

# CULTIVATE

FLORIDA HORTICULTURE FOR HEALTH NETWORK

Summer 2024 Volume 4 Issue 3

[FLHort4Health@outlook.com](mailto:FLHort4Health@outlook.com)

The Florida Horticulture for Health Network's vision: To promote activities and connect organizations to each other and resources that use horticulture to improve health including therapeutic horticulture and horticultural therapy, landscapes for health, nature, emerging professional support, allied horticulture and health services, community and school gardens, and food action initiatives.

## CONTENTS

- 1 Therapeutic Techniques Applicable to People-Plant Programming
- 5 Synthesizing Recent Research: Health, Nutrition & Plant-Based Activity
- 7 A Workshop for Wellness at Fairchild Tropical Botanic Garden
- 9 American Colleges Support Students' Health & Well-Being Through Nature Engagement Programming On & Off Campus
- 11 Campus Nature Rx



## Therapeutic Techniques Applicable to People-Plant Programming

Text & photos by Lesley Fleming, HTR & Eva Creus, DVM, PhD

Professionals in therapeutic disciplines utilize a variety of therapeutic techniques when working with clients. Some techniques transcend disciplines, others are specific to a particular field. Some require specialized training. Many techniques are applicable to health services where people-plant programming is used for recreation or treatment purposes.

**Therapeutic communication**, a technique used by all therapeutic professionals, refers to interactions, verbal and non-verbal, that occur between health care professional and client, with the intent of enhancing trust, safety, comfort and health of the client. These can include active listening and prompting techniques (Morgan, 2019).

**Therapeutic alliance** refers to the bond created between therapist and client. The development of a therapeutic alliance requires the health care professional to possess core competencies relating to strong interpersonal skills, the capacity to demonstrate empathy, acceptance, and genuineness, as well

as clinician knowledge of theory sufficient to elicit client response that will create a bond as a foundation for improved health and goal-oriented outcomes (Sultanoff, 2023).

**Therapeutic process** refers to a multi-stage methodology, often utilizing a formalized treatment plan including assessment, goal-setting, treatment activity, and evaluation of outcomes. The treatment process may be interdisciplinary (Fleming, 2017a).

**Behavioral psychotherapy techniques**, part of cognitive behavioral therapy (CBT) include: modelling, reinforcement programs, relaxation training, behavioral trial, and exposure techniques. Most often used by psychologists who have extensive training in their use, some of the techniques like modelling and relaxation training are used by others in the therapeutic community including cancer specialists, social workers, special education teachers and recreation therapists (Sommers-Flanagan & Sommers-Flanagan, 2018). Other classic psychology techniques offer a range of therapeutic tools: abreaction (patient has a verbal emotional purge related to situation guided by the therapist); clarification; confrontation; and interpretation.

**Laughter therapy** techniques help “clients shift their emotional distress, undesired behavior, and negative thinking” (Sultanoff, 2023). The modality takes several forms: laughter therapy—where the natural physiological process of laughter relieves physical and emotional stress and discomfort; laughter yoga; and therapeutic humor/humor therapy—laughter and smiling used to help people heal and escape from burdensome thoughts or feelings (Fleming, 2017b).

**Mindfulness**, referring to an individual’s self-regulation of attention to experiences in the present moment with curiosity, openness, and acceptance, is a technique and practice used in therapy. Several forms of clinical mindfulness-based interventions (MBI), (mindfulness-based stress reduction, mindfulness-based cognitive therapy) as well as non-clinical mindfulness-based therapies like meditation and mindfulness-based art therapy and nature-based mindfulness interventions, all non-pharmacological techniques, can be used in combination to reduce anxiety/depression, promote stable disposition and life satisfaction (Campos et al., 2016; Djernis et al., 2019).

**Polyvagal-informed therapy**, based on Porges’ polyvagal theory, provides an understanding of human functioning where physiological and psychological inputs are involved in a continual cycle of mobilization, disconnection and social engagement in a hierarchical model (Porges & Dana, 2018)

**Trauma-informed care** uses a comprehensive approach that recognizes the likelihood the person has experienced trauma, may have a history and symptoms of trauma, and re-traumatization may occur. Health services deliver care based on “core principles of safety, trustworthiness + transparency, peer



support, collaboration, empowerment, humility + responsiveness” where clinical and organizational practices/culture work together (Buffalo Center for Social Research, 2024).

**Somatic-oriented techniques** address trauma-induced instability in the body’s nervous system manifested by negative physical and emotional effects. Mind-body exercises are used to promote emotional change, and can include sensory and/or kinetic awareness, reiki, and somatic experiencing among others, these incorporating both psychotherapy and physical therapies. (Thomas, 2018; La Rocque, 2019).

**Motivational interviewing** is a collaborative counselling technique that encourages clients to change (often when they are ambivalent about doing so), motivating them using four principles (RULE): “Resist the righting reflex; Understand the patient’s own motivations; Listen with empathy; Empower clients” (Hall et al., 2012).

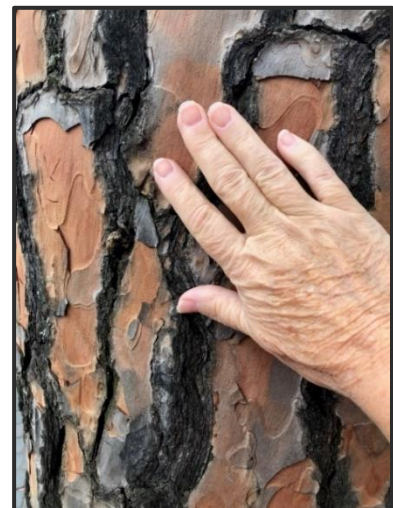
### **Therapeutic Techniques Used in People-Plant Programming**

**Adaptive gardening techniques** focus on strategies and methods for making gardening tasks easier based on physical and intellectual capabilities of the client. Hand on hand positioning, seated gardening chairs, vertical gardens and gardening from a standing position, raised beds with ledges for sitting, lightweight watering cans and barrier-free garden areas are a few of many examples. Tools attached to braces, use of children’s tools with adults, lightweight tools made of composite materials, and absence of pointed/ sharp/ or cutting tools (for specific populations) are techniques used for plant-based activities (Morgan, 2019; Fleming, 2013).

**Experiential activity**, also known as hands-on activity, is the foundational technique used in horticultural therapy and people-plant programming. In contrast to talk therapy, experiential techniques or activities where plant or gardening activities are used to achieve specific health outcomes involve the client in active (and at times passive) activity.

**Aromatherapy** and the use of aromatic oils from botanicals are used to improve psychological and physiological well-being using topical applications, aerial diffusion, and direct inhalation. Empirical studies have demonstrated that smell can influence the brain’s limbic and olfactory systems (Dechen, 2020; John Hopkins Medicine, 2024).

**Sensory stimulation** techniques are used to evoke client response based on sensory processing involving behavior, neurological thresholds and self-regulation (Gabaldo, 2019). Smelling, touching, and tasting plant fragrances, textures and flavors to elicit emotions or memories are applications used by therapeutic recreation and therapeutic horticulture practitioners. Recent HT articles include interoception, proprioception and vestibular (balance) senses, sensory therapy gardens, and updated interventions with children (Fleming & Grimes, 2023; Yun et al, 2018; Altuntas, 2020).



**Neurosequential approach** of therapeutic engagement targets brain regions to improve the functioning of subcortical brain systems. A horticultural therapy application, at Pacific Quest Hawaii, targets earlier-developing brain regions for treatment of adolescents and young adults with emotional

and behavioral difficulties, using an integrative approach involving experiential learning, rites of passage, healthy community living and clinical intervention (Slagle, 2019).

- Altuntas, a. (2020). The use of medicinal and aromatic plants in landscape architecture: Sensory therapy gardens. *Research in Medicinal and Aromatic Plants*, 81.
- Campos, D.C., Bretón-López, J., Botella, C.S., Campayo, J.G., Demarzo, D., & Baños, R.M. (2016). Meditation and happiness: Mindfulness and self-compassion may mediate the meditation–happiness relationship. *Personality and Individual Differences*, 93, 80-85.
- Dechen, S. (2020). The future of aromatherapy: Professional compendium. Aroma Apothecary Healing Arts Academy.
- Djernis, D., Lerstrup, I., Poulsen, D. et al. (2019). A systematic review and meta-analysis of nature-based mindfulness: Effects of moving mindfulness training into an outdoor natural setting. *International Journal of Environmental Research and Public Health*, 16(17), 3202.
- Fleming, L. & Grimes, K. (2024). [Active and passive engagement with plants: Incorporating interoception, proprioception and vestibular senses for therapeutic outcomes](#). *Cultivate*, 4(1).
- Fleming, L. (2013). Recent trends in adaptive gardening tool use in HT settings. *AHTA News Magazine* 41(1), 12-13.
- Fleming, L. (2017a). Practitioner forum: Assessment, goal-setting, activities & measuring outcomes. *MAHTNMatters*.
- Fleming, L. (2017b). Laughter therapy and horticultural therapy: Cross-pollination. *Journal of Therapeutic Horticulture*, 26(1).
- Gabaldo, M. (2019). Perspective and technique: Sensory processing in Haller, Kennedy & Capra (Eds.), *The profession and practice of horticultural therapy*. CRC Press.
- Hall, K. Gibbie, T., & Lubman, D.I. (2012). Motivational interviewing techniques – facilitating behaviour change in the general practice setting. *Aust Fam Physician*, 41(9).
- John Hopkins Medicine. (2024). Aromatherapy: Do essential oils really work? <https://www.hopkinsmedicine.org/health/wellness-and-prevention/aromatherapy-do-essential-oils-really-work>
- LaRocque, C. (2019). Program example: The interface between horticultural therapy trauma treatment and somatic-oriented mental health therapy in Haller, Kennedy & Capra (Eds.), *The profession and practice of horticultural therapy*. CRC Press.
- Morgan, S. (2019). Considerations and adaptations to safely accommodate program participants in Haller, Kennedy & Capra (Eds.), *The profession and practice of horticultural therapy*. CRC Press.
- Porges, S.W. & Dana, D. (2018). *Clinical applications of the polyvagal theory: The emergence of polyvagal-informed therapies*. W.W. Norton.
- Slagle, T. (2019). Program example: Neurosequential approach to horticultural therapy in Haller, Kennedy, Capra (Eds.), *The profession and practice of horticultural therapy*. CRC Press.
- Sommers-Flanagan, J. & Sommers-Flanagan, R. (2018). *Counseling and psychotherapy theories in context and practice: Skills strategies, and techniques*. John Wiley & Sons.
- Sultanoff, S. (2023). [How humor heals: The therapeutic nature of humor in psychotherapy](#). *The Integrative Therapist*, 9(1).
- Thomas, J. (2018). [What is somatic therapy and how does it work?](#) *Betterhelp*.
- Yun, H.S., Yun, S.Y., & Choi, B.J. (2018). Effects of horticultural activities designed to stimulate five senses on the sensory development of children. *Journal of People, Plants, and Environment*, 21(5), 369-378.

This updated version of Fleming’s 2018 article published by the Hong Kong Therapeutic Horticulture Association expands on techniques being used in horticultural therapy and people-plant programming. Author/practitioner Lesley Fleming’s recent published work has explored therapeutic techniques, goals, and self-regulation. Eva Crues’ contribution on mindfulness is based on her training in HT & a Master’s degree in Mindfulness (University of Zaragoza). Eva is cofounder of the Spanish Association in Social and Therapeutic Horticulture ([La Asociación Española de Horticultura y Jardinería Social y Terapéutica](#), AEHJST).

## Synthesizing Recent Research: Health, Nutrition and Plant-Based Activity

Text by Lesley Fleming, HTR

Graphics by Plant-based Canada & Plant-based Prevention of Disease National Conference

Research has validated nutrition as an important health determinant. The scope of research and research topics continue to expand exponentially. Plant-based nutrition is an area of substantial research currently, as is nutritional cognitive neuroscience and impacts on specific areas of health like brain fatigue, mood, and inflammation. Nutrition derived from plants is being investigated in relation to specific health conditions including asthma, hypertension management and cardiovascular outcomes, kidney disease, diabetes, breast and other cancers (Satija & Hud, 2018; Schulze et al., 2018; Morin et al., 2020; Trautwein & McKay, 2020; Alwarith et al., 2020; Almarzooq et al., 2023; Carrero et al., 2020; DeBruyn et al., 2020; Keaver et al., 2022; Limon-Miro et al., 2021). Studies on specific populations—such as American Indians and diabetes, Kenyans and their indigenous vegetables, aging populations and their nutritional behavior patterns—are shedding light on the correlations between diet and health (DeBruyn et al., 2020; Ornelas et al., 2021; Bokelmann et al., 2022; Dominguez et al., 2024).

Prominent within the nutrition field, evident in research topics and expanding interest in business opportunities, are plant-based foods, plant protein, plant protein diversity, plant substitutes for cow milk and meat, and the promotion of plant-based diets (Ahnen et al., 2019; Gordon et al., 2023; Hertzler et al., 2020; McClements, 2020; Nosworthy et al., 2023; Salomé et al., 2020; Taifik et al., 2019; Toribio-Mateas et al., 2021; Verduci et al., 2019). Organizations like *Plant Based Foods Association*, and national and international [conferences on plant-based foods/nutrition/prevention of diseases](#) are emerging in greater numbers.

Issues like access to nutritious food, school-based nutrition programming and nutrition literacy for students, farm to school programs and related activity continue to be important in the nutrition-health sector (Angeles-Agdeppa et al., 2019; Charlton et al., 2021; de Medeiros et al., 2019; Kim & Park, 2020; Lai et al., 2021; Prescott et al., 2020; Turner & Calvert, 2019; Vamos et al., 2021). Impacts on nutrition, food security, and food consumption were exacerbated during the pandemic; research on COVID-19 highlighted specific issues. (Refer to the Florida Horticulture for Health Network's Resource Hub [Pandemic Gardening](#) section). Strategies like nutrition counseling, therapeutic horticulture, food Rx models, nutrition education centers (Ikendi et al., 2023), and food literacy continue to play a role in health across populations, with particular focus on people with food and nutrition insecurity. Newer research in the field of nutrition, seeking to address food security has included studies on mineral nutrients in plants, underutilized plant foods like sweet potato, edible insects, and nutritional value of food in food pantries (Khan et al., 2023; Kim et al., 2021; Li et al., 2023; Simmet et al., 2017).

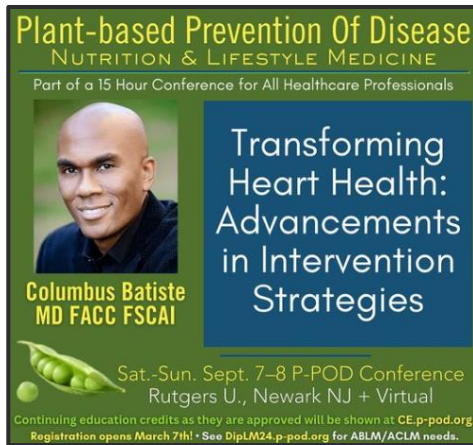
More recent research has investigated nutrition-focused topics impacting health like the role of taste and texture, cultural nutrition/foodways (MIPLATO) (Weibe, 2021), pros and cons of vegetarian diets (Schürmann et al., 2017), and personalized nutrition (Cook, 2024). Production of phytochemicals and nutraceutical potential from plants - stone fruits among them, is currently an area of interest (Lara et al., 2020; Manivannan et al., 2020; Singh et al., 2023). Clinical utilization of plant-based nutrition and fasting protocols as a novel therapy has emerged (Jamshed et al., 2024) as have university courses and certificates in plant-based nutrition and sustainable agriculture (Consumnes River College, California Dept. of Education, University of Guelph).

Investigations into specific plants and their role in nutrition and health appear to be increasing including lemongrass, indigenous vegetables, microgreens, quinoa greens, nuts (and nut consumption), nightshade vegetables, watermelon, dandelions, prickly pear, ginko seeds, ancient wheats and wild edible plants (Adhikary et al., 2024; Bokelmann et al., 2022; Di Gioia et al., 2022; Gómez et al., 2024; [Kim et al., 2017](#); Kuang et al., 2023; Dhuli et al., 2023; Liu et al., 2021; Roumia et al., 2023; Tharmabalan, 2023).

Previously identified developments related to nutrition and food—food is medicine movement and produce prescription programs—are seen as important on-going activity in this sector (Fleming et al. 2022).

References can be found on the Florida Horticulture for Health Network’s Resource Hub: [Food, Nutrition and Food Action category: Nutrition subset.](#)

*As part of the Florida Horticulture for Health Network’s Resource Hub 2024 revisions, Lesley Fleming, HTR reviewed the literature, updating the research citations. An analysis of the research has been compiled for this article, identifying new areas of research and interest in the horticulture-plant-nutrition-health nexus.*



## A Workshop for Wellness at Fairchild Tropical Botanic Garden

Text & photos by Joanna Brown

The first of its kind—a therapeutic horticulture session at [Fairchild Tropical Botanic Garden](#) in Miami Florida, titled *Plant Care is Self Care* was delivered as a wellness workshop for members of the general public. Practitioner Joanna Brown of Restorative Horticultural Therapy (RHT) designed and delivered the workshop using the concept of discovering a ‘plant narrative’ where participants take time to reflect that plants and people share the rhythm of life and their plants can be used as a form of self care. Participants were particularly engaged by repotting and taking home a new freshly repotted plant and zine, a self-published print work. Therapeutic outcomes, though not directly expressed as such, rather using the concept of self care, included revitalized awareness to take time for self reflection and recognition of one's own needs, connecting to nature, and the experience of human connection.

**Workshop Details:** *Plant Care is Self Care* immerses attendees in therapeutic horticulture, emphasizing the joy and balance horticulture can bring to life. Beyond the plant repotting exercise, the session included emotional learning aspects like self-identification with chosen houseplants, encouragement for creating a sacred space with the new plant, a yoga warm-up, group sharing, and guided meditation all fostering self-expression, creativity, and social connections. The concept of a plant’s narrative was used to enhance self-awareness, highlighting the importance of basic needs such as light, water, companionship, and nutrients (Silva-Rodriguez Bonazzi & Febles, 2022), thus promoting a holistic sense of well-being.

*Plant Care is Self Care* was originally designed as a therapeutic horticulture session for populations within residential treatment for addiction and has been modified/adapted for a general public population. The workshop was designed to cultivate the following wellness aspects among participants: self-awareness through a personally selected plant, a sense of belonging, a revitalizing experience, physical exercise, and stress reduction. The practitioner drew from the [Six Dimensions of Wellness Model](#) and Kaplan and Kaplan’s Attention Restoration Theory to create the workshop. The Six Dimensions of Wellness model defines wellness based on occupational, physical, emotional, social, spiritual, and intellectual aspects (National Wellness Institute, 2023).

**Setting and Logistics:** Due to unexpected heavy rain, the workshop originally planned for Fairchild's outdoor garden was quickly adapted for an indoor session by the practitioner and Fairchild's coordinator, and moved to an intimate classroom with panoramic views of tropical greenery. Light jazz welcomed attendees, while open doors merged the outdoors' humidity, fresh air, and nature sounds into the setting. The practitioner's early arrival, 90 minutes before the session, ensured a smooth transition and stress-free setup despite the change in workshop setting. The workshop, intended to last 60-75 minutes, extended to 120 minutes, fortunately without scheduling conflicts. This deviation from the norm, pre-approved for this workshop, enhanced its flow and allowed extra time for sharing, with all attendees staying till the end for a group photo with their plants.

**Participants:** The age range of participants was 13-70, with 10 of the 11 registered participants attending the workshop. Initially, each participant introduced themselves, sharing personal insights. Among them were two mother-daughter duos seeking quality time, while others came for various reasons—from combating depression, desiring to learn about re-potting plants, to seeking social

interaction post-pandemic. A Fairchild Garden member, intrigued by the therapeutic horticulture description in Fairchild’s newsletter, joined to explore this new concept. A post-workshop survey reflected participant benefits: joys of socializing, doing something different, and learning about plants and human connections.

**Plants:** Upon arrival participants were encouraged to browse and select a plant that in some way reflected themselves. The practitioner provided all of the following plants within 4” pots ready for repot into 6”, [kangaroo’s paw fern](#), rabbit’s foot fern, blue star fern, dwarf elkhorn, [rattlesnake plant](#), spotted angel wing begonia. The workshop’s plants, specifically selected for tropical environments, also make excellent beginner houseplants in South Florida’s humid climate. With the exception of the begonia, all plants are non-toxic for humans and pets. Every 6-foot table, arranged with two seats, was prepped before participants arrived, equipped with necessary materials, including a cardboard flat of soil per table. Participants also received 4 issues of the zine (self-published by the practitioner) “*People & Plant Care: for anyone in a time of recovery, healing, displacement and/or transition*”. Topics included therapeutic horticulture, wellness, self-soothing techniques, and activities.

**Connecting to Local Botanic Gardens/Entrepreneurial Action:** Engaging with local botanic gardens not only broadens public awareness about the benefits and professional scope of therapeutic horticulture and horticultural therapy but also enhances accessibility to these therapeutic interventions. The success of the first *Plant Care is Self Care* workshop generated a second workshop in April, 2024.

National Wellness Institute. (2023). [Six Dimensions of Wellness - National Wellness Institute](#)  
Silva-Rodriguez Bonazzi, D. & Febles, A. (2022). [Horticultural therapy program for trauma survivors](#). HTI Newsletter.

*Joanna Brown holds a certificate from the Horticultural Therapy Institute and an interdisciplinary BA from the University of Central Florida. Based in Miami, Florida, she is the owner of [Restorative Horticultural Therapy](#), delivering programs within a variety of behavioral health settings and the founder of [Horticulture For Healing](#), a non-profit which advocates for therapeutic horticulture in less privileged communities.*







## American Colleges Support Students' Health & Well-Being Through Nature Engagement Programming On & Off Campus

Text by Lesley Fleming, HTR

Photo by California State University Monterey Bay

Well-being of students at American colleges is gaining momentum, with a variety of services offered on and off campuses in support of their on-going health and wellness. One area that is seeing recent expansion and emphasis is connecting with nature, important not just for this demographic but across the larger population. However, “university and college students are experiencing stress at unprecedented levels related to their studies, COVID-19, financial demands of higher education, climate change, violence and hate on campuses, and food insecurity. Research is recognizing this population as a distinct group, separate from younger students, and is exploring connections between well-being and nature.

A wide array of nature interactions is offering engagement that the research suggests, is positive for their mental well-being. These include access to campus green spaces (gardens, forests, meadows, lawns) (Larsen et al., 2022), social prescribing to spend time in nature and [Nature Rx programs](#) available to students (Rakow & Eells, 2019), [reflexology paths](#) on campuses for stress relief (Fleming, 2022), and therapeutic horticulture programming (Diehl, 2021; Li et al., 2022). Viewing foliage colors, for example, has been identified as improving relaxation and emotional status of university students across countries according to Kexiu et al. (2021). Simple actions like having houseplants, desktop aquariums, nature photography as art, natural light lamps, and nature soundscapes can address student well-being ([Joly et al., 2022](#)).

Volunteering in plant-rich environments and gardening at on-site campus gardens is common on many campuses. Interest and action by students related to food insecurity and food system changes have provided access to nature and plants while generating alternatives to campus foodscapes, these linked to student well-being” (Classens et al., 2022; Fleming, 2024). [Campus Nature Rx](#), a movement across North American universities promotes strategies to bolster nature engagement for students, faculty and staff. Each has its own blend of programming and services:

**University of South Florida Outdoor Recreation Education Center Nature Rx Program:** This program, begun in 2021, focuses on wellness for university students, offering activities like [mindfulness hikes](#), local green spaces (and maps), and counseling center referrals. Its partners on campus are USF Health, College of Public Health, Counseling Center and Recreation and Wellness.

**University of Florida Nature-based Health Programs on the UF Campus:** A large college and a campus with many natural areas, and its resources and programs are addressing student, faculty and staff wellness. Its campus Rx effort includes [therapeutic horticulture at Wilmot Gardens](#), Farm and Fork program growing food for students, [mindfulness nature-based healing activities/workshop series](#), Recsports Center for Outdoor Recreation and Education, along with Wellness Team at Health Science Center Library, Living Learning (Housing) Initiatives/Communities and Healthy Gators Coalition.

**California State University Monterey Bay, California:** As a Hispanic-serving institution and one that resides on indigenous homeland of the Esselen people, the Campus Nature Rx (CNRx) program promotes health, wellbeing and sense of belonging for the whole campus community using direct experiences in nature through outdoor classrooms, living laboratories and recreation. [Biophilic design](#) (and study spots), building awareness, food justice, along with events, recreation and mental restoration sites and campus community gardens are occurring on the 1,396 acre campus known for its marine and terrestrial ecosystems.

**Texas A&M University in College Station:** Collaborations with the [Center for Health & Nature](#) (through Houston Methodist and Texan by Nature) integrate access to greenspaces, nature prescriptions, nature-based activities and research available to students and faculty. Research areas focus on nature in preventative medicine, nature-based interventions for disease management and the health role of nature in urban environments.

Post secondary students, their choices, actions and future directions are linked to the natural world, humanitarian efforts and choosing mechanisms for supporting their own well-being.

Campus Nature Rx Network. (2024). [Member colleges & universities](#).

Classens, M., Adams, K., & Srebot, S. (2022). Food systems change and the alternative campus foodscape. *Journal of Agriculture, Food Systems, and Community Development*, 12(3), 155-176.

Diehl, L. (2021). The effect of therapeutic horticulture on student wellbeing. *AHTA Magazine*, 49(3), 11.

Fleming, L. (2024). University students' health & well-being supported by nature engagement & campus gardens. *Digging In*, 10(2), 6-7.

Fleming, L. (2022). [Landscapes for health: Reflexology paths](#). *Cultivate*, 2(1).

Joly, J., Kuhlken, H., & Rakow, D. (2022). *Nature Rx guide for first year college and university students*. Families in Nature & Cornell University.

Kexiu, L., Elsadek, M., Liu, B., & Fujii, E. (2021). Foliage colors improve relaxation and emotional status of university students from different countries. *Heliyon*, 7(1), e06131.

Larson, L.R., Mullenbach, L.E., Browning, M.H.E.M., Rigolon, A., Thomsen, J., Metcalf, E.C., Reigner, N.P., Sharaievska, I., McAnirlin, O., D'Antonio, A., Cloutier, S., Helbich, M., & Labib, S.M. (2022). Greenspace and park use associated with less emotional distress among college students in the United States during the COVID-19 pandemic. *Environ Res.*, 204(Pt D), 112367.

Li, Y.L., Li, F., Gui, Z., & Gao, W.B. (2022). Promoting effect of horticultural therapy on college students' positive psychological quality. *Front Psychol.*, 13, 864147.

Meredith, G.R., Rakow, D.A., Eldermire, E.R.B., Madsen, C.G., Shelley, S.P., & Sachs, N.A. (2020). Minimum time dose in nature to positively impact the mental health of college-aged students, and how to measure it: A scoping review. *Front. Psychol.*, 14.

Rakow, D. A., & Eells, G. T. (2019). *Nature Rx: Improving college-student mental health*. Cornell University Press.

## Campus Nature Rx

Text by Tim Mason

Photo by Acadia University

Original Publication: Mason, T. (2024). *Digging In*, 10(2).

A growing movement across North American university campuses is promoting [Campus Nature Rx](#). The goal is to support nature engagement for students on and off campuses sharing ideas, strategies and collaborations. Beginning with 4 U.S. campuses in 2019, the program has grown rapidly and is now delivered in nearly 70 North American colleges, including Cornell, Harvard, Yale, and Canadian members Humber College and University of Calgary. The coalition of Campus Nature Rx members are dedicated to supporting mental and physical health of students through inclusive and equitable nature engagement teaching, research, outreach and [resources](#).



A free virtual [symposium](#) is held annually each Fall to ensure members are kept connected with peers, as well as innovation and studies in campus nature engagement. The sharing of ideas through discussions is encouraged and is a large component of the event, embodying the principles of collaboration and shared knowledge of evidence-based studies.

Recent articles support the Campus Nature Rx program: “An increasing number of studies have provided evidence that people who spend time in nature-rich environments benefit psychologically and physiologically...studies that show that as little as 10–20 min of time spent sitting or walking in nature has a beneficial effect on college-aged adults' mental health” (Meredith et al., 2019). Rakow and Ibes' article proved the investment of developing campus nature engagement provided valuable benefits, whether creating new spaces or making existing outdoor spaces more welcoming and engaging: “The COVID pandemic had some administrators questioning the need for residential college experiences, particularly given the high cost... Campus Nature Rx movement provides compelling evidence that on-campus nature experiences provide a high return on investment by offering scientifically proven, equitable, and cost-effective solutions for improving college student mental health”(2020).

Expanding the Campus Nature Rx network further across the continent and into Canada is an important step in advancing the statistical data of nature engagement studies. Larger sample sizes, and consistency of similar activities across different regions and types of environments will add further credibility to ongoing research on the benefits of spending time in nature settings.

Meredith, GR. et al. (2019). Minimum time dose in nature to positively impact the mental health of college-aged students, and how to measure it: A scoping review. *Frontiers in Psychology*, 10, 2942.

Rakow, D.A. & Ibes, D.C. (2022). Campus Nature Rx: How investing in nature interventions benefits college students. *Frontiers in Psychology*, 13.

*Tim Mason is a nature-based gardener living in Halifax, Nova Scotia. Originally from Australia, Tim grew up with a deep love for nature which influences his work, garden design and creation, notably 'Wildlife Windows'.*

Editor in Chief Lesley Fleming, HTR

Contributors

Eva Creus, Joanna Brown, Tim Mason

Acadia University, California State University Monterey Bay, Plant-based Canada,  
Plant-based Prevention of Disease National Conference

**Florida Horticulture for Health Network**

To receive *Cultivate* contact [FLHort4Health@outlook.com](mailto:FLHort4Health@outlook.com)



[www.facebook.com/FloridaHort4Health](https://www.facebook.com/FloridaHort4Health)

Upcoming Issue of *Cultivate* Fall 2024:  
Veterans, Poppies and Connections to Nature

Products, services, references, and medical research contained herein are intended for informational purposes only and do not imply endorsement or practice by FLHNN. Website URLs may be changed without notice. Original and creative material is considered the intellectual property of FLHNN. We respectfully request credit for reprinted articles.