crosscurrents
The Journal of Addiction and Mental Health
AUTUMN 2012
VOL 16 NO 1

The Greening of Mental Health

Vitamin Green How viewing, being and "doing" in nature affects our health and well-being

A growing concern Horticulture therapy offers potent opportunities for healing and growth

Not just another shade of hospital green Institutions around the globe find that greening buildings, grounds and activities makes for better mental health

camh
Centre for Addiction and Mental Health
Centre de toxicomanie et de santé mentale

ADHD + nature = ↓ symptoms for children | The 11th International People Plant Symposium

contents

AUTUMN 2012
VOL. 16 NO. 1

Focus:

The Greening of Mental Health

In Every Issue

The Door of the Door (2011), Eduardo Hatch, acrylic and ink on canvas, 16" x 20"

Eduardo Hatch displays his paintings through Workman Arts in Toronto (www.workmanarts.com). His images reflect real as well as imaginary life experiences. Despite not having a formal art education, his work has been mainly influenced by Picasso, Kandinsky, Chagall, Botero and others. He often abandons the figure altogether and lets flow the pure spontaneous forces of colour, brightness, form and movement.

camh
Centre for Addiction and Mental Health
Centre de toxicomanie et de santé mentale

Editor: Jacquelyn Waller-Vintar
Executive Editor: Kwame McKenzie
Proofreader: Diana Ballon
Creative Services Co-ordinator: Nancy Leung
Layout: Lawrie Korec
Print Production Co-ordinator: Christine Harris

Editorial: 416 535-8501, ext. 4908
Fax: 416 595-6892
Advertising: 416 595-6714
Subscriptions: 1 800 661-1111 or 416 595-6059 in Toronto

Issued four times a year.

Annual subscriptions are $16.00 in Ontario, $26.70 in Canada and $36.95 in the U.S. and elsewhere internationally (includes shipping and handling and taxes).

Published by CAMH Education
Centre for Addiction and Mental Health
A PAHO/WHO Collaborating Centre
Affiliated with the University of Toronto
Autumn 2012
Vol. 16 No. 1
ISSN: 1481-3122

www.camhcrosscurrents.net

4809

note from the editor

This issue's theme—the greening of mental health—came from executive editor Kwame McKenzie. Upon learning this issue would be his last, I asked him if he'd like to provide the theme; you can read his thoughts below. From there, I consulted with the editorial advisory board, and netted some fantastic leads that resulted in stories such as Vitamin Green, a review of the literature on the effects of three types of interactions with nature on mental health, A Growing Concern, a look at horticulture therapy from here to Hawaii, and Ohen:ton Karih-watehkwen, a collection of stories about the spiritual connection Aboriginal people have with nature. I've long had an interest in non-pharma strategies for coping with ADHD in children, so this theme was a great opportunity to put writer Kathryn Dorrell on the trail of the director of the Landscape and Human Health Laboratory at the University of Illinois, and Richard Louv, author of *Last Child in the Woods*, a book about saving children from "nature-deficit disorder." I hope you find this issue interesting and useful for your clients, and for yourself as well. Everyone can use some greening.

On page 25 and 26 you'll find the 2012–13 Readership Survey. Please take the time to fill it in, or visit https://www.surveymonkey.com/s/crosscurrents and complete it online. We really want to know what you think about *CrossCurrents* and how it can serve you best.

And finally, a heartfelt thank you to Kwame for his input and guidance over the past three years. We will miss you.

Check out CrossCurrents online
www.camhcrosscurrents.net

Follow us on Twitter
@CrossCurrentsCA

Help shape *CrossCurrents*!

https://www.surveymonkey.com/s/crosscurrents

a view from CAMH

Recently I was asked by the British Academy of Humanities and Social Sciences to write a paper. The task was to offer one piece of advice for improving mental health to the new public health bodies that are being set up in the U.K. The British Academy is an august body of scholars that has been in existence for 110 years, and people listen to what they say. I consulted widely before starting my work. Whether I was speaking with public health clinicians, policy makers or social psychiatrists, one issue kept on coming up: the importance of green space. The more I researched, the more high quality evidence I found that seems to demonstrate that contact with nature has a plethora of beneficial effects on us, as you will see as you read this issue. Though I was born and brought up in a city, I have always felt attracted by a more rural life. I thought this was just a genetic or epigenetic effect—both my mother's and father's families farmed—but could it be a more fundamental human need?

The research so far is varied but seems to state that interaction with nature, such as doing your gardening, tending plants or even sitting in a garden makes a difference.

The implications for mental health are clear as urban sprawl eats up green space in and around many major cities. Balanced, sustainable development that promotes mental health is one of the most important issues facing high-income countries. We have to be able to outthink economies where labour is cheaper in order to have an economic edge. Our mental capital is our intelligence, our emotional intelligence and our mental health. This is a vital resource that governments must invest in for the future, and all are influenced by access to green space.

This is my last issue as executive editor of *CrossCurrents.* I would like to take this opportunity to thank CAMH for supporting this publication, the editorial board for their ideas, the two editors I have worked with (who really do all the work), the writers who have produced such superb stories, people who have shared their personal experiences of mental illness, professionals who have shared their knowledge and of course you, the readership.

On a last note, this publication is here to serve the readership—we need to know what you think so we can do a better job—please fill out the questionnaire.

Kwame McKenzie, MD, MRCPSYCH (UK)
Executive Editor, *CrossCurrents*; Medical Director CAMH; Professor of Psychiatry, University of Toronto

Mark de la Hey

Canadian parents show little concern about teen gambling

Canadian parents do not see adolescent gambling as a serious issue, according to a study from McGill University in Montreal. The results were based on a nationwide survey of 3,279 Canadian parents with a child between the ages of 13 and 18. Of 13 risky adolescent behaviours, parents rated gambling as the least worrisome, behind alcohol and other drug use, drinking and driving, unsafe sex, smoking, eating disorders, and excessive Internet use and video

game playing. While 87 per cent of parents endorsed substance use as a serious issue, only 40 per cent saw gambling as a serious problem. Gambling was the only issue that was not seen by a majority of parents as a risky behaviour. Indeed, more than 60 per cent of parents indicated that they had participated in some kind of gambling activity with their child, most commonly involving the purchase of lottery or raffle tickets. The authors conclude that prevention programs need to target parents as well as adolescents, possibly through public service announcements.

International Journal of Mental Health and Addiction, 2012, v. 10: 537–550. Colin A. Campbell et al., International Centre for Youth Gambling Problems and High-Risk Behaviors, McGill University, Montreal, Quebec.

Childbirth experience can lead to PTSD in some mothers

Childbirth can be such a traumatic event for some women that it can result in posttraumatic stress disorder (PTSD), according to new research from Beer Yakov Mental Health Center in Israel. Researchers interviewed 89 women who had recently given birth, finding that 3.4 per cent of them met the criteria for PTSD, with a total of 26 per cent exhibiting at least significant partial PTSD symptoms. Women who developed PTSD symptoms were more likely to have experienced a particularly difficult previous childbirth, or to have required mental health treatment after a previous pregnancy. During delivery, they were more likely to perceive a threat to their life and health or to the life and health of the fetus. Although women who developed PTSD generally expected more pain during childbirth, they were more likely to deliver vaginally, received fewer painkillers and did in fact experience more pain during delivery. These findings appear to support proposed changes to current *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) criteria for PTSD, which fail to recognize the suffering of women with partial symptoms.

Israel Medical Association Journal, 2012, v. 14: 347–353. Inbal Shlomi Polachek et al., Beer Yakov Mental Health Center, Beer Yakov, Israel.

Viewing cute images can improve concentration

A series of experiments conducted at Hiroshima University in Japan demonstrate that looking at cute images of things such as puppies and kittens can improve a person's concentration. In the first experiment, participants were asked to play two sessions of a version of the game Operation in which they had to remove small objects from holes in the "patient" on the game board without brushing the sides. Between the two sessions, they were shown images of either puppies and kittens or adult dogs and cats. In the second session, participants shown the cute images exhibited a 44 per cent improvement in their performance scores while taking 12 per cent more time to complete the task, suggesting that viewing the cute images caused them to perform the task more carefully and deliberately. No significant improvement was seen among those who saw images of adult animals. Similar improvements in performance were seen for those viewing cute images in a second experiment involving number recognition, suggesting that the improvements were not the result of a heightened social motivation. A third experiment involving letter recognition indicated that the cute images helped to narrow the focus of participants, and this narrowing of focus may be the mechanism by which cute images improve performance in tasks requiring careful behaviour.

PLoS ONE, September 26, 2012, 7 (9): e46362, doi:10.1371/journal.pone.0046362. Hiroshi Nittono et al., Graduate School of Integrated Arts and Sciences, Hiroshima University, Hiroshima, Japan.

Marijuana users can experience significant impairment when they quit

New research from the University of New South Wales in Sydney, Australia, indicates that cannabis withdrawal is associated with significant impairment of normal daily activities, as well as the potential for relapse, arguing in favour of cannabis withdrawal being included in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) as a psychiatric condition. The study involved 49 cannabis users meeting DSM-IV criteria for dependence who were asked to abstain from cannabis use for two weeks. Ten participants relapsed to cannabis use during the two weeks of attempted abstinence—five had high levels of dependence and five had low levels of dependence. Of all withdrawal symptoms (including insomnia, lack of appetite, anxiety, mood swings and depression), only physical tension turned out to be a significant predictor of relapse. Participants who had higher levels of cannabis dependence experienced more severe levels of functional impairment in daily activities resulting from cannabis withdrawal. Those who experienced higher levels of functional impairment during the abstinence attempt later reported higher levels of cannabis use at the one month follow-up.

PLoS ONE, September 26, 2012, online, 7(9): e44864, doi: 10.1371/journal.pone.0044864. David J. Allsop et al., National Drug and Alcohol Research Centre, University of New South Wales, Sydney, Australia.

The clothes we wear can change our behaviour

Wearing certain types of clothing can affect a person's behaviour, according to research from Northwestern University in Evanston, Illinois. In the study's first experiment, participants were asked to indicate whether a series of letters on a computer screen were red or blue. Half of the participants wore a lab coat during the experiment. Selective attention was measured by contrasting performance on incongruent trials (for example, the word "RED" written in blue letters) with non-incongruent trials (for example, the word "BLUE" written in blue letters). Participants who wore lab coats made half as many errors as those not wearing lab coats on incongruent trials, but the same number of errors on non-incongruent trials, demonstrating that wearing a lab coat increased selective attention.

A second experiment measuring sustained attention required participants to pick out minor differences between two virtually identical pictures on a computer screen. Participants wearing a lab coat were told it was either a doctor's coat or a painter's coat. Other participants were merely shown a "doctor's coat" lying on a table. Participants wearing a "doctor's coat" identified more differences than those wearing a "painter's coat" or those merely shown a "doctor's coat."

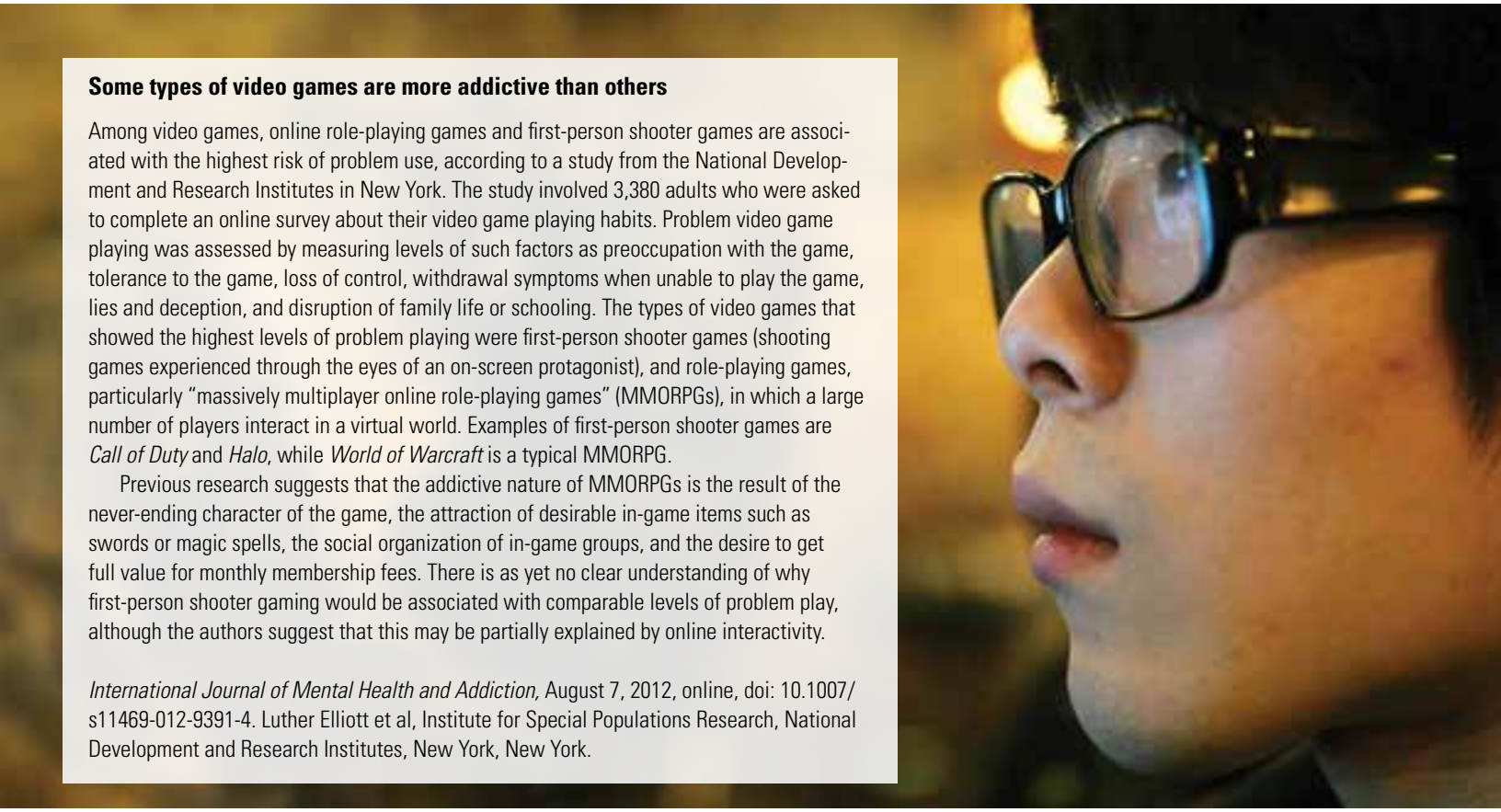
A third experiment replicated the second with the difference that people merely shown the "doctor's coat" viewed it throughout the experiment, and were asked to write a brief essay about how they identified with the coat. Participants who were primed to identify with the "doctor's coat" coat detected more differences than those wearing a "painter's coat" but fewer than those wearing a "doctor's coat." This indicates to the study's authors that, while identifying with a doctor's coat increased sustained attention, actually wearing the coat resulted in additional improvements in attention.

Journal of Experimental Social Psychology, 2012, v. 48: 918–925. Hajo Adam and Adam D. Galinsky, Northwestern University, Evanston, Illinois.

Regular tooth brushing may offer protection against dementia

Brushing your teeth regularly may reduce your risk of developing dementia later in life, according to a new study from the University of Southern California in Los Angeles. Researchers followed 5,486 elderly people over the course of 18 years, 1,145 of whom developed dementia by the end of the study. Women who reported not brushing their teeth daily at the study's outset were 65 per cent more likely to develop dementia than those who brushed three times daily, while the comparable figure was 22 per cent for men who did not brush daily. Men who had not seen their dentist in the year prior to the beginning of the study were 89 per cent more likely to develop dementia than those who had seen their dentist two or more times in the same time period. There was no comparable risk among women. The relationship between dental health and dementia was not influenced by lifestyle factors such as exercise, body mass index, smoking, alcohol or caffeine consumption, chronic disease, or by known risk factors for dementia such as education, head injury or family history. The authors conclude that while "poor oral health behaviours may be early signs of dementia," it is also possible that poor oral health may contribute to the development of dementia through infection, inflammation, lower extracellular acetylcholine release, or by negatively affecting nutrition.

Journal of the American Geriatric Society, 2012, 60:1556–1563. Annlia Paganini-Hill et al., Keck School of Medicine, University of Southern California, Los Angeles California.



Some types of video games are more addictive than others

Among video games, online role-playing games and first-person shooter games are associated with the highest risk of problem use, according to a study from the National Development and Research Institutes in New York. The study involved 3,380 adults who were asked to complete an online survey about their video game playing habits. Problem video game playing was assessed by measuring levels of such factors as preoccupation with the game, tolerance to the game, loss of control, withdrawal symptoms when unable to play the game, lies and deception, and disruption of family life or schooling. The types of video games that showed the highest levels of problem playing were first-person shooter games (shooting games experienced through the eyes of an on-screen protagonist), and role-playing games, particularly "massively multiplayer online role-playing games" (MMORPGs), in which a large number of players interact in a virtual world. Examples of first-person shooter games are *Call of Duty* and *Halo*, while *World of Warcraft* is a typical MMORPG.

Previous research suggests that the addictive nature of MMORPGs is the result of the never-ending character of the game, the attraction of desirable in-game items such as swords or magic spells, the social organization of in-game groups, and the desire to get full value for monthly membership fees. There is as yet no clear understanding of why first-person shooter gaming would be associated with comparable levels of problem play, although the authors suggest that this may be partially explained by online interactivity.

International Journal of Mental Health and Addiction, August 7, 2012, online, doi: 10.1007/s11469-012-9391-4. Luther Elliott et al, Institute for Special Populations Research, National Development and Research Institutes, New York, New York.

Exploring the relationship between physical activity and mental health

While physical activity has long been known to be associated with fewer mental health problems among adolescents, new research from the Netherlands Institute of Mental Health and Addiction in Utrecht has now highlighted two mechanisms which may explain this relationship. The researchers analyzed data on 7,304 adolescents from the Dutch Health Behaviour in School-Aged Children survey. Results showed that inactive adolescents were 1.5 times more likely than active respondents to experience internalizing problems such as depression and anxiety, and 1.3 times more likely to experience externalizing problems such as delinquency, aggression and substance use problems. Respondents who perceived themselves as being either too thin or too heavy were more likely to report mental health problems than those who were happy with their body weight. As well, those who were members of sports clubs had fewer mental health problems than those who were not. These findings indicate to the study's authors that the relationship between physical activity and mental health is at least partly explained by the indirect effects of self-image (body-weight perception) and social interaction (participation in organized sports). They recommend further research to gain a more detailed understanding of the characteristics of physical activity that are most relevant to mental health—information that would be important in developing physical activity programs for the treatment of mental health problems in adolescents.

Clinical Psychological Science, September 7, 2012, online, doi:10.1177/2167702612450485. Karin Monshouwer et al., Trimbos Institute, Netherlands Institute of Mental Health and Addiction, Utrecht, The Netherlands.

The CAMH Queen Street Redevelopment Project embraces green spaces: trees, lawns, and gardens at ground and roof level.

Not just another shade of hospital green

Institutions around the globe find that greening buildings, grounds and activities makes for better mental health

By Ned Morgan

The grand opening of Phase 2 of the Centre for Addiction and Mental Health (CAMH) Queen Street Redevelopment Project was a revelation to architect Alice Liang. As the crowds milled around the newly minted grounds on a sunny, breezy day in June 2012, the principal at Montgomery Sisam Architects—who'd worked on the project since 2001—stood with a feeling of wonderment. "When everyone walked around, it was absolutely stunning to see how truly it's been transformed," she says. "You have to walk it yourself to really feel the impact of unveiling mental health, this whole idea of engaging and inviting the public." Green space is crucial to the redevelopment and its "urban village" ethos that has revitalized the 27 acres along Queen Street West that have been continuously occupied since 1850 when the Provincial Lunatic Asylum opened. The grounds were then encircled by a fence and trench and tucked away in a shady enclave on the edge of the old city limits of Toronto. Today, CAMH occupies the same ground as the old asylum, "but now it's in the heart of Canada's major urban centre," says CAMH psychiatrist Dr. David Goldbloom. "The challenge is to marry the soothing and restorative elements of green space with integration into the community."

This is a notion echoed by Liang. "When you walk around the 27 acres now," she says, "you hardly know that CAMH is there—it's become part of the city fabric." This fabric is coloured green, and its textures are numerous. The new buildings include low-maintenance green roofs viewable from many vantage points; client-accessible double-height terraces with planters and three-metre-high protective but transparent glass panels; and client-accessible terrace gardens including a roughly 1,500-square-foot main-floor courtyard in the new inpatient unit, the Intergenerational Wellness Centre. With raised planting beds for gardening therapy for clients with mobility issues, this courtyard also boasts a contemplative common area with parasols, a gazebo and trees. If these new plantings in the courtyard won't give much shade for a few years yet, the building is next to the mature trees of Shaw Park, a green space essentially unchanged since 1850. The proximity of Shaw Park, says Liang, "was one of the drivers behind building the inpatient unit here. It's an L-shaped building so the corner—or what we call the 'knuckle'—is the main dining and activity area. It is highly transparent, so from that space you're always looking down at Shaw Park and that is consistent on every floor… we've made therapeutic spaces as accessible to clients as possible. That's the guiding principal."

The notion that green space holds therapeutic benefits for those with mental health or addiction problems, and can help re-integrate them into their community, is not new. In the mid-1800s, Thomas S. Kirkbride, a physician in Pennsylvania, ran a facility with extensive gardens set aside for his mental health patients. The gardens, he wrote, "prove exceedingly valuable, by contributing to the comfort, happiness, and restoration of many patients." After the U.S. military began a series of gardening programs to treat shell-shocked soldiers after the First and Second World Wars, horticulture therapy had established a niche in North America, though the field began to wane in the 1950s.

In recent years, Europe has taken the lead in connecting green space and therapy. In 2009, researchers at the Norwegian University of Life Sciences studied the effects of horticulture therapy on clients and found significantly improved depression scores after a gardening regime of just three hours twice weekly. Another 2009 study of more than 300,000 Dutch adults and children offers more evidence. The findings, published in the *Journal of Epidemiology and Community Health,* concluded that people living nearer to green space were less likely to experience depression and anxiety.

Langley Green Hospital in West Sussex, U.K., an inpatient psychiatric hospital, recently won a Better Building Healthcare Award for Best External Space. Langley is an example of therapeutic green space in action on an elaborate scale. "To create and maintain connections with the outside world, the landscape design sought to heighten awareness of seasonal change," says Helen Griffin of Devereux Architects, who worked on the project. "Sensory stimulation is provided by ensuring patients have access to a variety of landscapes with different textures, smells, attractions and overall character." Each pavilion-like ward has its own garden and in the middle, an outdoor therapy area links the wards. A circular path, called a "wanderloop," connects each ward and garden, creating a sense of openness.

A portion of the "wanderloop" that connects each ward and its accompanying garden at Langley Green Hospital in West Sussex, U.K.

The U.K.'s largest mental health charity, Mind, has launched an ambitious, broad-based effort that uses green space and horticulture to integrate clients back into communities. Since 2008, the Ecominds initiative, funded by the National Lottery, has furthered hundreds of environmental projects throughout England and Wales, ranging from horticulture to "green gyms" (where groups participate in nature conservation activities for physical and mental health) to wetland rehabilitation. Mind community portfolio manager Gavin Atkins fills in some background: "In 2007, we published a piece of research and policy work [*Ecotherapy: The Green Agenda for Mental Health*] and since then we've funded different projects across a vast range of organizations including community groups, other mental health charities, environmental charities, local woodland trusts and the National Trust—all based around using the natural environment for the benefit of mental health." To take just one example from

Langley Green Hospital photograph courtesy of Sussex Partnership NHS Foundation

One of 12 windows designed by Sasha Ward for Langley Green Hospital, Mental Health Services West Sussex, U.K.

hundreds, Ecominds recently partnered with Growing Well, an organic farming co-operative where mental health and/or addiction clients referred by local doctors help to produce vegetable boxes to sell to shareholders.

Such collaborative efforts are advanced and widespread around the U.K. One must look harder to find such initiatives in Canada, at any rate on a countrywide scale. On a local scale, the CAMH Sunshine Garden at Queen Street West has been helping clients through recovery for more than 10 years. And this year the Vancouver Island Health Authority (VIHA) and Seven Oaks Tertiary Mental Health Facility launched the "Feeding Ourselves and Others" project, a 6,000-square-foot garden in the fertile Blenkinsop Valley north of Victoria, B.C. "Our gardeners range in age from their 20s to their 60s," says project co-ordinator David Stott, "and they are all overcoming obstacles most of us cannot even begin to imagine—the growing of vegetables, herbs and other plants is helping them along their recovery path." Each participant—drawn either from Seven Oaks or from VIHA's Assertive Community Treatment (ACT) program—is responsible for their own 100-square-foot garden, and the produce is shared with local food banks and among the clients. "Our garden project not only teaches participants valuable food growing skills, it also helps individuals work together and find focus and purpose—all in support of their recovery," says Dr. Ian Musgrave, clinical director of Tertiary and ACT Services for VIHA.

Though lacking a food-gardening component, another Canadian mental health facility is incorporating the use of green space, this time in a large-scale urban redevelopment. The new West 5th Campus of St. Joseph's Healthcare in Hamilton, Ontario, lies in the midst of 55 acres intersected by tree-lined pathways, soccer fields, tennis courts, walking paths and outdoor therapeutic spaces, including a labyrinth. The hospital (to be completed by fall 2014) will offer clinical and diagnostic services for mental health and addiction clients as well as research and education facilities, and features a chapel courtyard, four rooftop terraces, and eight patient courtyards up to 10,000 square feet, all with shade trees, walkways and benches. The interior design allows an abundance of sunlight and reflects the landscape with a colour palette emphasizing earth tones, while the unit names pay homage to Hamilton's natural features: Mountain, Orchard, Waterfall and Harbour. Like CAMH, St. Joe's plans LEED (Leadership in Energy and Environmental Design) certification for its new buildings.

The new West 5th Campus at St. Joseph's Healthcare Hamilton will integrate therapeutic outdoor space, preserve the heritage centre green and provide virtually every patient room with a view of the escarpment.

Artist's rendering of St. Joseph's campus by Philip Michael Brown Studio

One of the basic components of LEED certification, the green roof—a relatively simple and cheap addition or retrofit—is an increasingly common cityscape feature in North America. Vancouver's new convention centre has a 2.4 hectare green roof, while the city of Toronto recently has passed a bylaw requiring a certain footage of green roof in all new builds above a certain size. St. Elizabeth's Hospital in Washington, D.C., the storied mental health facility that treated American Civil War soldiers, recently installed a 28,000-square-foot green roof. "We started [the CAMH Queen Street Redevelopment Project] back in 2001," says Alice Liang, "and just in the last year or so, the City of Toronto mandated in their building permit application to include green roofs in all new buildings. So 11 years later, it's becoming a norm in sustainable design for a better environment. You can look at a green roof from that perspective, as well as from a healing perspective. In our case, the green roof element is part and parcel of the overall approach to the healing environment. Our development of green roofs and courtyards and gardens was coming from the whole therapeutic side of things. And now the two are converging."

There's some evidence that this convergence—environmental sustainability, and therapy for mental health and addiction—is evolving into a widespread phenomenon. Back in the U.K., Eco-minds' Gavin Atkins highlights recent partnerships with environmental charity Thames21, where clients work on waterway rehabilitation, and other charities focusing on re-greening and cleaning up reservoirs. "Local mental health organizations are referring people to these groups," says Atkins, "so they're gaining the positive benefits of activity and being outdoors, and at the same time, the reservoir is getting much needed care and attention."

Photographs by Hannah Andemichael

CAMH has incorporated green space from rooftop gardens right down to the public and client leisure and recreation spaces.

A growing concern

Horticulture therapy offers potent opportunities for healing and growth

By Diana Ballon

Work in the garden "takes priority over interacting with my symptoms," says Toshio Ushiroguchi-Pigott. "It's a kind of medicine in a way, to be outside," caring for plants, harvesting, weeding and seeding in the greenhouse on days it's too cold outside, says Toshio, who enjoys dropping by CAMH's Sunshine Garden near his home to garden whenever he can. Run by FoodShare Toronto in partnership with CAMH, the Sunshine Garden uses horticultural principles to teach clients about food security, provide skills training and nurture self-confidence and healthy leisure activity.

"Going outside in a park is what I used to do when I was overwhelmed by symptoms," says Toshio, an outpatient with CAMH's Archway Clinic. He has found it's even healthier to actively work in a garden; his involvement in gardening has since propelled him to enroll in a landscape design certificate program at Ryerson University.

Many people—like Toshio—have discovered the healing powers of horticulture therapy (HT), a formal practice involving the use of plants, the garden and horticultural activities to "promote well-being for its participant," as defined by the Canadian Horticultural Therapy Association (CHTA). The benefits of horticulture therapy can take many forms, from physical and cognitive, to spiritual and emotional.

Gardening and surrounding yourself in nature have obvious therapeutic benefits that have been recognized for centuries: as far back as ancient Egypt, "mentally disturbed" royalty were advised by court physicians to roam in the palace garden as a means of relaxation and healing. Over the past 60 years, horticulture therapy has increasingly been recognized as an evidence-based practice. Horticulture therapy study has evolved to educational programs that offer assessment procedures, and concrete therapeutic goals for its participants, based on each person's needs. The therapy is now practised extensively in a range of Canadian settings—in prisons, vocational rehabilitation programs, psychiatric hospitals, consumer-survivor businesses, community gardens, with mental health and addiction programs—and with almost any population group you can think of, from children and troubled teens to older adults with dementia and people with physical disabilities.

When I was first assigned this story, I thought, can I actually write 2,500 words on this topic? Aren't the calming benefits of gardening and being in green space obvious, and the meditative, soothing effects of weeding and planting relatively predictable? What I found was a much more researched and sophisticated practice than I had imagined.

Countless studies attest to the success of horticulture therapy in everything from reducing recidivism in at-risk youth, to reducing aggression in adolescents who have been institutionalized, to reducing cortisol levels, improving self-esteem, helping people to feel less stressed and anxious, reducing the severity of depression and improving perceived attentional capacity and ability to concentrate in people who are depressed—the latter from an article published in a 2010 issue of the *Journal of Advanced Nursing*.

"In the past 25 years, horticulture therapy has really been given a whole lot of attention and research," says Travis Slagle, a land supervisor for Pacific Quest's Sustainable Life Skills program in Hawaii, speaking on LA Talk Radio about his program.

"You are in a restorative environment. As I tell the students, the garden will never judge you…. It places the client or student in a caregiving role, and gives them a sense of efficacy and purpose in being able to provide the care, rather than their being the ones that need the care," he says.

The first registered horticultural therapist in Canada, Mitchell Hewson introduced horticulture therapy into psychiatry in Canada in 1974, with the opening of the horticulture therapy program at Homewood Health Centre, a mental health and addiction facility in Guelph, Ontario. It's a program that he still manages almost 40 years later.

In this time, the program has burgeoned: about 230 patients participate in the program each week, with HT being used as an adjunct to other forms of treatment they will receive while they're at Homewood. The program has three full-time horticulture therapists on staff, and about 40 volunteers and interns that come from as far away as Korea, Japan and China to train in how to use HT as a specialized tool in mental health/psychiatry. With a 47-acre property as backdrop, landscaped gardens, a state-of-the-art conservatory and teaching classrooms, it is an ideal setting for learning—and finding sanctuary in the process.

Hewson explains the seductiveness of the teachings, and the universal appeal of being in green space. "Most people can relate to nature in some way. You walk on it. You eat it. You breathe it. It's all around you." Whether you appreciate the smell of a rose, or the taste of mint, somehow we can all find a connection to nature.

"Where do you find a sense of peace? A sense of sanctuary?" he asks rhetorically.

Rather than having a preset program for patients, Hewson tailors the program differently depending on the person's diagnosis—whether it's anorexia, posttraumatic stress, a drinking problem or a combination of these or other mental health or addiction issues.

In 2005, Homewood began using horticulture therapy to treat patients with concurrent substance abuse and posttraumatic stress disorders. "The premise of this program is to provide sanctuary, bereavement and reconnection through community," says Hewson. The seven-week program may include what he describes as "psychological burials," in which patients bury, burn or plant an object such as a letter or audiotape—something that physically connects them to the moment of trauma—as a ritual to help them move from being a victim to being a survivor.

In illustrating the power of this exercise, Hewson gives the example of a woman who expunged the trauma of an abusive father by crushing and smashing roses from her father's coffin and putting them in Homewood's memorial garden on the last day of her stay. She later describes her experience: "Since then I still have had painful memories of my father's abuse, but I now feel surrounded by my higher power and I feel safe and comforted."

In Homewood's horticultural program for people with eating disorders, the focus is slightly different. With eating disorders, "they seek perfection" and control, says Hewson. Through the program, "we bring patients into a safe environment, and then work to help them replace their preoccupation with food with a healthier, creative focus," he says. We offer activities where they can have fun, and feel joy, Hewson says, letting go of the intense focus they've had toward food issues. This may involve designing a miniature Japanese garden in a glass container, making botanical prints, going on nature walks or experimenting with herbology. They also use psycho-aromatherapy, in which they make or apply creams and essential oils with plant derivatives for massage, and as a way of self-nurturing. "Most people need to be nurtured," says Hewson. Smells can also be strong triggers for trauma and other memories that can be replaced by more calming aromas created from these plant-based creams, explains Hewson, who is also a certified aromatherapist.

A horticulture therapy practice for dementia involves using the same client-centred Rogerian approach as is used for other populations, but adapting the pace of the program, so that clients are still challenged and stimulated by the work, without becoming overwhelmed. Hewson, who lost both his mother and mother-in-law to Alzheimer's, says he finds this work particularly rewarding. Patients benefit from the social aspect of gardening, the physical work involved, and the "memory enhancer," effect—recalling past skills they had in

At Pacific Quest, on the Big Island of Hawaii, teens and young adults have a "root camp" experience of organic gardening, wellness practice and rites of passage work.

Photos courtesy of Pacific Quest

gardening, and gardens they've enjoyed. Therapists can assess patients' cognitive functioning and build a rapport with them without the direct confrontation required in a more clinical setting. Working with plants also builds their self-confidence and improves their mood: activities range from group projects to dry herbs and make wreaths, to smashing pots and hoeing as a way to let out anger and aggression.

With patients with addictions, Hewson describes using various therapeutic plants—such as the dwarf orange tree, whose orange blossoms have antidepressant properties. Certain plants can be used to make creams, which can be self-soothing and nurturing to clients, and an alternative way of calming themselves, instead of using addictive substances. Clients who are in the program for 35 days will take a cutting from a plant, learn to nurture it, and bring it home with them.

Transplant yourself to the other side of the world, and you'll find a program that draws on healing powers of the garden and rich metaphors of growth in its work with teens. Although not a registered horticulture therapy program, Pacific Quest is an intriguing outdoor therapeutic program where teens and young adults live for two to three months to learn what they refer to as a "sustainable life skill," which includes elements of horticulture therapy as well as a wellness curriculum and rites of passage work. Students sleep in bunkhouses, and spend the bulk of their days in organic gardens where they tend plants, weed, harvest and then use the produce they've cultivated to cook for each other, and sell to a local farmer's market, says Kathryn Kasenchak, one of the program's psychologists.

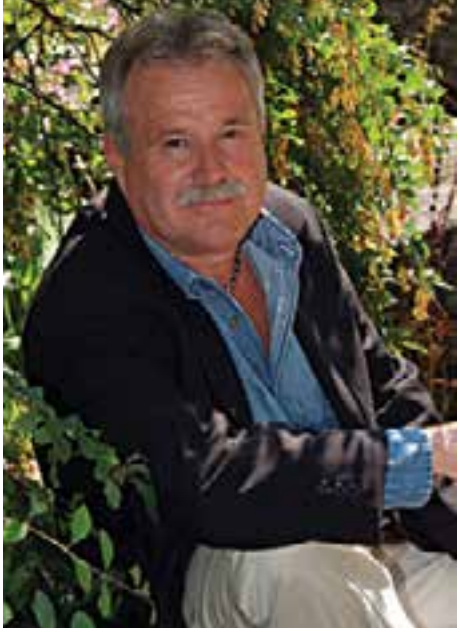
"Growth of the plant can reflect growth of the self," and transplanting can be a rich metaphor for the process students go through, says Kasenchak. "Like plants, the students' roots can outgrow the environment they grew up in. They may need to temporarily leave home, as a way to recognize and then abandon maladaptive patterns that they've become familiar with. When they do, they—like plants—usually go through some shock. But they come to recognize that change doesn't happen when you're comfortable. They may not do so well at first, but it [leaving home] is necessary to achieve their full potential," she explains. Students go through their own process of transplanting.

"I like to use the analogy of the soil," says Kasenchak. "Soil is dirty, but it also nourishes.… Sometimes the work is dirty, because it involves dredging up difficult issues to then move forward."

In the program, therapists give different roles to students based on therapeutic goals; for instance, they may assign a resident who has had a hard time addressing difficult things in his or her own life to work in composting. "Compost becomes analogous to these unaddressed issues. The longer it is unattended, the grosser and stinkier it can become," says Kasenchak. Someone else who needs nurturing, and has family of origin issues, may be assigned to work in the nursery tending to baby plants, she says.

Gardening work is also used to teach students skills that can be directly applied to their own lives, such as executive functioning, Kasenchak says. "A lot of students who have gone through the mental health system have trouble with planning, task initiation and completion," Kasenchak says. "The garden helps them to break down different tasks in life into more manageable pieces." They learn math skills involved in portioning out food, and gain information on nutrition, diet, cooking and time management. "We also encourage and teach mindfulness practices and suggest certain activities, such as weeding, be done silently, so they can see what arises for them."

Weeding is another interesting metaphor, she muses. "With weeds, you have to keep tending the garden. You get the weeds out, but then they come back next week.…



The first registered horticultural therapist in Canada, Mitchell Hewson introduced horticulture therapy to his clients in 1974.

A greenhouse at Homewood Health Centre in Guelph, Ontario, makes a fitting classroom for students of horticulture therapy.

Some weeds are deceiving because they can look really pretty."

The program has a community focus, in that each resident's role is interdependent, and proceeds from sales of their produce at the farmer's market goes to community organizations. As Slagle comments in the radio interview, their approach reflects a whole new paradigm, a shift from the "rugged individualism of our culture to a more collective approach of what we give versus what we take."

In offices overtop PARC—Toronto's Parkdale-Activity Recreation Centre—HT is an activity that people can make a living off. Here at Parkdale Green Thumb Enterprises, employees are hired to plant, water, prune, fertilize, mulch, weed or do other landscaping services to beautify Toronto streets and businesses. Employees at this consumer-survivor business all have mental health issues, and struggle with poverty—plights that are common in Parkdale where substandard rooming houses, boarding homes and a psychiatric hospital have been home for many people trying to rise out of difficult conditions.

"A lot of people have been isolated, and told they can't work or shouldn't work, or when they tried to work, there was no accommodation, so they're afraid to work," says Green Thumb's business manager Maggie Griffin. "You have to understand the culture of people with mental health and addiction issues," she says. Many have experienced extended abuse, some have come from small communities, are recent immigrants or refugees, or may have lived on the street or couch surfed.

At Green Thumb, employees are given a chance to succeed, rather than being further stigmatized and alienated for the problems they are trying to cope with. And they can do this work within the often meditative and nurturing environment of plant life.

"We're here to support, but we're not social workers," says Griffin. If someone needs accommodation, to take time off, they can do that without getting fired or being asked for a reason why they can't work. Staff are paid to participate in staff meetings, paid for their training and can take part in different staff outings. They work three hours per day for as many days a week as they can manage, and are paid between $10.50 and $15 per hour for their work.

One employee has been at Green Thumbs for almost 11 years. "I feel a lot better about myself," she says of her work there. "I can keep a job." After leaving an abusive marriage, coming to Green Thumb meant that she could get back on her feet, and even afford a shared apartment near the program.

Of course, the seductiveness of green space and the power of not just observing, but participating in the plant world around us keep many of us sane. I rely on daily walks with my dog in High Park to bring stillness to an often overengaged mind. Thoughts slow down. I feel the same breeze that brushes against the leaves, that nudges the bushes, that sweeps past the trees.

On Hewson's homepage, he quotes Thich Nhat Hanh, who writes, "Walk as if you are kissing the Earth with your feet."

Hewson himself comments on the "magical and curative powers of nature… Nature is forgiving; if a plant dies, another can be grown in its place." While gardening may be dirty, the effects can be restorative. And the experience of caring for an other, rather than being cared for, has potent benefits.

Diana Ballon is an editor at CAMH, and a freelance writer specializing in mental health issues.

Horticultural Therapy and Its Benefits

Lea Tran is the horticultural therapist at the Guelph Enabling Garden in Guelph, Ontario. In addition to running inclusive, imaginative and lively programs and the garden, she blogs about all the events and takes photos too. She and Trina Alix, a fellow registered HT, put together this list to show just how many benefits can be found in HT.

Read more at ***http://guelphenablinggarden.blogspot.ca***

Cognitive benefits	Emotional benefits	Physical benefits	Spiritual benefits	Social benefits
Promote memories	Increase self-esteem	Hands-on work	Sense of purpose and meaning	Get outside, meet new people and network
Learn and share skills	Relax in a beautiful setting	Sensory awareness	Life review	Teamwork-building skills
Communicate ideas	Discover interesting new hobbies	Nutritious organic herbs and vegetables	Motivate and inspire	Make a difference in the community
Make choices and plan	Feel like an important part of the community	Fine/gross motor skills	Acceptance	Improve supportive relationships
Use the imagination	Feel empowered and independent	Eye/hand co-ordination	Sense of interconnection with wildlife	
Maintain/improve attention span	Express oneself creatively	Strength and balance	Presence	
		Exercise, fresh air and sunshine	Heal with energetic properties of plants	

ADHD + nature = ↓

Clinical evidence and a groundswell of public opinion says there's a little help just outside the door for children with ADHD

By Kathryn Dorrell

Shannon Gerard wasn't surprised when her son, Will Brown, was diagnosed with attention-deficit/hyperactivity disorder (ADHD) at age 10. "He had a really difficult time focusing and controlling his impulsivity, and it came out a lot more at school and in groups," says the Toronto mom. Will is among the five to eight per cent of Canadian kids who are diagnosed with ADHD, one of the most common mental health conditions among children and youth today. Like many youngsters, Will was prescribed, and continues to take, medication. He also took part in a behavioural modification clinic for children with ADHD at Sick Kids Hospital in Toronto.

The latest research shows that medication and behaviour modification are the best tools for managing ADHD. " 'The Multimodal Treatment Study for ADHD'—a study carried out at six national health centres around the world—states that these modes of treatment are the most effective and are superior to other individual or combination treatments," says Dr. Umesh Jain, a staff psychiatrist with the Centre for Addiction and Mental Health. Dr. Jaim doesn't treat Will but works with hundreds of children, adolescents and adults who have ADHD.

But what if there was something else that could lessen the ADHD symptoms of kids like Will? Another tool without any side-effects that was free and easily accessible to most families? Researchers Andrea Faber Taylor and Frances E. (Ming) Kuo from the University of Illinois say there is: spending time in nature.

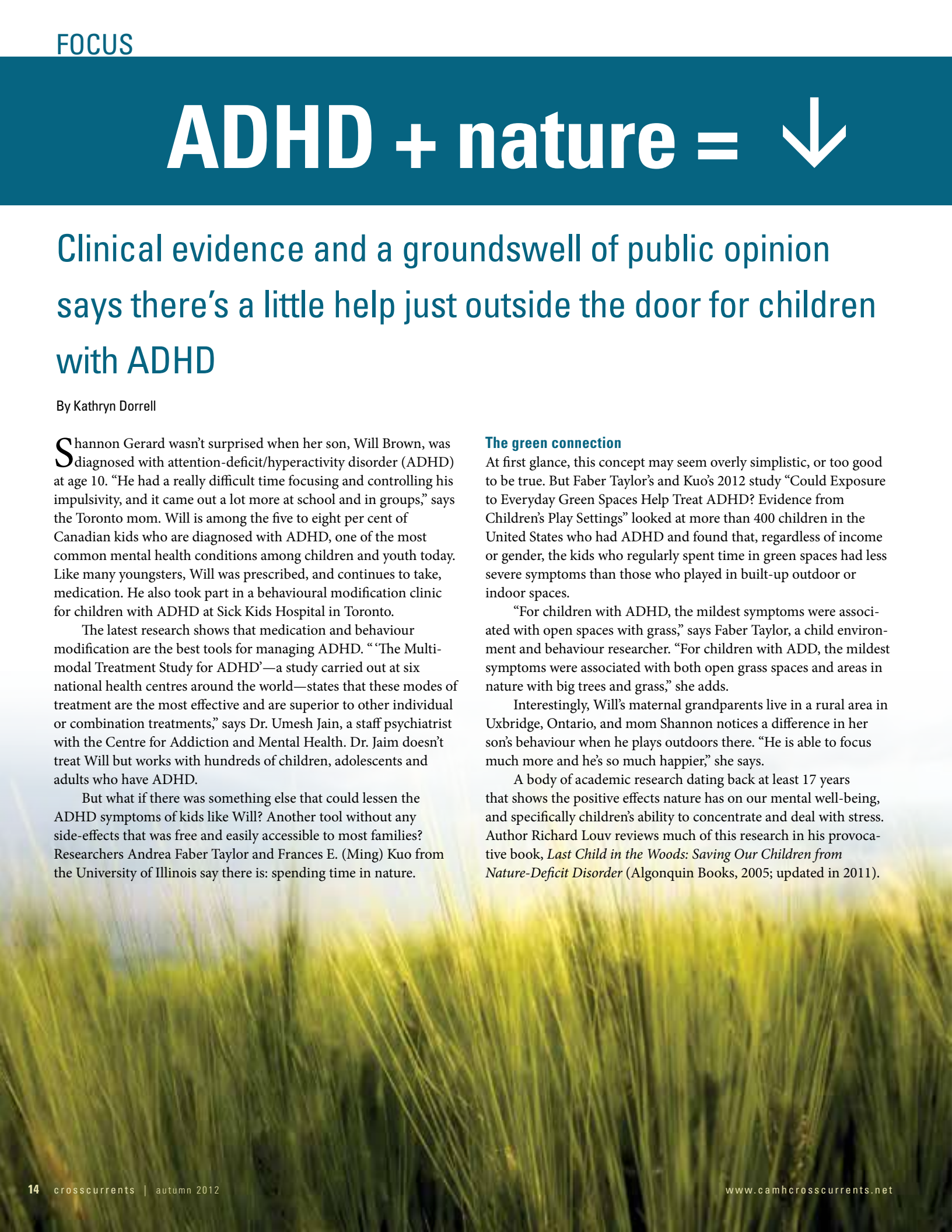
The green connection

At first glance, this concept may seem overly simplistic, or too good to be true. But Faber Taylor's and Kuo's 2012 study "Could Exposure to Everyday Green Spaces Help Treat ADHD? Evidence from Children's Play Settings" looked at more than 400 children in the United States who had ADHD and found that, regardless of income or gender, the kids who regularly spent time in green spaces had less severe symptoms than those who played in built-up outdoor or indoor spaces.

"For children with ADHD, the mildest symptoms were associated with open spaces with grass," says Faber Taylor, a child environment and behaviour researcher. "For children with ADD, the mildest symptoms were associated with both open grass spaces and areas in nature with big trees and grass," she adds.

Interestingly, Will's maternal grandparents live in a rural area in Uxbridge, Ontario, and mom Shannon notices a difference in her son's behaviour when he plays outdoors there. "He is able to focus much more and he's so much happier," she says.

A body of academic research dating back at least 17 years that shows the positive effects nature has on our mental well-being, and specifically children's ability to concentrate and deal with stress. Author Richard Louv reviews much of this research in his provocative book, *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder* (Algonquin Books, 2005; updated in 2011).



symptoms for children

"The book has been a lightning rod in getting people to think about how much time our kids spend outdoors in green spaces and the impact it has on them," says Faber Taylor.

In an interview, Louv explains that nature-deficit disorder (NDD) isn't a medical condition, but rather a term that describes the negative effects of our present-day arms' length relationship with the great outdoors. Still, Louv calls nature "a potent therapy" for ADHD, and points out similarities between ADHD and NDD. Notably, NDD results in difficulties with paying attention, as well as higher rates of mental illnesses such as anxiety and depression, which Dr. Jain says are also true of ADHD.

Asking tough questions

Louv is clearly passionate about persuading clinicians to look at the evidence. He co-founded the online Child and Nature Network (childandnature.org) that features abstracts of hundreds of studies on the health benefits associated with kids playing in nature. Some of the research, like the Faber Taylor and Kuo study, specifically outline its benefits for people with ADHD. "I have to question why this type of information isn't on online academic sites like Harvard," says Louv.

When he was asked to give a keynote speech at a conference for the American Society of Pediatrics, Louv says he implored clinicians to review all the research available on treating children with ADHD—including those studies that point out the role that nature can play. "I was surprised at the positive reception that I received," he says.

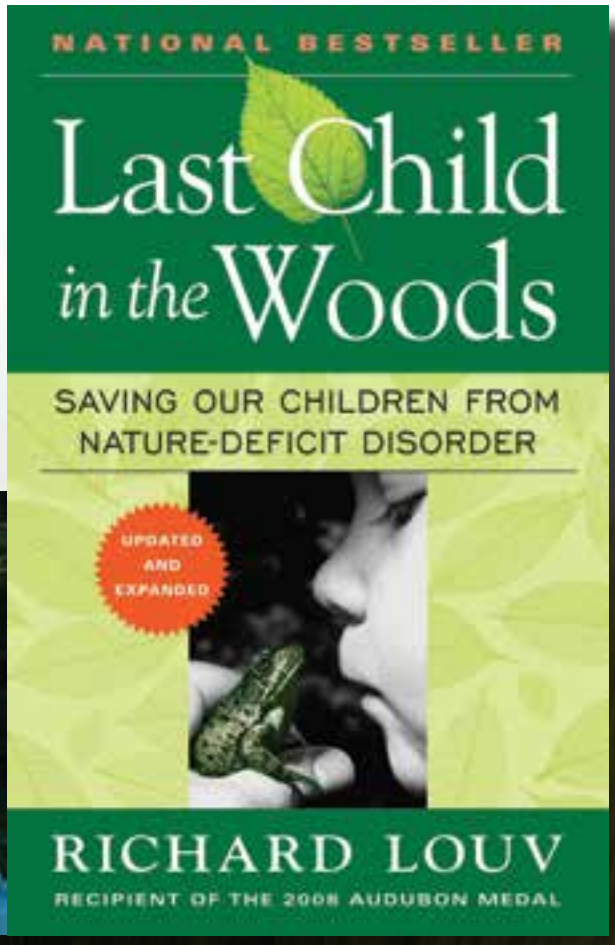
Louv recognizes that some children do need medication for ADHD. But he asks important questions, such as: what percentage of children needs medication? And what other options are we looking at? Are we being too influenced by research that supports drug treatments—and by parents and teachers who want a quick solution to a child's problems? "We have witnessed nothing short of an epic change in our children's relationship with nature and need to ask if we are medicating them too much to help them deal with this transformation."

Making the case for nature

Faber Taylor and Kuo have conducted several studies that examine the impact nature or "green spaces" have on kids with ADHD. Their 2009 study "Children with Attention Deficits Concentrate Better After Walk in the Park," published in the *Journal of Attention Disorders*, looked at the effects of a 20-minute guided walk through a park and found that children with ADHD had significantly better concentration skills immediately after the park walk than those children who took a walk in a non-nature setting.

The pair's area of academic interest builds on that of environmental psychologists Steven and Rachel Kaplan of the University of Michigan. In the mid-1990s, the Kaplans coined the term attention retention theory after they conducted a nine-year study that revealed we all have two forms of attention: directed and involuntary. We have a finite capacity for directed attention and it takes effort to use it. Sleep is one way to restore our supply of directed attention, and so is spending time in nature where we use involuntary attention, according to the Kaplans' research.

Richard Louv, journalist and author, co-founded the online Child and Nature Network. He questions if children are medicated too much as a result of their lessened engagement with nature.



Ten Actions Parents Can Take to Prevent Nature Deficit Disorder

This list comes to us from www.education.com, and while directed to parents, it can easily be adapted for clients of any age who could benefit from a dose of nature.

1. Be a role model.

Remember, children will get excited about something when you are genuinely excited about it, too. Model the behaviour you want your children to emulate. Demonstrate your own curiosity about nature sharing what you love to do in the outdoors with your kids. You can model respect for nature through simple everyday activities like recycling and not littering. Sharing your natural interests is the best motivation a child can have to participate.

2. Plan a monthly or weekly surprise outdoor adventure.

Every Sunday, or once a month, plan a surprise outdoor trip with your kids. You could go to your local river, beach, forest, nature preserve or city park. Planning surprise family fun time builds kids' excitement for the next adventure, and helps demonstrate how you value your time with them.

3. Organize a monthly outing with your child's school.

Be the parent who plans the monthly outing with families in your child's class. Exploring the great outdoors can be easier and closer than you think. Do some research on beautiful areas near your school. Build community with your child's class and instil in them a love of nature.

4. Follow the AAP's guidelines and limit TV and video games to one to two hours a day.

The American Academy of Pediatrics recommends no more than one to two hours of quality programming per day. Just think of how much more time your child will have for unstructured, imagination-fuelled playtime outside!

5. Take a daily or weekly walk together as a family after dinner.

In the evenings after dinner, go for a nice family stroll with your kids. A walk around the neighbourhood, saying hello to neighbours, pointing out flowers or birds, and catching up on the days' events is a great way to spend quality time with your kids outside and get a little exercise together.

6. Register for an outdoor summer camp.

There are hundreds of great outdoor camps that your child can attend across the country or in your region. Give them a dose of the outdoors, and a chance to make new friends, and fall in love with nature during summer vacation this year. Some accredited camps cost as little as $75 per week.

7. Go camping.

Grab your tent, sleeping bag and camp stove and teach your child how to camp! Camping in national or provincial parks is a great cost-effective family vacation that can be fun and educational.

8. Plant a garden.

Plant a vegetable or herb garden in your backyard or at your child's school, or take part in an urban community garden plot. School or home food gardens teach kids how to be smart about nature and nutrition and make better food choices. Take advantage of whatever small amount of outdoor space to which you have access and experiment with a vegetable, herb, or flower garden. It's a great way to learn about nature alongside your children and get your hands dirty in rich soil.

9. Use a field guide.

Field guides make every walk in the park an educational experience! A good quality field or nature guide helps you name and identify what you find outside. Guides can teach you about the favourite foods of the animals or the flowering and fruiting times of plants. That walk around the block can become an educational experience for everyone.

10. Link up with one of your great local or national organizations.

Children and Nature Network www.childrenandnature.org

Child & Nature Alliance of Canada http://childnature.ca

Scouts Canada (plus Beaver Scouts, Cub Scouts, Venturer Scouts, Rover Scouts, SCOUTSabout and Extreme Adventure) www.scouts.ca/ca/programs

Girl Guides of Canada (plus Sparks, Brownies, Pathfinders, Rangers, Trex/Extra Ops and Lones) www.girlguides.ca

David Suzuki Foundation: Get back outside www.davidsuzuki.org/what-you-can-do/connecting-youth-with-nature

Canadian Wildlife Federation www.cwf-fcf.org

Nature Canada: Building the Nature Nation www.naturecanada.ca

Outward Bound Canada www.outwardbound.ca

Wildlife Conservation Society (WCS) Canada www.wcscanada.org

Earth Explore Adventures www.earthexplore.com

National Audubon Society: Bird Studies Canada http://birds.audubon.org/partners/bird-studies-canada

National Geographic's Geography Action http://www.nationalgeographic.com/geography-action/index.html

Sierra Club Canada www.sierraclub.ca

The Society for Amateur Scientists www.sas.org

Adapted with permission. www.education.com/reference/article/actions-parents-prevent-nature-deficit-disorder

"Their studies also found that too much directed attention leads to a type of tiredness and fatigue that has very similar symptoms to ADHD and ADD," says Faber Taylor, "most notably agitation, irritation and an inability to concentrate."

What's more, in *Last Child in the Woods*, Louv reveals that Nancy Wells, a professor at the New York State College of Human Ecology, conducted a study in 2000 that found being close to nature, in general, helps boost a child's attention span. "In the study, when children's cognitive functioning was compared before and after they moved from poor- to better-quality housing near natural green spaces, profound differences emerged in their attention capacities even when the effects of the improved housing were taken into account."

On the radar?

Faber Taylor says anecdotal evidence from parents who have children with ADHD or ADD reveals that more and more family doctors and physicians are taking the nature connection seriously. "People have told me that their child's doctor is literally prescribing time in green spaces," she says. She adds that playing in green spaces is a great option for the up to 30 per-cent of children for whom medication isn't effective, or who have serious side-effects from it. These effects are well known to mom Shannon Gerard who says her son Will lost his appetite and about 16 pounds on the medication that he continues to use to manage his ADHD.

But the "Multimodal Treatment Study for ADHD" didn't consider playing in green spaces as a factor that could help treat the symptoms of ADHD, says Dr. Jain. Neither did the EUNETHYDIS 2nd International Conference held in 2012 when it examined non-pharmaceutical treatments for ADHD that included general physical activity. Dr. Matt Blackwood, a Mission, B.C., family physician with an interest in child and youth mental health issues, attended the meeting.

"All kids should spend time outdoors and in nature," says Dr. Blackwood, who is also on the B.C. ADHD Task Force. "It's simply a motherhood issue that no one could argue against." But he doesn't see it as a replacement to medication. "We need to ask, how much of the beneficial effects of nature in a study are a type of placebo effect, and how long will any effects last over time?"

Dr. Jain points out that most people seek out nature because of the sense of peace it creates. "It's an enveloping environment that brings about an emotional state of calm and our place in the world," he says. "We certainly don't get that when we are in the city with tall buildings." He adds that nature is "hugely sensory," with so many sights, smells and sounds that greatly appeal to people who have ADHD. There's a caveat, though: this doesn't mean nature can replace medication and behavioural medication therapy. "There's no way we can make the leap from spending time in nature to replacing or reducing medication."

Where Dr. Jain and Faber Taylor are aligned is that they—and many others—call for a more holistic look at treatments for ADHD. Dr. Blackwood and Dr. Jain stress to parents the importance of becoming educated about their child's condition and how they can support their son or daughter. Dr. Jain founded the Canadian Attention Deficit Hyperactivity Disorder Resource Alliance (CADDRA) (caddra.ca), which led to the creation of the Centre for ADHD Awareness, Canada (CADDAC) (caddac.ca)—a great online resource for parents.

Dr. Jain adds that certain sports that require concentration and discipline, such as judo, are excellent activities for kids with ADHD/ADD, as are competitive sports. He adds that "ADHD is rampant in pro sports and the athletic world. Olympic swimmer Michael Phelps is the poster boy for youth who have ADHD."

Faber Taylor best sums up the nature debate when she says it may not benefit every child, but there's no harm in trying the tool. "Daily small doses of green time are best for rejuvenating a child," she says. Faber Taylor also encourages parents to keep a journal to track their child's activities and note what type of physical environment the activities are done in. "Then note what moods and symptoms your child has afterwards," says Faber Taylor. Most importantly, "use that information to set your child up for success."

Kathryn Dorrell is a Toronto-based writer and editor who has written for a variety of professional and consumer publications and websites. She is passionate about mental health issues and loves the outdoors.

How viewing, being and "doing" in nature affects our health and well-being

By Sandra Moll, Rebecca Gewurtz and Emma Saltmarche

Terry Krupa, a member of the CrossCurrents *editorial advisory board, is involved in an initiative that is addressing how human activities are linked to mental health and well-being. One of the activity dimensions identified in the study is "connecting with nature," and an initial scoping review on the topic is under way. She put* CrossCurrents *in touch with principal investigators Sandra Moll and Rebecca Gewurtz at McMaster University, who have written this review of the literature for the journal.*

*I go to nature to be soothed and healed, and to have my senses put in order. —*John Burroughs

Over the past few decades, Canadians have become increasingly disconnected from the natural environment. Over 80 per cent of the population in Canada resides in urban centres—a number that has steadily increased over the past few decades (Morris, 2009). In addition, technology has changed our lifestyles, making it possible to do many things without leaving the comfort of our homes. According to a recent report by the Suzuki Foundation, 70 per cent of youth spend about an hour or less outside each day (Zorzi & Gagne, 2012). Concerns have been expressed about this disconnect with nature, with some arguing that this goes against our innate, biological need for connecting with other living organisms. The "biophilia hypothesis," proposed by Wilson (1984), argues that humans have an innate affiliation for nature and that this affiliation is fundamental to human development.

There is a large and growing body of research evidence that considers the health-promoting potential of exposure to and immersion in outdoor and natural spaces. Research from the fields of ecology, geography, urban planning, environmental psychology, occupational therapy and health promotion has contributed to our understanding of the links between nature and the health of individuals and communities. The purpose of this paper is to explore and reflect on research evidence regarding the impact of connecting with nature on mental health and well-being and to consider how this might inform clinical practice.

Connecting with nature, as conceptualized in this paper, may take a variety of forms, from simply viewing landscapes through a window to more active involvement such as walking outdoors or participating in outdoor adventure programs. In this paper, we consider three broad dimensions of nature-based participation; "viewing," "being" and "doing" in nature. We have adopted a broad view of nature, from natural forests, fields and lakes to urban green spaces, gardens and neighbourhood parks (Abraham, Sommerhalder & Abel, 2009).

Viewing nature

This first dimension of connecting with nature involves exposure to natural landscapes through observation. A number of studies have been conducted exploring the impact of viewing nature, whether through video images or through an outside window. Several experimental studies have been conducted, primarily with a student population, comparing the impact of watching videotaped images of nature scenes as opposed to urban images. Overall, viewing natural landscapes led to improved mood, better performance on attention tasks, and decreased stress responses (Berto, 2005; Hartig et al., 2002; Laumann et al., 2003; Ulrich et al., 2001). In addition to videotaped scenes, viewing nature through a window is reported to have beneficial effects. Studies of hospital patients recovering from surgery show that those who had a view of nature from the hospital window (as opposed to a view of a brick wall) had shorter hospital stays, and fewer pain medication requirements (Abkar et al., 2010; Tennesse & Cimprich, 1995; Ulrich, 1984). Similarly, studies of office workers have shown that workers who have a view of nature from their windows tend to have greater job satisfaction, attentional capacity and greater life satisfaction (Abkar et al., 2010; Ulrich, 1991). Short exposures to a view of natural surroundings have been described as a "micro-restorative opportunity," since it provides a sense of being away and allows our mind to wander, reflect and recuperate (Kaplan & Kaplan, 2011).

Being in nature

The next dimension of connecting with nature is one of being physically present and immersed in nature. It is well established that being in contact with nature can improve health, foster recovery from mental fatigue and stress, improve concentration and productivity, and lead to a more positive outlook on life (Maller et al., 2005). There are several studies that have examined the impact of being in close proximity to nature and the impact on mental health and well-being. For example, it has been shown that the availability of green space in the living environment (defined by a three-kilometre radius) has a strong positive effect on self-reported health and mental health, and has an even stronger effect for those living in urban neighbourhoods (de Vries et al., 2003). Furthermore, people exposed to a greener environment have been found to have lower levels of health inequality related to income deprivation (Mitchell & Popham, 2008). These authors suggest that exposure to green space can modify pathways through which low socioeconomic position can lead to poor health and disease.

Doing in nature

The third dimension of connecting with nature is that of doing—engaging in an activity in a natural or outdoor environment. Such activities could include walking, hiking, cycling or more intensive "ecotherapeutic" outdoor activity programs, and have widely recognized health-promoting benefits. For example, completing a relaxation activity in an outdoor environment has shown to have greater positive impact on energy levels and consciousness than relaxation indoors in a simulated natural environment (Kjellgren & Buhrkall, 2010). Outdoor relaxation reportedly leads to increased feelings of well-being and quality of life, renewed energy, "here-and-now" thinking and tranquility (Kjellgren & Buhrkall, 2010). Likewise, compared with indoor activity, outdoor-based walking programs have a more powerful impact on measures of revitalization, self-esteem, engagement and subjective vitality (Thomson Coon et al., 2011). Walking in an outdoor urban setting has also been shown to be equally health-promoting as walks in rural or wilderness environments on variables of stress, mood and mindset (Roe & Aspinall, 2011) and self-esteem and mood (Barton & Pretty, 2010). It has been reported that more active or rigorous participation in nature-based "doing" also yields some interesting health benefits, for example, participants of a 12-week ecotherapy program for people living with mental illness who spent three hours daily participating in walking, conservation efforts and environmental art-making reported experiencing improvement in perceived mental well-being (including increased confidence and self-esteem), physical health, knowledge and skills, and social skills following completion of the program (Wilson et al., 2010). These examples highlight the diversity of health-promoting benefits of spending time "doing" in outdoor, natural environments.

Mediating forces

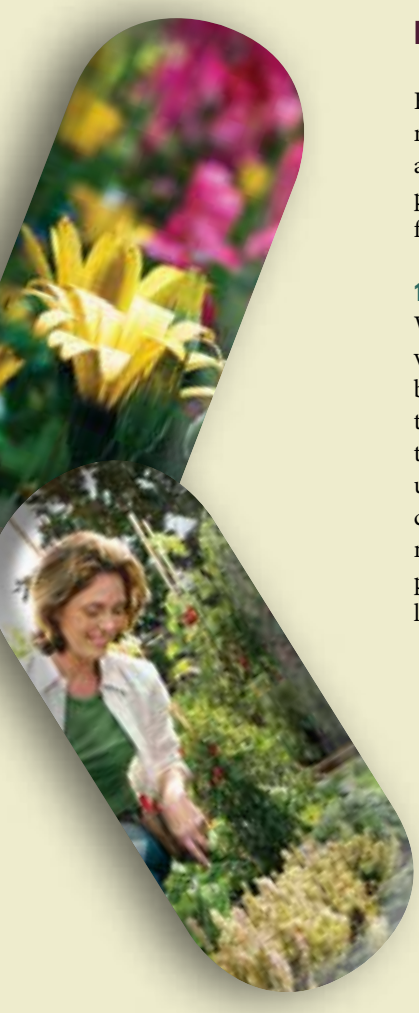
The research evidence points to many and varied health benefits that can be gained from viewing, being and doing in nature. However, it is important to consider the mediating forces that may impact, or even undermine, the health-promoting potential of any natural environment. Personal choice, socio-cultural relevance and accessibility are some of the key forces to consider.

Personal choice relates to the importance of a sense of autonomy and personal relevance in connecting with nature. Nature experiences that are intentionally chosen are more likely to lead to positive outcomes than experiences that are uninvited and perhaps unwelcome. Not all individuals are comfortable with outdoor experiences and may experience increased stress if they feel forced to participate in a situation they perceive to be difficult or unsafe. Lack of preparation for outdoor experiences, from not having the right equipment and clothing, to not having the

stamina or skill may lead to a negative experience and reluctance to participate. In contrast, environments that capture attention and are a match between an individual's intentions and desires are more likely to lead to positive health effects (Bratman et al., 2012). There may, for example, be a favourite place that a person instinctively seeks out to provide a sense of restoration. A sense of belonging or identification with the natural world can shape the extent to which an individual engages with nature (Meyer & Frantz, 2004).

Socio-cultural relevance is another important factor that may shape the health impact of nature experiences. Although many cultures around the world emphasize the role of nature in well-being and rejuvenation, there is cultural variation in perceptions of and engagement in nature-based activities. Images of nature have been found to relate to cultural background, education level and religion (Buijs et al., 2009). Immigrants are reported to be less likely to visit national parks or nature reserves (Buijs et al., 2009; Johnson et al., 1997). This trend is attributed to immigrants' preferences for a more developed, functional environment, as opposed to more of a natural wilderness environment. For some, camping outdoors might be seen as an escape from the grind of daily life, an opportunity for rejuvenation and relaxation, and/or an opportunity to challenge physical capacities. For others, it may be a reminder of time spent in refugee camps or temporary shelters, and the poverty and insecurity often associated with these conditions. Views of the relationship between humans and nature may also be shaped by cultural or religious beliefs (Bujis et al., 2009). An anthropocentric or human-centred view of the world, for example, is central to many Christian communities, whereas an ecocentric or nature-centred view is central to the beliefs of some eastern religions and Aboriginal communities (Bujis et al., 2009). These viewpoints may affect preferences for nature-based activities. An anthropocentric viewpoint, for example, may lead to preferences for acting on nature through functional tasks such as gardening or conservation activities, whereas a nature-centred viewpoint may lead to preferences for the aesthetic value of simply being in nature. It is important to be aware of the meaning and value of connecting with nature and how it is shaped by socio-cultural beliefs.

Accessibility is another important issue: a range of barriers may impede people's meaningful, healthy connections with nature. Safety is one key concern. Outdoor spaces in disrepair or that attract high levels of crime may be perceived as threatening or unsafe (Lee & Maheswaran, 2010). Women, for example, may be afraid of walking in forested areas, or children may be afraid of playing in public parks. Financial accessibility may be another concern. Although connecting with nature does not necessarily cost money, some outdoor activities (e.g., skiing, cycling), adventure-based programs and ecotherapeutic opportunities include registration and/or transportation and equipment costs.



Implications for practice

For individuals and communities, the health-promoting effects of viewing, being in, and "doing" in nature are manifold; from reducing anxiety and improving mood, to reducing social and health inequality. Exposure to and engagement in natural settings has immense health-promoting potential. The evidence presented in this paper is designed to encourage thoughtful reflection on the therapeutic potential connecting with nature holds for your clients, yourself as a health care worker, and the shared community in which we live.

1. Implications for our work with clients

When working with clients who have mental health or addiction issues consider the potential therapeutic value of viewing, being or doing in nature as a means of promoting health and well-being. It may, for example, be helpful to explore the extent to which clients have an opportunity to connect with nature, and the importance of this connection in their lives. This may be as simple as asking about their time use and examining the time spent in outdoor activities. The Connectedness to Nature Scale (CNS) is a 17-item scale that could be a useful tool determining a client's degree of emotional connection to nature (Meyer & Frantz, 2004). The tool could also be used as an outcome measure for nature-based programming. Opportunities for connecting with nature can be a valuable addition to a client's recovery plan, as long as these opportunities are accessible and personally and culturally relevant. Barriers to engaging in nature-based experiences, from lack of confidence to lack of awareness of opportunities, may need to be addressed.

2. Implications for taking care of ourselves

Connecting with nature is not only valuable for our clients, it can be valuable for health care providers as well. Health care work is stressful, and can lead to high rates of burnout. It is therefore important for practitioners to take time to reflect on their own opportunities for connecting with nature as a way of rejuvenating their spirit and enhancing their mental health.

3. Implications for our neighbourhoods and communities

There is mounting evidence highlighting the importance of connecting with nature for health and well-being. It has been argued that many health care settings are neither nurturing nor healing and that we need to re-incorporate the natural world in designing health care environments (Irvine et al., 2002). We also need to build communities, neighbourhoods and health centres that incorporate access to green space and ensure that all people have opportunities for viewing, being and doing in nature. For example, we need to advocate for sufficient windows when planning or renovating buildings, support the development and revitalization of parks that are safe and accessible, and ensure opportunities for green exercise through structures such as walking trails and outdoor recreation events for all ages and abilities. In addition, we are called to be environmental stewards to ensure that nature is preserved for future generations (Irvine et al., 2002).

In conclusion, there is considerable evidence for the value of nature or "vitamin green" in promoting and maintaining mental health. There are many opportunities for accessing this vitamin in our own lives and in the lives of our clients and families. In the words of Calvin Coolidge:

> ***There is new life in the soil for every man. There is healing in the trees for tired minds and for our overburdened spirits, there is strength in the hills, if only we will lift up our eyes. Remember that nature is your great restorer.***

Sandra Moll is an occupational therapist and assistant professor in the School of Rehabilitation Science at McMaster University. She has more than 23 years of expertise as a clinician, educator, researcher and advocate in the field of mental health and psychosocial rehabilitation. She completed her doctoral studies in the School of Public Health at the University of Toronto, supported by a CIHR training fellowship in Research in Addictions and Mental Health Policy and Services.

Rebecca Gewurtz is an occupational therapist and assistant professor in the School of Rehabilitation Science at McMaster University. She has clinical and research expertise in community mental health services, social services and employment supports. She completed her doctoral studies in Rehabilitation Science at the University of Toronto, and a diploma in Health Services and Policy Research from the Ontario Training Centre.

Emma Saltmarche completed her Master of Science degree in occupational therapy at McMaster University. She is a clinician in the field of geriatric mental health and a research co-ordinator with the School of Rehabilitation Science at McMaster University. She also volunteers as a ward co-ordinator and community advocate with Social Planning Toronto.

References

Abraham, A., Sommerhalder, K. & Abel, T. (2009). Landscape and well-being: A scoping study on the health-promoting impact of outdoor environments. *International Journal of Public Health, 55,* 59–69. doi:10.1007/s00038-009-0069-z

Abkar, M., Karnal, M., Maulan, S. & Mariapan, M. (2010). Influences of viewing nature through windows. *Australian Journal of Basic Applied Science, 4*, 5346–5351.

Barton, J. & Pretty, J. (2010). What is the best does of nature and green exercise for improving mental health? A multi-study analysis. *Environmental Science and Technology, 44,* 3947–3955.

Berto, R. (2005). Exposure to restorative environments helps restore attentional capacity. *Journal of Environmental Psychology, 25,* 249–259.

Bratman, G.N., Hamilton, J.P. & Daily, G.C. (2012). The impacts of nature experience on human cognitive function and mental health. *Annals of the New York Academy of Sciences, 1249,* 118–136.

Buijs, A. E., Elands, B. H. M. & Langers, F. (2009). No wilderness for immigrants: Cultural differences in images of nature and landscape preferences. *Landscape and Urban Planning.* doi:10.1016/j.landurbplan.2008.12.003

de Vries, S., Berheij, R.A., Groenewegen, P.P. & Spreeuwenberg, P. (2003). Natural environments–healthy environments? An exploratory analysis of the relationship between greenspace and health. *Environment and Planning A, 35*, 1717–1731. doi:10.1068/a35111

Hartig, T., Evans, G.W., Jamner, L.D., Davis, D.S. & Gärling, T. (2002). Tracking restoration in natural and urban field settings, *Journal of Environmental Psychology, 23*, 109–123.

Irvine, K., Warber, N. & Sara, L. (2002). Greening healthcare: Practicing as if the natural environment really mattered. *Alternative Therapies in Health and Medicine, 8* (5), 76–83.

Johnson, C. Y., Horan, P. M. & Pepper, W. (1997). Race, rural residence, and wildland visitation: Examining the influence of sociocultural meaning. *Rural Sociology,* 62, 89–110.

Kaplan, R. & Kaplan, S. (2011). Well-being, reasonableness and the natural environment. *Applied Psychology, Health and Well-being, 3* (3), 304–321.

Kjellgren, A. & Buhrkall, H. (2010). A comparison of the restorative effect of natural environment with that of a simulated environment. *Journal of Environmental Psychology, 30*, 464–472.

Laumann, K., Gärling, T. & Stormark, K.M. (2003). Selective attention and heart rate responses to natural and urban environments. *Journal of Environmental Psychology, 23,* 125–134.

Lee, A.C.K. & Maheswaran, R. (2010). The health benefits of urban green spaces: A review of the evidence. *Journal of Public Health, 33,* 212–222. doi:10.1093/pubmed/fdq068

Maller, C., Townsend, M., Pryor, A., Brown, P. & St. Leger, L. (2005). Healthy nature healthy people: 'Contact with nature' as an upstream health promotion intervention for populations. *Health Promotion International, 21* (1), 45–54. doi:10.1093/heapro/dai032

Meyer, F. & Frantz, C. (2004). The connectedness to nature scale: A measure of individuals' feeling in community with nature. *Journal of Environmental Psychology, 24*, 503–515. doi:10.1016/j.jenvp.2004.10.001

Mitchell, R. & Popham, F. (2008). Effect of exposure to natural environment on health inequalities: An observational population study. *Lancet, 372*, 1655–1660.

Morris, C. (2009). Federal perspectives on urban communities. CityScapes seminar presentation. Ottawa: Institute on Governance. Retrieved from http://hdl.handle.net/123456789/11269

Pieris, Y. & Craik, C. (2004). Factors enabling and hindering participation in leisure for people with mental health problems. *British Journal of Occupational Therapy, 67*, 240–247.

Roe, J. & Aspinall, P. (2011). The restorative benefits of walking in urban and rural settings in adults with good and poor mental health. *Health & Place, 17*, 103–113. doi:10.1016/j.healthplace.2010.09.003

Tennessen, C.M. & Cimprich, B. (1995). Views to nature: Effects on attention. *Journal of Environmental Psychology, 15*, 77–85.

Thompson Coon, J., Boddy, K., Stein, K., Whear, R., Barton, J. & Depledge, M.H. (2011). Does participating in physical activity in outdoor natural environments have a greater effect on physical and mental wellbeing than physical activity indoors? A systematic review. *Environmental Science & Technology, 45*, 1761–1772. doi:10.1021/es102947t

Ulrich, R.S., Simons, R., Losito, B., Fiorito, E., Miles, M. & Zelson, M. (2001). Stress recovery during exposure to natural and urban environments. *Journal of Environmental Psychology, 11*, 201–230.

Ulrich, R.S. (1984). View through a window may influence recovery from surgery. *Science, 224*, 42–421.

Ulrich, R.S. (1991). Effects of interior design on wellness: Theory and recent scientific research. *Journal of Health Care Interior Design, 3* (1), 97–109.

WHO. (1986). Ottawa-charter for health promotion. First International Conference on Health Promotion. Ottawa, Canada.

Wilson, E. O. (1984). *Biophilia.* Cambridge: Harvard University Press.

Wilson, N., Flemin, S., Jones, R. & Lafferty, K.K. (2010). Green shoots of recovery: The impact of a mental health ecotherapy programme. *The Mental Health Review, 15* (2), 4–14. doi:10.5042/mhrj.2010.0366

Zorzi, R. & Gagne, M. (2012). Youth engagement with nature and the outdoors: A summary of survey findings. The David Suzuki Foundation. Retrieved from: www.davidsuzuki.org/publications/downloads/2012/youth%20survey%20findings%20summary.pdf

The 11th International People Plant Symposium

What we missed

By Carolyn Morris

This fall, a group of people who believe in the healing power of plants got together at a castle in the Netherlands. They shared insights and research about the role of the natural world in wellness. *CrossCurrents* spoke to one of the organizers of the 2012 International People Plant Symposium, Annette Beerens, for some tips on greening mental health.

This was the 11th International People Plant Symposium, so it's not exactly new. But for those of us who've never heard of it, could you give us a bit of background?

Sure. The People Plant Council started in 1990 in the United States, when horticulture professors Diane Relf and Candice Shoemaker realized that there was much going on between health and nature, and how we as humans relate to the natural world. They wanted to get researchers and practitioners together. The council was a way of building bridges between organizations concerned about human health, as well as the health of Mother Earth. It's a forum for all those people with green thumbs to share their knowledge and their experience.

Those founders were at this symposium, and representatives of the International Society for Horticultural Science came—that's a large organization with more than 7,000 members all over the world. They cover everything that has to do with horticulture. In fact, all of the research that was presented at the symposium is published in their journal, *Acta Horticulturae*.

When I went to the previous IPPS, in Nova Scotia in 2010, I was asked to bring this symposium to Europe, along with my German colleague Konrad Neuberger, of the

German Association for Horticulture and Therapy. I'm not a researcher, I'm a practitioner with 20 years of hands-on experience. I thought that although the research is very interesting, it can sometimes be a little dry on its own, so I brought in a series of practitioners to do workshops. We brought in more liveliness with dancing and art. It helped get people to wake up a bit, and to be not only in the head but in the rest of the body as well.

We held the event at a castle in the east of the Netherlands called De Berckt. It has beautiful gardens with lots of old trees, and we chose that [site] over a venue with high-tech meeting rooms but little access to outdoor space. Most of the activities at the symposium were outside, although we had a tango night in the chapel.

We're fun people, because we're really outdoorsy—just like many Canadians!

Could you tell us about your own work in therapeutic gardens?

I started working at an organic therapeutic farm in Switzerland years ago. People would come with a variety of psychiatric problems, including burnout, and addiction issues. They would come and get into the work mode of the farm, and while that worked in the short term, I didn't feel that it was very effective in the long term. I didn't think people were free enough to deal with their personal issues. Over the years, I've come to find that people need to find their own mode.

So five years ago, I started my own therapeutic garden here in Nijmegen, in the east of Holland. It's 2,500 square metres—by Dutch standards that's really big, but not so by Canadian standards. Having studied horticultural therapy, I was influenced by the concept of the creation spiral, detailed in the book *Die Kreationsspirale. Wie wir Wünsche zur Wirklichkeit werden lassen können* by Dutch writer Marinus Knoope. It's a set of 12 steps to get from a wish to reality. This garden was my wish, and I succeeded in making it into reality by using these steps, and they are all portrayed in secluded spaces in the garden, although it's not a spiral but more of an oval, like an egg. For people who are really depressed, to have a wish is a big step. You have to work at building self-confidence to get to the first step, then comes imagining the wish, believing in the wish, expressing it, and so on.

Each step has an exercise, something you have to work through. The last area is for relaxation, and there's a hammock between a large oak tree and a chestnut tree. The garden is a balance between doing and being. There's freedom in the garden for people to find their own way through, and to experience non-judgmental observation—which is what mother nature shows us. If you have blue hair, white skin, black skin, purple dots on your coat it doesn't matter. Mother Nature says, "You're good as you are, right now. Everything that's there is allowed to be there. Everything that you express is exactly right in the moment." So if you can accept that—even though you think so lowly of yourself, and you are really down, Mother Nature says you're OK. And if you fall, you don't fall into nothingness, you fall onto Mother Earth, and she holds you up all the time. She does that unconditionally. That's my philosophy on this work.

That sounds beautiful—you would probably have to push me out of that last section of the garden, though. So tell me what we missed at this year's symposium. What was the biggest takeaway for you?

One of the highlights was Matthijs Schouten's keynote talk. He's a Dutch philosopher and a biologist who also teaches in Ireland. He spoke about the way humans perceive nature and how it's changed throughout history. At times, we've thought of ourselves as very different from nature. But we're really all related. We're made out of the same biochemical substances—all the trees and the plants, and animals. And this is important, because one of the most important factors for us to be happy is having some sort of connection with others. Relationships are really important. If we are not disconnected from all the plants and the animals—if we are like them, or they are like us—then we're much more connected to the world around us.

These days, we set ourselves apart as homo sapiens—our thing is that we can think, and fly to the moon. And that's really special, but in the meantime, we also have these huge problems on Earth, that we created, and if we simplify things and see that we are no different, that we are made of the same chemical substances as the outside, then the inside and outside don't have to be so different.

And plants and animals have their own set of problems to deal with as well, it's not just us.

Oh definitely. And many people are using metaphors from nature to talk about the problems and challenges in our lives. Another keynote speaker at the symposium, Willem Beekman, does that a lot. He's a Dutch biologist and botanist. He gave a great example of a caterpillar and its process of transformation. It starts with this bug just eating and eating. And when it's a cocoon, there's barely anything in a cocoon. It doesn't look like much at all, it's just potential. During the cocoon period, this butterfly that wants to be born has a golden moment from which the butterfly starts growing—where the incubation turns into a new birth. So when you talk about the process of change in our lives, there's a moment when what seemed impossible starts to be possible. You have this spark somewhere in your soul, where your life energy sits, even when you don't know that it's there. You

Mandala photograph by Noud te Riele

Hilde Backus gave workshops in therapeutic hiking at the symposium.

Annette speaks about a happening in her garden: "In the expression part of the garden, there's a mound of dirt, about 80 centimetres high. The exercise is to stand on the mound and look toward the meadow and announce your wish. I once had a lady who said what she really wanted was to be heard. So I crossed the meadow, about 100 metres away and I asked for her wish—she needed to shout "I want to be heard!" You could see the whole physics of this person change. She had been looking to the ground, her shoulders hunched—and she lifted herself up and projected. And the whole garden was working with her."

realize that you don't have to be stuck to the situation you're in, in which you're unhappy, but you have other options. You could change your situation.

Another participant, Hilde Backus, who gave several hiking workshops at the symposium, uses metaphors from nature a lot. She's a hiking coach, and counsels people who are tied up with work-related problems. She goes hiking with her clients and talks with them about what's going on and she uses metaphors that she encounters in the outdoors to help people reflect about what's going on in their particular situations.

There were also several scientific presentations. Among those that jumped out at me from the schedule was one about qualities in natural environments that help with people suffering from stress-related problems.

That particular presentation is from an outstanding program at the Swedish University of Agricultural Sciences, where there's a garden created for people to recover from stress-related mental health problems. It's called Alnarp. They've created a therapeutic garden and have been working with different atmospheres to trigger sensory reactions and help people get into the reflective mode, calling it nature-based rehabilitation. In a recent study, they carried out in-depth interviews with a few dozen clients, and a questionnaire on what "perceived sensory dimensions" they find the most therapeutic. It turns out that clients show a preference for the concepts of "refuge," "prospect" and "serene." And they identified certain areas of the garden they found particularly supportive in their recovery. The next step for the researchers is to analyze those specific locations to try to determine what characteristics these areas of the garden could have that could be important in healing.

There was a scientific presentation about "green care" in Poland. What was that about?

The researchers collected information about a series of "green care" farms in Poland. The goal was to get a glimpse of what types of things are happening in these programs, to characterize them. Poland is economically weaker than say Holland, Germany or France, and they're building up their social systems and creating opportunities for people with mental issues to get some help.

So these green care farms help build strong communities at a very grassroots level, just by helping people grow their own organic crops, make meals and eat together. Most of the farms are run with charity funding, and some are supported by Poland's health care system. In some cases, people from neighbouring areas with mental health issues are invited to participate, and one of the farms also invites homeless people to join.

There was also a presentation on horticultural therapy for prisoners.

Yes, in that study, a group of Korean researchers measured levels of depression, posttraumatic growth and cortisol of prisoners who participated in a horticultural therapy program before they were released back into regular society. There were 18 people in the study, and they were evaluated throughout the program, which involved planting vegetables and flowers, fertilizing and watering the garden, harvesting and flower decoration. The researchers found that horticulture therapy led to significantly lower levels of depression, and lower salivary cortisol levels, which is an indicator for depression and stress.

And there were many more presentations that looked intriguing. Where can people go if they want to find out more?

As I mentioned, all of the scientific studies will be published in the International Society for Horticulture Science's journal, *Acta Horticulturae*. And people can go to IPPS2012.com to look up the symposium's schedule, which includes information on all of the presentations. They can also buy our DVD, which includes interviews with presenters and many of the activities.

The next IPPS will be in Brisbane in 2014, where it will be part of the larger International Horticultural Congress. But since that's so far away, I'm planning to start a new European People Plant Symposium, and I'm scheduling the first one for September 2013, at the same castle. So this is my official invitation to that.

Workshop photograph by Noud te Riele

Readership Survey 2012–13

Welcome to the *CrossCurrents* 2012–13 Readership Survey. We're asking for a few moments of your time—12 minutes, in the majority of our test-runs—because with a journal such as *CrossCurrents*, we answer to you, the reader. So please let us know what you think, how we could do better, how we can be more useful to you.

When you return the survey—faxed, mailed, dropped off inter-office, scanned and e-mailed, or online—by **February 28, 2013**, you'll be entered in **three random draws for $100 worth of publications from the Centre for Addiction and Mental Health**. (Subscriptions to *CrossCurrents* are not included in this offer. This offer is not valid in conjunction with any other offer.)

If you would like to be eligible for the draw, please provide your name and telephone number or e-mail address:

_____ _____

PLEASE RETURN YOUR SURVEY VIA:

MAIL *CrossCurrents*
Jacquelyn Waller-Vintar, editor
33 Russell St., Room 4045
Toronto ON M5S 2S1

INTEROFFICE MAIL from almost any office at
1001 Queen St. W.,
250 College St.,
and many satellite offices.

FAX 416 595-6892 Attn: Jacquelyn Waller-Vintar

E-MAIL Jacquelyn.Waller-Vintar@camh.ca

ONLINE https://www.surveymonkey.com/s/crosscurrents

YOU AND YOUR SUBSCRIPTION

1. Please indicate your current profession (check one).
☐ Psychologist ☐ Nurse
☐ Social worker ☐ Student
☐ Family of addiction / mental health client ☐ Administrator
☐ Addiction / mental health client ☐ Librarian
☐ Addiction / mental health counsellor ☐ Psychotherapist
☐ Police / corrections worker ☐ Psychiatrist
☐ Community service provider ☐ Teacher
☐ Other (please indicate): _____

2. In what sector do you work?
☐ Health ☐ Library
☐ Law enforcement /corrections ☐ Education
☐ Community services, governmental
☐ Community services, non-governmental
☐ Other (please indicate): _____

3. How long have you been subscribing to *CrossCurrents*?
☐ Less than 1 year ☐ 1–2 years ☐ 2–3 years
☐ 3–4 years ☐ More than 4 years

4. Is your subscription private or work-supported (paid by the company you work for)?
☐ Private ☐ Work supported

5. How expensive do you think the subscription is?
☐ Very expensive ☐ Expensive ☐ Average
☐ Inexpensive ☐ Very inexpensive

6. This issue of *CrossCurrents* has 32 pages. For the last year, *CrossCurrents* has run at 24 pages. What is your preferred length for *CrossCurrents*?
☐ Less than 20 pages ☐ 20 to 28 pages
☐ 28 to 36 pages ☐ more than 36 pages

JOURNAL CONTENT

7. How satisfied are you with the amount of information available in *CrossCurrents* on mental health and addiction issues?
☐ Very satisfied ☐ Satisfied
☐ Somewhat dissatisfied ☐ Dissatisfied

8. What do you think about the depth of coverage in general?
☐ Substantive ☐ Too shallow
☐ Too academic ☐ Too casual

9. Do you find that the content of *CrossCurrents* is duplicated in other resources you use?
☐ Yes ☐ No

10. What do you think of the style and level of writing in *CrossCurrents* ?
☐ Too sophisticated ☐ Appropriate ☐ Too simple
☐ Other (please describe): _____
_____

11. What is your favourite feature of *CrossCurrents*?
Please choose the one that is the most interesting to you.
☐ Research Update ☐ Ethics column ☐ Focus articles
☐ Profile ☐ Last Word
☐ Other (please indicate): _____

12. What is your least favourite feature of *CrossCurrents*? Please choose one.
☐ Research Update ☐ Ethics column ☐ Focus articles
☐ Profile ☐ Last Word
☐ Other (please indicate): _____
☐ Why?: _____

13. What improvements, if any, would you make to *CrossCurrents*? This is a completely open-ended question, and you can check off as many of these examples as you like, but feel free to write in your own suggestions.
☐ Longer articles ☐ Shorter articles
☐ More focus section articles ☐ More news articles
☐ Fewer focus section articles ☐ Fewer news articles
☐ More sidebars with practical information
☐ More articles written by experts in the field
☐ Other (please describe): _____

14. How interested would you be in more coverage of global rather than local or national mental health and addiction issues?
☐ Very interested ☐ Somewhat interested
☐ Not very interested ☐ Not at all interested

15. What topics, if any, would you like to see added to *CrossCurrents*?
_____
_____

readership survey

16. We want *CrossCurrents* to educate our readers by including different voices. Please consider some new columns and sections that you might be interested in seeing, at least on a trial basis. Please check off how you feel about each one:

a. A first-person letter or short essay by a client about what their experience in the mental health system has been like.
☐ Definitely yes ☐ Yes, on a trial basis
☐ Yes, others might find it valuable ☐ No

b. A first-person letter or short essay from a family member about what their experience has been having a loved one in the mental health system.
☐ Definitely yes ☐ Yes, on a trial basis
☐ Yes, others might find it valuable ☐ No

c. Breakthrough moments: A first-person story from a clinician, counsellor, nurse or social worker that describes a turning point in their practice.
☐ Definitely yes ☐ Yes, on a trial basis
☐ Yes, others might find it valuable ☐ No

d. Letters to the editor
☐ Yes ☐ No
☐ Yes, with full letters and submitted articles in support or rebuttal

e. A nutrition column linked to the issue's theme
☐ Definitely yes ☐ Yes, on a trial basis
☐ Yes, others might find it valuable ☐ No

f. Other (please describe):
_____

17. Each issue of *CrossCurrents* focuses on a particular theme. How relevant do you find the focus themes in *CrossCurrents*?
☐ Very relevant ☐ Relevant
☐ Somewhat relevant ☐ Not relevant

18. Are there any particular focus themes you would like to see covered in the future? Please indicate:
_____

19. How would you like to see the visual aspect of *CrossCurrents* changed, if at all? You can check more than one:
☐ More images ☐ Fewer images ☐ More sidebars
☐ Fewer sidebars ☐ No changes ☐ Larger text size
☐ Other (please describe): _____

PRINT AND ONLINE FORMATS

20. We assume you use online journals when doing research. For these questions, please think of reading in your field outside a particular research topic Do you read any journals or magazines online?
☐ Yes ☐ No

21. If yes, how much of each issue of the online publication do you read?
☐ All ☐ About half
☐ Less than half ☐ One specific article

22. If yes, please name as many of these online publications as you can.
_____
_____

23. Have you visited www.camhcrosscurrents.net?
☐ Yes ☐ No

24. How do you use the website?
☐ Read the current issue ☐ Read past issues
☐ Search issues for specific information

25. What would be the ideal format for *CrossCurrents*?
☐ Hard copy with subscription, plus free access to a PDF version of the print issue (as it now is)
☐ Hard copy subscription and free access to an enriched online version
☐ Free online access to an enhanced version (no print version option)

26. How likely would you be to read *CrossCurrents* if it were only available online rather than as a paid print version?
☐ Very likely ☐ Somewhat likely ☐ Not likely

27. How much of each print issue do you read?
☐ All ☐ Most ☐ A bit
☐ About half ☐ Less than half

28. How much of each issue do you think you would read if it were available as an online magazine only?
☐ All ☐ Most ☐ A bit
☐ About half ☐ Less than half

29. Please share your thoughts on print vs. online magazines, their readability, versatility and accessibility.
_____
_____

YOUR RELATIONSHIP WITH *CROSSCURRENTS*

30. How valuable is *CrossCurrents* to you? Please check one.
☐ Very valuable ☐ Valuable
☐ Slightly valuable ☐ Not valuable

31. Do you ever use your *CrossCurrents* issue as a reference after you have read it?
☐ Yes ☐ No

32. If yes, how often do you use a single issue as a reference in a year?
☐ 1–3 times ☐ 4–6 times ☐ More than 7 times

33. How many other people read your copy of *CrossCurrents*?
☐ 0 ☐ 1 ☐ 2
☐ 3 ☐ 4 ☐ 5 or more

34. How long do you keep your issue around?
☐ 1 to 2 weeks ☐ 3 to 4 weeks
☐ A couple of months ☐ More than three months

35. Where does your issue reside before you store it on a shelf or in a magazine box? Check as many as apply for you:
☐ My briefcase/backpack ☐ My home
☐ Common area for staff at work ☐ Waiting room
☐ My office or client meeting room ☐ My work desk

36. Would you be interested in being part of an informal reader advisory board? It would involve e-mail exchange on ideas and issues in mental health and addiction, as well as new directions for the journal and the website, likely four times a year.
☐ Yes, here is my e-mail _____
☐ Maybe, but I need more information, e-mail me_____
☐ Maybe, I'll have to think on it
☐ Sounds interesting, but no thank you ☐ I don't have time
☐ I like to receive it purely as a reader

Thank You!

Ohen:ton Karihwatehkwen

Giving greetings to the natural world

By Rod McCormick

Ohen:ton Karihwatehkwen is a Haudenosaunee (Iroquois) expression that means "the words that come before all else." It is also referred to as "the thanksgiving address," or "giving greetings to the natural world." For the Haudenosaunee people, the proper way to open any gathering is to recite the thanksgiving address in which we thank our world as relatives. Those relatives may include Mother Earth, sky father, grandmother moon, and our brothers and sisters in the plant and animal regions. It is appropriate that "the words that come before all else" should also be the words used as the "last word" in this issue of *CrossCurrents* that focuses on mental health and nature.

Our relationship with nature is cyclical with no clear beginning or end. The perceived separation between humans and nature is a relatively recent phenomenon in Euro-western culture and is not a separation that exists for the indigenous peoples of what we call Turtle Island (North America). In spite of the changed Western perspective regarding healing and nature, the Aboriginal worldview of respect for the natural world and its central place in healing customs and practices has remained constant and continual.

For many Aboriginal people, the spiritual connection exists between nature and humans because humans are seen as part of nature. All of creation is seen as being equal and part of the whole and is therefore equal in the eyes of the Creator. Connection to nature often helps Aboriginal people feel part of something much larger as well as feel less lonely, stronger, more grounded and more secure. These quotes—which I culled from interviewing Aboriginal people about their healing journeys—illustrate some of the healing benefits of nature.

Nature is grounding and connecting

"Lots of times, I will go and just sit under a tree with my back against a tree, knowing the roots are there, and the roots are connected and that I am also a part of that tree. I feel solid then. Talk about being supported—wow."

Guidance

"The thing that helped a lot was water. I would go to the river or to the lake…. I would just sit by the river and watch the water flow. The water was continuously flowing whatever happened, even if there was a snag or something it would just flow around it. If a rock was sticking out of the surface, the water would flow around it. It made me feel that's how I should be and that I should carry on."

Nature is cleansing

"I have used water to cleanse myself emotionally and spiritually too. I wash my hands, my eyes and ears, and I ask for wisdom and to listen and hear things and see things clearly. This is a technique that I was taught as a child and I still use it to heal myself."

Perspective

"I have climbed a lot of mountains in my life. It is hard work but it is worth it because when I am on top I can look down at the world and see things in a very different way. Anything seems possible when I am above the world. I walk back down to my life then, knowing that the obstacles I face are not as big as they were before."

Nature is calming

"I sit by the water when I'm really upset. The river behind our house was really rough. I imagined the troubled water just taking all of my problems away. The rougher the water, the calmer I felt because it pulls the problems away faster."

Nature is empowering

"When I walk in an old growth forest I am able to absorb a small amount of the enormous energy that is there. Those big old trees are our elders and they possess energy and wisdom that they can share with those of us who walk the earth."

When asked about how Aboriginal peoples view mental health, it is sometimes hard to explain since the western concept of mental health comes more from an illness perspective and its focus is more on the individual. An indigenous concept of well-being recognizes the importance of connections to family, community and culture, and to the natural and spiritual world. As a last word and a way of summarizing this philosophy, I quote the refrain used in the thanksgiving address: "Onen enska ne-io-kwa-ni-kon-ra" Now our minds are one.

Dr. Rod McCormick is a Mohawk (Kanienkehake) psychologist and counselling psychology professor at the University of British Columbia. Dr. McCormick works a clinician/consultant/researcher in Aboriginal mental health.

CANADA

CMHA Bottom Line Conference 2013
Celebrating a New Era of Workplace Mental Health: Putting National Standards into Practice
February 27–28, 2013
Vancouver Convention Centre East,
Vancouver, B.C.
tel 604-688-3234, ext. 244
toll-free 1-800-555-8222
e-mail conference@cmha.bc.ca
http://bottomlineconference.ca

The 5th International Conference on Fetal Alcohol Spectrum Disorder
February 27–March 2, 2013
The Westin Bayshore, Vancouver, B.C.
tel 604 822-2801
e-mail marketing.ipce@ubc.ca
brochure: http://www.interprofessional.ubc.ca/fasd/fasd2013_brochure.pdf
registration: http://www.interprofessional.ubc.ca/FASD/registration.aspe-mail marketing.ipce@ubc.ca
www.interprofessional.ubc.ca/FASD

3rd National Mental Health Conference
Mental Health Disorders: Challenges in the Criminal Justice System, Education System & Aboriginal Communities
March 19–21, 2013
Delta Hotel, Winnipeg, Manitoba
tel 650 888-2654
e-mail
rebecca@2013mentalhealthconference.com
http://2013mentalhealthconference.com

9th Annual Pacific Forensic Psychiatry Conference
Mental Health and the Justice System: Implications and Applications of Treatment, Research, Policy and Law
March 20–22, 2013
Fairmont Hotel Vancouver, B.C.
tel 604-524-7509
e-mail bbell@bcmhs.bc.ca
www.bcmhs.ca/Education/RVHConferences.htm

Society for the Study of Psychiatry and Culture Annual Conference 2013 (SSPC 2013)
Shame and Silence: Understanding the Stigma of Mental Illness
May 3–5, 2013
Delta Chelsea Hotel, Toronto, Ontario
http://psychiatryandculture.org

Grounding Trauma 2013
Emerging Ideas & Progressive Approaches
May 7–9, 2013
Nottawasaga Inn, Alliston, ON
tel 705-749-6145
e-mail gt@cast-canada.ca
www.cast-canada.ca

Canadian Public Health Association 2013 Annual Conference
Moving Public Health Forward: Evidence, Policy, Practice Conference
June 9–12, 2013
Ottawa Convention Centre, Ottawa, ON
tel 613-725-3769
www.cpha.ca/en/conferences/conf2013.aspx

7th Annual Quality Worklife Quality Healthcare Collaborative Summit (QWQHC Summit)
June 12, 2013
Sheraton on the Falls, Niagara Falls, Ontario
e-mail loman@cchl-cls.ca
www.qwqhc.ca

Addiction & Mental Health Research Showcase 2013
Creating Connections: Innovations in Addiction and Mental Health Research
September 11–13, 2013
Coast Plaza Hotel, Calgary, Alberta
www.mentalhealthresearch.ca

Canadian Psychiatric Association 63nd Annual Conference
September 26–28, 2013
Ottawa Convention Centre, The Westin Ottawa, Fairmont Chateau Laurier
Ottawa, Ontario
tel 613 234-2815, ext. 242
e-mail conference@cpa-apc.org
www.cpa-apc.org

Issues of Substance 2013
From Knowledge to Know-how: Learn. Inspire. Change.
November 4–6, 2013
Ottawa, Ontario
www.issuesofsubstance.ca

UNITED STATES

International Neuropsychological Society 41th Annual Meeting
February 6–9, 2013
Hilton Waikoloa Village, Waikoloa, Hawaii
tel 614 263-4200
e-mail polly.tasset@gmail.com
www.the-ins.org/41st-annual-meeting-hawaii

American Association for the Advancement of Science 2013 Annual Meeting
The Beauty and Benefits of Science
February 14–18, 2013
Hynes Convention Center, Boston, Massachusetts
tel 202 326-6450
e-mail meetings@aaas.org
www.aaas.org/meetings

American College of Psychiatrists Annual Meeting
Culture and Neurosciences in Psychiatry
February 20–24, 2013
Grand Hyatt Kaua'I, Hawai'i
tel 312 662-1020
e-mail angel@ACPsych.org
www.acpsych.org/meetings-and-news/annual-meeting

21st World Family Therapy Congress
Working with Families: Whole or Parts
February 20–23, 2013
Disney's Coronado Springs Resort, Lake Buena Vista, Florida, U.S.A.
e-mail info@ifta-congress.org
www.ifta-congress.org

11th Annual NorthWest PBIS Conference
Hands Across the Water: Providing Support to Children, Students, Families & Educators
February 27–March 1, 2013
Hilton Eugene Hotel & Conference Center, Eugene, Oregon
e-mail conference@pbisnetwork.org
www.pbisnetwork.org

American Association for Geriatric Psychiatry's 2013 Annual Meeting
Finding the Golden Years at the Dawn of a Silver Age: Tools for Geriatric Mental Health Prospectors
March 14–17, 2013
JW Marriot, Los Angeles, California
tel 301-654-7850 ext. 10
e-mail registration@AAGPonline.org
www.aagponline.org

Anxiety Disorders and Depression Conference
Anxiety and Depression: Technology and New Media in Practice and Research
April 4-7, 2013
Hyatt Regency La Jolla at Aventine,
La Jolla, California
www.adaa.org/resources-professionals/conference

2013 National Council Mental Health and Addictions Conference
National Council for Behavioral Health
April 8–10, 2013
Caesars Palace, Las Vegas, Nevada
www.thenationalcouncil.org/cs/conference

From the New Socialist Person to Global Mental Health: the Psy-ences and Mental Health in East Central Europe and Eurasia
April, 29–30, 2013
University of Chicago, Chicago, Illinois
e-mail eraikhel@uchicago.edu.
http://ceeres.uchicago.edu/cfp_mentalhealth

American Psychiatric Association 166th Annual Meeting
May 18–22, 2013
San Francisco, California
www.psychiatry.org/learn/annual-meeting

Mental Health America 2013 Annual Conference
Why Wellness Works: Breakthroughs and Pathways to Whole Health
June 5–8, 2013
Gaylord National Hotel & Convention Center, National Harbor, Maryland
tel 703-838-7523
aparedes@mentalhealthamerica.net
www.mentalhealthamerica.net

ABROAD

Dementias 2013: The 15th National Dementia Conference
February 7–8, 2013
The Institute of Engineering & Technology (IET)
Savoy Place, London, United Kingdom
tel +44(0)20 7501 6762
e-mail conferences@markallengroup.com
www.mahealthcareevents.co.uk/dementias2013

The First Joint Meeting ADHD Worldwide
February 27–March 1, 2013
David Intercontinental Hotel, Neve Tzedek,
Tel Aviv, Israel
tel +972-3-7610805
e-mail: tali10@ofakim.co.il
www.adhdworldwide2013.com

International Congress of the World Federation for Mental Health
Crises and Disasters: Psychosocial Consequences
March 6–9, 2013
Royal Olympic Hotel, Athens, Greece
Tel +30 210 3634 944
e-mail info@era.gr
www.psychcongress2013.gr

Bioethics Conference: Global Emerging Issues
May 8–9, 2013
International Medical University (IMU)
Bukit Jalil, Kuala Lumpur, Malaysia
e-mail bioethics@imu.edu.my
www.imu.edu.my

21st World Congress Social Psychiatry (WASP 2013)
June 29–July 3, 2013
Reitoria Universidade de Lisboa,
Lisbon, Portugal
e-mail info@wasp2013.com
www.wasp2013.org

The 17th World Congress of the International Union of Anthropological and Ethnological Sciences
August 5–10, 2013
University of Manchester, United Kingdom
e-mail John Gledhill, conference@iuaes.org
www.iuaes2013.org

3rd Asia Pacific Regional Conference of the International Association for the Scientific Study of Intellectual and Developmental Disabilities
August 22–24, 2013
Waseda University, Tokyo, Japan
www.iassid.org
conferences

Conferences is a free service. All notices are considered for publication, space permitting. Contact:
CrossCurrents, 33 Russell St. Toronto, Ontario, Canada, M5S 2S1;
fax 416 595-6892
e-mail jacquelyn.waller-vintar@camh.ca

ISSN 1481-3122

9 771481 312005 01

camh
Centre for Addiction and Mental Health
Centre de toxicomanie et de santé mentale

33 Russell Street
Toronto, Ontario
Canada M5S 2S1

Publications Mail Agreement Number /
Envoi de publications – convention de vente nº
40005034