion of nature and mental performance.12

In a study of creative professionals, the responses during focused interviews suggested that nature experiences may enhance creativity by: evoking new ways of thinking, promoting curiosity, and encouraging more flexible thinking.13 A recharge of directed attention may support creativity, as the restored mind is better at analyzing and developing ideas. Those interviewed noted that nature was particularly helpful in two phases of the creative process, during preparation and incubation.

Workplace managers are increasingly providing opportunities for employee physical activity, to help them achieve better health and reduced healthcare costs. There may be important synergies between the psychological benefits of outdoor physical activity and the restorative effects of contact with natural environments.

Nature-Based Therapy
More and more children in developed nations are being diagnosed with attention-deficit/hyperactivity disorders (ADHD). In one study, children who were active in green outdoor spaces showed reduced ADHD symptoms more than kids doing either built outdoor activities or indoor activities.14 Another study found that children with ADHD concentrated better after a walk in the park than after a downtown walk or a neighbourhood walk.15

Other mental diseases afflict adults. A study of one community found that residents with only 10 percent green space within about half a mile had a 25 percent greater risk of depression and a 30 percent greater risk of anxiety disorders compared to those having the highest degree of green space near the home.16 Providing a natural setting for mental illness treatment may also have an effect. Patients with moderate to severe depression were assigned to cognitive-behavioural therapy in either a hospital setting or a forest setting (arboretum). Overall depressive symptoms were reduced most significantly in the forest group, and the odds of complete remission were relatively high—20 to 30 percent more likely than typically observed from medication alone.17

Nature settings may also be remedy for the elderly. Reduced depression in the elderly has been reported after walking in gardens.18 Dementia patients who were frequent users of a wander garden required fewer scheduled medications; they also experienced fewer falls, which is important because injuries from falls are a serious health risk for older people.19

These and other studies suggest that with more focused research, carefully designed gardens and outdoor spaces may supplement, or even be used in lieu of, medical therapy or prescription medicine. Some doctors and treatment centres are exploring the cost effectiveness of nature-based healing environments and may find that being in well-designed outdoor spaces is a way to reduce the high costs of care for mental health.20

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REFERENCES


04/ Physical activity in the outdoors can help lower feelings of distress and help reduce depression.

IMAGE/ Guy Kramer