DIGGING IN

NOVA SCOTIA HORTICULTURE FOR HEALTH NETWORK

Fall 2021 Volume 7 Issue 4 nshhortnetwork@gmail.com

The Nova Scotia Horticulture for Health Network is a coalition of people interested in supporting horticulture for health initiatives through resource-sharing, exchange of practices/knowledge, and networking.

Compassion Satisfaction and Compassion Fatigue

By Lesley Fleming, HTR & Christina Wilson, MSW, RSW

Are horticultural therapists familiar with these concepts? Compassion satisfaction and compassion fatigue are being recognized in a wider range of professions and circumstances, most recently magnified by COVID-19 and its impact on frontline workers. Historically included as part of trauma care, compassion satisfaction and compassion fatigue are now considered prevalent in all occupations that provide empathetic care including horticultural therapy.

Compassion satisfaction theory suggests that some people have a strong desire to help others, and for many, it is their chosen careers that provide this type of satisfaction and pleasure. Such occupations—social work, firefighting, nursing, education and therapeutic professions—share a common element. Compassion, defined as "one's empathetic attitude toward another's suffering with a desire to alleviate it" (Zang et al, 2018), is a positive human characteristic, and one that can address and help nurture, heal and contribute to improved health of others. Psychologist Steven

CONTENTS

Photos page 1: L. Fleming

Sultanoff identifies empathy, acceptance and genuineness as core competencies for therapeutic professionals (2013).

Compassion fatigue, defined as the "progressive and cumulative outcome of prolonged, continuous, and intense discomfort that exceeds…endurance levels, is the negative side of compassion satisfaction. Compassion fatigue is a state where the compassionate energy expends beyond restoration causing marked physical, social, emotional, spiritual, and intellectual changes in a progressive manner" (Coetzee & Klopper, 2010). This often includes continual hearing, seeing, and witnessing tragedies, continuous exposure to loss and suffering of clients (Siritsky, 2021). The literature on compassion fatigue has expanded since the early 1990s when it was first identified. The use of different terms including burnout, vicarious trauma, second victim (referring to the caregiver), secondary trauma stress and compassion fatigue have their own and different symptoms, prevalence, etiology and treatment efficacy (Zhang et al, 2018).


Photo: A. Earl.Unsplash

The ability to recognize stress, burnout or reduced feelings of job satisfaction is an important early indicator for professionals whose job it is to treat people using compassionate care. Many of the symptoms are easily identifiable—sleeping problems, depression, intrusive thoughts, inability to focus compassion, and shift from work mode to leisure mode. Across health disciplines, resources and strategies for dealing with compassion fatigue are available including self-care tips, workplace programs for respite, caregiver's bill of rights, and professional development re trauma care. The Professional Quality of Life Measure is widely used as a metric for gauging compassion fatigue.

"The expectation that we can be immersed in suffering and loss daily and not be touched by it is as unrealistic as expecting to be able to walk through water without getting wet" (R. Remen). Left unchecked, professionals may be vulnerable to violations of professional boundaries and trust, and their own health issues. Evidence-based studies have determined that strategies like self-care, acceptance and building of resiliency can be effective in addressing compassion fatigue (Ames et al, 2017; Fakkema, 2018; Siritsky, 2021).

Recognizing and acknowledging the increasing prevalence of compassion fatigue can be an important development in the evolution of the horticultural therapy field. Therapists work with special populations where compassionate care is foundational to health improvements—veterans and active military, trauma survivors, individuals with mental health disorders among others. The current context - the world of global pandemics, civil unrest, military conflicts, and climate disasters, requires frontline workers and health professionals including those delivering people-plant programming to understand and manage compassion satisfaction and compassion fatigue.

CARING FOR YOURSELF IN THE FACE OF DIFFICULT WORK

Our work can be overwhelming. Our challenge is to maintain our resilience so that we can keep doing the work with care, energy, and compassion.

10 things to do each day

1. Get enough sleep.
2. Get enough to eat.
3. Vary the work that you do.
4. Do some light exercise.
5. Do something pleasurable.
6. Focus on what you did well.
7. Learn from your mistakes.
8. Share a private joke.
9. Pray, meditate or relax.
10. Support a colleague.

For More Information see your supervisor or visit www.istss.org, www.proqol.org and www.compassionfatigue.org

Ames, M, Salmond, E, Holly, C. & Kamienski, M. (2017). Strategies that reduce compassion fatigue and increase compassion satisfaction in nurses: A systematic review protocol. *JBI Database of Systematic Reviews and Implementation Reports 15*(7); 1800-1804.

Coetzee, SK. & Klopper, HC. (2010). Compassion fatigue within nursing practice: A concept analysis. *Nursing Health Science 12*; 235-43.

Fakkema, D. (2018). The four phases of compassion fatigue. Retrieved from http://hshv.convio.net/site/DocServer/THE_FOUR_PHASES_of_Compassion_Fatigue.pdf

Hudnall Stamm, B. (2012) Professional quality of life: Elements, theory, and measurement. Retrieved from proqol.org

Hudnell Stamm, B. (2009). Professional quality of life scale (PROQOL) compassion satisfaction and fatigue Version 5 (2009). Retrieved from http://socialwork.buffalo.edu/content/dam/socialwork/home/self-care-kit/compassion-satisfaction-and-fatigue-stamm-2009.pdf

Siritsky, N. (2021). The ethics of burnout. Retrieved from https://onlinexperiences.com/scripts/Server.nxp?LASCmd=AI:4;F:QS!10100&ShowUUID=90A75662-25B7-481E-9E1B-EAFA5C2B0806&Referrer=https%3A%2F%2Fnscsw.org

Sultanoff, S. (2013). Integrating humor into psychotherapy: Research, theory, and the necessary conditions for the presence of therapeutic humor in helping relationships. *The Humanistic Psychologist 41*(4); 388-399.

University of Buffalo School of Social Work (2021). Checklists and measures. Retrieved from http://socialwork.buffalo.edu/resources/self-care-starter-kit/self-care-assessments-exercises/checklists-and-measures.html

Zhang, YY, Zhang, C, Han, XR, Li, W. & Wang, YL. (2018). Determinants of compassion satisfaction, compassion fatigue and burn out in nursing: A correlative meta-analysis. *Medicine 97*(26); e11086.

This article is being concurrently published in Digging In (Nova Scotia Horticulture for Health Network) and Cultivate (Florida Horticulture for Health Network). Lesley Fleming, HTR examines applications of HT/TH for a range of populations, plants and programs. Christina Wilson, MSW, RSW is a clinical social worker with over 25 years working as a therapist primarily helping youth, families, and individuals heal from trauma. Over the past 10 years she has offered compassion resiliency workshops for fellow helpers given the evident need to care safely and sustainably. She is embracing in her practice how incorporating gardening and nature into therapy sessions has incredible healing impact for helpers and clients alike.

Series

Plant Activities Using Unusual Items or Props

By Lesley Fleming, HTR & Susan Morgan, MS
Photos by J. Fleming & L. Fleming

Incorporating unusual items for intellectual stimulation, whimsy and humor can be an effective technique when delivering plant activities. The items can be used as an opening activity, an extension of the theme, or as sensory (visual, tactile, auditory) stimulation; they are best used when there is a direct connection to the plant or theme of the session. Check out these items that could be used in plant-based programs. What other unusual items could be used?

Rain stick – Sensory stimulation grabs the attention of all populations, with auditory stimulation a bit more challenging to create. A rain stick can be used as a social prompt where all participants take a turn or as a topic of cultural conversation about indigenous cultures' views and relationships to the earth. Related to water as an essential input for plants, it can introduce concepts of the water cycle, leaf transpiration, or for vocational sessions on irrigation.

Calendar photos – Laminate beautiful photos of flowers, birds, landscapes to be used as a visually appealing opening activity, something for clients to look at as they arrive for the session. Therapeutic goals can include passing photos around group as a socializing activity and as a task for following

directions – "pass to the person to the left of you". Also useful for matching to real flowers, inspiration for plant art, or as a substitute for difficult to source live plants or butterflies.

Book art – Books like *There was an Old Lady Who Swallowed a Bat,* *The Day the Teacher Went Bananas* and *Planting a Rainbow* can be the focus of a session on bats, bananas or flowers. Have the group enjoy the fanciful artwork while reading the story or doing related plant activities. Good for literacy (in the garden), nature connections, distraction from pain, and appropriate for all ages and abilities.

Tibetan singing bowl – Open or close a session with each person making the bowl sing (photo p.6). Often tied to sessions related to gratitude, addiction recovery, or grief, this item can also be inspirational for wellness populations, programs where repeated routines are helpful or where sound therapy techniques supporting meditation and relaxation are integrated into the program.

Aprons – Used to identify the therapist and the start of a program, aprons can also be worn by participants to inspire and/or protect clothing from soil, amendments, paint or other materials. Find apple, Halloween, or other themed aprons. Encouraging participants to watch for leader's arrival wearing an apron (different from last session) can support health goals related to sense of time and seasonality.

Bug hat – Beginning a program by wearing a fun hat can set a positive tone for hands-on activities. Ideas - pass the hat around, make a fun hat or headpiece, transition into insect topics, or address nature deficit tendencies experienced by children, seniors and other populations.

Bird and bat houses – Setting these on tables to spark participants' interest in the day's session can provide intellectual stimulation, curiosity and interactions within assembled group. Having participants touch/hold/pass the birdhouse provides an opportunity for physical activity, comparing weight of items, feeling texture of materials, and connecting to nature. Like reminiscence therapy, such items can elicit memories for elders in senior living facilities and others who have limited access to nature.

Bingo using natural materials – Playing on the popularity of the game Bingo, make up a nature-inspired version. Use acorn caps, miniature pine cones, pumpkin or other seeds, or other nature objects as game pieces; screen materials for safe use with different populations. Organize the activity set-up so that participants work fine motor, memory, and sequencing skills.

Unusual soil blending materials – Take a look at soil materials in a new and different way. Consider using alternative materials that might provide unique grounding and discovery activities. Dehydrated coir discs and netted peat pellets expand when water is added; this provides an opportunity for

participants to watch the "soil" grow and learn about soil alternatives and their environmental impacts. Sow seeds in the netted peat pellets. When comparing potting soil mixes that may or may not incorporate watering crystals, conduct an experiment growing plants using different potting soil mixes. Or purchase a small container of watering crystals (sold separately from potting mixes), pour crystals into a large bowl, and add water. Make observations with the group on what happens; practice sequencing and memory skills by taking notes and charting observations of the crystals over a period of time. Incorporate the watering crystals into potting mixes for later planting or discard. Screen materials for safe use with different populations.

Program-adjacent jokes – As a socialization icebreaker for a new or shy group or a fun program finale, plant jokes or ones related to the program topic, such as upcoming holidays, can help start or finish a program with levity and humor. Search for clean, funny jokes online or in joke books to share with group. Where appropriate, invite participants to share their own jokes or funny stories.

Elias, SMSE, et al. (2015). The effectiveness of group reminiscence therapy for loneliness, anxiety and depression in older adults in long-term care: A systematic review. *Geriatric Nursing* 36(5); 372-380.

Goldsby, TL, Goldsby, ME, McWalters, M. & Mills, PJ. (2017). Effects of singing bowl sound meditation on mood, tension, and well-being: An observational study. *Journal of Evidence Based Complementary Alternative Medicine* 22(3); 401-406. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5871151/

Junior Master Gardener (2016). Literacy in the garden. Retrieved from https://jmgkids.us/lit/

Susan Morgan, MS presented at the American Horticultural Therapy Association's 2017 conference with a session titled Activities Reimagined. Her blog Eat Breathe Garden offers interesting activities with a range of materials, all related to plants. Lesley Fleming, HTR incorporates activities from her Artist Training Certificate into HT/TH programming.

Photo: Unsplash

2021 Edition

Horticulture Terms A – Z

By Lesley Fleming, HTR & Susan Morgan, MS

Andromedotoxin – a toxic hydrocarbon compound found in many conifers and plants in the heath (*Ericaceae*) family

Biopiracy – commercial exploitation or monopolization of biological or genetic material, most prominently medicinal plant extracts obtained without compensation to indigenous people or countries for their knowledge or materials

Cladodes – shoot systems where leaves do not develop, but become flattened leaf-like stems also called cladophylls or phylloclades

Denitrifying – removing the nitrates from soil, air or water through chemical reduction

Elaiosomes – fleshy structures attached to seeds of many plants, many of which attract ants

Forb – or phorb is an herbaceous flowering plant that is not a graminoid

Germplasm – living genetic resources such as seeds or tissues that are maintained for breeding or preservation

Haemanthamine – a natural alkaloid (HAE) found in daffodils, with potential as an anticancer agent

Indumentum – a covering of trichomes or fine hairs on a plant

Jeffersonia diphylia - common name of Twinleaf, a protected North American wildflower with a unique set of 2 leaflets, named for American president and self-taught botanist Thomas Jefferson, used medicinally by indigenous people

Karesansui – Japanese dry garden, often with raked gravel with ripples suggesting or symbolizing water

Lignified – becomes woody by the decomposition of lignin in cell walls

Monoecious – plant that has both male and female reproductive organs

Nativar – short for native cultivars, a hybrid of two or more plants selected to breed because of desirable wild plant traits

Ovipositioning – adult female insect laying eggs

Penjing - refers to bonsai, translated as tray plant

Q*uercus* – genus of oak trees

Rhizomatous – a horizontal underground stem that often sends out roots and shoots

Shakei – Japanese design principle meaning borrowed landscape which incorporates background features like mountain or forest into design

Tepal - combination of petal and sepal (example magnolia)

Urea – a synthetic chemical sometimes used to increase decomposition rate

Vaterite – a rare mineral with potential medicinal applications, found on some plants in the *Saxifaga* family

Winged stems – parts of some woody plants, the wings or corky projections are along their stems (bur oak, burning bush, sweetgum)

Xerces Society – an international organization that protects invertebrates and habitats including butterflies and bees

Y*ucca* – genus of plants that grow in hot, dry areas of North and South America, characterized by architectural sword shaped leaves, notably the Joshua Tree (*Yucca brevifolia*)

Zone pusher – using hardiness zones as guidelines but experimenting beyond these

Reprising this article concept from 2020, Lesley Fleming, HTR and Susan Morgan, MS, collaborated for the 2021 version identifying 26 more horticultural terms not as familiar to most. Photographs from top to bottom: conifer - L. Fleming, elaiosomes/ants - W. Hassleman, daffodil - A. Brun, karasansui - R. Schram, penjing bonsai - M. Tegethoff, tepal (magnolia) - Q. Al, Xerces (butterfly) - Y. Kageyama, yucca - A. Hliamshyna. Photos from Unsplash.com except conifer/Fleming.

Series

The Treatment Process: Measuring Outcomes

Text by Lesley Fleming, HTR

Many disciplines, including horticultural therapy, use treatment processes when working with people seeking health improvements. The four main components of the process and of a treatment plan—assessment, goal-setting, therapeutic activity, and measuring outcomes—are essential for not only achieving the desired health outcomes, but for delivering quality treatment based on standards of practice. A four part series will focus on each of the component parts of a treatment plan.

The Treatment Process—Measuring Outcomes

Measurable outcomes are standards of practice that therapeutic and medical professionals use to maximize client improvement. Measuring outcomes that have resulted from treatment allows client, provider, family and others to gauge progress and effectiveness of treatment. The process of first identifying health goals, and then determining how to measure progress from the intervention has proven to be an effective process that keeps the focus on client improvement. When treatment involves interdisciplinary teams, the process, protocols and measurable outcomes allow for cross-discipline understanding and collaboration.

Common terms, concepts and practices are used for measurable outcomes across disciplines including horticultural therapy. The acronym SMART is often used to remind practitioners what to include when writing treatment goals that will ensure outcomes are measurable. (Refer to *Digging In's* spring 2021 issue - in this series SMART goal-setting was discussed—*S*pecific, *M*easurable, *A*ction-oriented, *R*ealistic & *T*ime-based). The measurable outcomes must relate directly to the health deficits and goals. Expressing the outcomes using quantifiable terms provides for more objective, less subjective analysis of health improvements. Anecdotal comments, though more prone to subjective bias, are still used in certain contexts as part of the treatment process.

Several metrics are used in measuring horticultural therapy outcomes:

Numerically Quantifiable: Comparison trials, timed trials—length of time for standing tolerance, length of forward reach, speed and accuracy of seed planting.

Client Articulation: Client articulates goals, strategies or behaviors and may include self-reflection. Note that the therapist may specify the number and type of strategies as a treatment goal for client.

Observational: These can include observed behavior, abilities, attitudes - cooperation with others, willingness to undertake task, learning a new skill, flexibility during session. Anecdotal observations may be used in conjunction with other types of metrics.

Photo: L. Fleming

Kreski, B. (2019). Assessment and documentation strategies for horticultural therapy intervention. In Haller, Kennedy & Capra (Eds.) *The Profession and Practice of Horticultural Therapy.* New York: CRC Press.

Sieradzki, S. (2017). Documentation: The professional process of recording treatment plans, process, and outcomes. In Haller & Kramer (Eds.) *Horticultural Therapy Methods Making Connections in Health Care, Human Service, and Community Programs 2nd edition.* New York: The Hawthorne Press.

Lesley Fleming, HTR has been active in the field of horticultural therapy for more than a decade, with recent research focused on dementia populations.

Photo: J. Brown.Unsplash

Therapeutic Programming: Gardening and Plant Activities with People Living with Dementia

Text & photos by Lesley Fleming, HTR

Dementia continues to be a global health issue with more than 50 million people worldwide having these progressive degenerative neurological diseases, with 10 million new cases diagnosed each year (World Health Organization, 2020). Along with pharmaceutical and medical treatments, complementary services and interventions seeking to improve the health and quality of life for those living with dementia are being investigated and implemented. Therapeutic programming using gardening and plant activities are part of the effort to provide effective health services.

Therapeutic programming including therapeutic horticulture has been influenced by the World Health Organization's (WHO) *Report 67 What is the Evidence on the Role of the Arts in Improving Health and Well-being? A Scoping Review* published in 2019 (Fancourt & Finn). It, along with the important philosophy and narrative that living with dementia can be positive, look to activities and interventions that provide experiences focused on health and which can provide enjoyment, meaning, and at times, shared experiences with care partners or others living with dementia.

Health Goals

Therapeutic programming is guided by health goals of individual participants. Health challenges will vary, recognizing that each person has their own health challenges throughout their journey with their particular type of dementia. These can include: deterioration in cognitive function, emotional control, mood, social behavior, communication and relationship interactions, and reduced physical activity. Health professionals typically rely on activities of daily living (ADLs) and instrumental activities of daily living (IADLs) as additional indices for understanding participant's abilities as part of the process for selecting activities.

Therapeutic Programming Including Connecting with Nature, Gardening and Plant Activities

For people living with dementia, access to the outdoors typically becomes more limited, with fewer opportunities to connect with nature. Research has shown that time spent in nature has positive impacts on overall health and well-being and that improvements in mood, cognitive abilities, social connections and physical health are impacted, for everyone including people living with dementia (Bossen, 2010; Cook, 2019; Hassink et al, 2019; Rappe & Topo, 2007; Evans et al, 2019). The term Nature Rx has emerged, referring to activities and programs that promote outdoor activity as a means of managing sedentary lifestyles, stress and health challenges (Cornell University, nd; Conservation Foundation, 2021). Activities that focus on connecting with nature and the outdoors have been a cornerstone of therapeutic horticulture and therapeutic recreation, with greater emphasis in recent years as the evidence base has expanded validation of the benefits. While health benefits accrue for all

types of nature connections including activities initiated by care partners for people living with dementia, targeted health goals, and selection of most appropriate treatment modalities delivered by trained recreation therapists and horticultural therapists can have more effective and measurable outcomes.

Therapeutic programming activities with this nature-focus span a wide range. The term green exercise (more frequently used in Europe) refers to outdoor activity including walking in gardens and neighborhoods (McCaffrey & Raddock, 2013; Paillard et al, 2015). Walks in forests, called Shinrin-yoku or forest bathing, is a recognized therapeutic intervention originating in Japan (Li, 2018). Benefits of directed or informal walking activities include greater respiratory exchange and breathing in cancer fighting phytoncides (Li, 2010), increased physical exercise, and exposure to sunlight increasing melatonin production. When these are undertaken with people living with dementia, consideration for safety should include possible disorientation, (space and shadow), unattended wandering and elopement.

Gardening tasks are typical activities used as therapeutic programming with people living with dementia. These include: planting of flowers, shrubs, herbs, and edibles; soil movement - digging, composting, amending soil, creating garden beds; harvesting and tasting edibles. Positives include increased physical activity, sensory stimulation particularly from materials that are tactile and visual, activities that promote nurturing behaviors, and opportunities for shared interactions. Safety considerations include selecting plants that are not toxic and safe use of garden tools (Catlin, 2019).

Community gardening is another option, though not as often used as therapeutic programming by recreation or horticultural therapists. This activity may speak more to care partners than therapists, offering family and care partners opportunities for shared activity outdoors and self-care while spending time with people living with dementia (Univ. California, 2021a). Health benefits from this type of activity can include opportunities to socialize with other gardeners, food production, and physical exercise. Consideration for physical stamina and interests of the person living with dementia should be taken into account, with close supervision to prevent elopement where necessary.

Plant craft activities can be an important part of therapeutic programming, one that is available for indoor and outdoor settings. Tracing, drawing and painting plants address hand function challenges while offering creative expression. Pressing flowers for notecards, bookmarks and artwork, making spa products like herbal spritzers and bath bombs, embellishing Kentucky Derby hats with flowers, or making daisy chains can provide sense of accomplishment or connecting with the season. Safety considerations include securing items that may be put in mouths, using safe plants, and awareness of plant allergies.

Flower arranging can also be a therapeutic plant-based activity that can support sense of self and decision-making by people living with dementia (Montgomery & Courtney, 2015). Selection of container and color(s) of flowers or making a bouquet as they wish, empowers each participant, and does not have to require extensive verbal or multi-step directions. Making items to give to others can promote role reversal, allowing people with dementia to share a gift for care partner or family. Safety

considerations – choose non-breakable containers, avoid chemical bouquet preservatives, and select non-toxic flowers.

Therapeutic programming with people living with dementia can and should include plant and nature-based activities where possible. This type of programming can provide access to nature which is so important for health. Activities can be delivered as therapeutic modalities or as recreation by therapeutic professionals, as well as by care partners; these providing positive interactions, experiences, and health promoting behaviors. A great phrase and philosophy to consider, and one that is part of the positive narrative of dementia, is the focus on inclusiveness and access –"not about us without us".

Bossen, A. (2010). The importance of getting back to nature for people living with dementia. *Journal of Gerontological Nursing 36*(3).

Catlin, P. (2019). Techniques: Accommodations for working with people with dementia. In Haller, Kennedy & Capra (Eds.) *The Profession and Practice of Horticultural Therapy*. CRC Press.

Conservation Foundation (2021). The health benefits of nature Nature Rx. Retrieved from https://www.theconservationfoundation.org/nature-rx/

Cooke, M. (2019). Using urban woodlands and forests as places for improving the mental well-being of people with dementia. *Leisure Studies 39*(1); 41-55.

Cornell University (nd). Nature Rx. *Cornell Health.* Retrieved from https://health.cornell.edu/resources/health-topics/nature-rx

Evans, SC, .Barrett, J., Mapes, N., Hennell, J., Atkinson, T., Bray, J., Garabedian, C. & Russell, C. (2019). Connections with nature for people living with dementia. *Working with Older People* 23(3); 142-151.

Fancourt, D. & Finn, S. (2019). *Health Evidence Network Synthesis Report 67. What is the Evidence on the Role of the Arts in Improving Health and Well-being?* World Health Organization Europe. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/329834/9789289054553-eng.pdf

Hassink, J, Vaandrager, L, Buist, Y. & de Bruin, S. (2019). Characteristics and challenges for the development of nature-based adult day services in urban areas for people with dementia and their family caregivers. *International Journal of Environmental Research and Public Health 16*(8); 1337.

Li, Q. (2010). Effects of forest bathing on human immune function. *Environmental Health Prevention Medicine 15.*

Li, Q. (2018). *Forest Bathing: How Trees Can Help You Find Health and Happiness*. New York, NY: Viking.

McCaffrey, R. & Raddock, SB. (2013). The effect of a reflective garden walking program. *Journal of Therapeutic Horticulture 23*(1).

Montgomery, CS. & Courtney, JA. (2015). The theoretical and therapeutic paradigm of botanical arranging. *Journal of Therapeutic Horticulture 25*(1).

Paillard, T, Rolland, Y. & de Souto Barreto, P. (2015). Protective effects of physical exercise in Alzheimer's disease and Parkinson's disease: A narrative review. *Journal of Clinical Neurology 11*(3); 212-219.

Poison Control National Capital Poison Center (2021). *Poisonous and Non-poisonous Plants An Illustrated List.* Retrieved from https://www.poison.org/articles/plant

Rappe, E. & Topo, P. (2007). Contact with outdoor greenery can support competence among people with dementia. *Journal of Housing For the Elderly 21*(3-4).

University of California San Francisco Weill Institute for Neurosciences (2021a). Caregiver well-being. Retrieved from https://memory.ucsf.edu/caregiving-support/caregiver-well-being

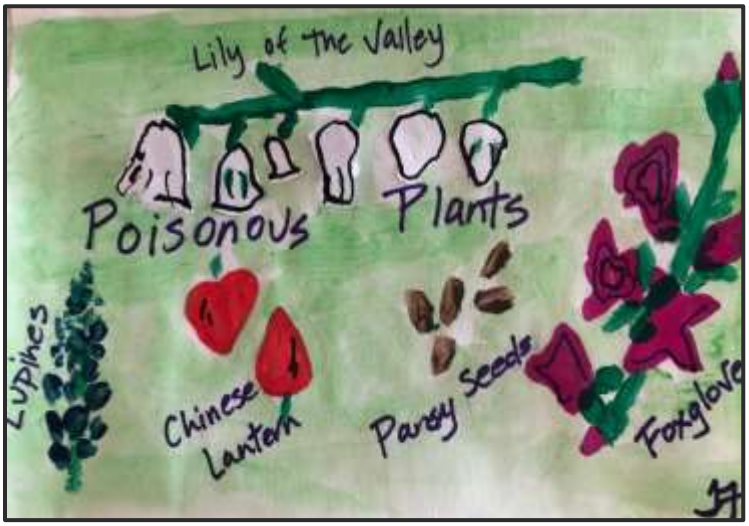
University of California (2021b). Safe and poisonous garden plants. Retrieved from https://ucanr.edu/sites/poisonous_safe_plants/Toxic_Plants_by_Scientific_Name_685/

World Health Organization (2020). Dementia. https://www.who.int/news-room/fact-sheets/detail/dementia.

Lesley Fleming, HTR has worked with people living with dementia for more than a decade, delivering therapeutic horticulture in a variety of settings. Her research interests include art interventions with people living with dementia, related to her volunteer work with Dementia Action Alliance Arts Committee.

Plant Safety and Toxicity

Text & photo by Lesley Fleming, HTR



Careful consideration for selection of plants used in therapeutic programming is essential for the safety of participants. Plants that are poisonous, thorny or have excessive sap can pose safety issues and should be avoided. Additional vigilance and more stringent selection of plants is recommended for populations or individuals tempted to put items in mouths (children, dementia, self-harm).

There are four generally accepted classifications for plant toxicity: major toxicity, minor toxicity, oxalates (juice or sap that irritates), and dermatitis (juice, sap, thorns causing rash or irritation). Resources will often list plants by toxicity class, and some plant lists identify ones considered safe.

Many lists include a caveat - "plants on this list are generally believed to be safe. However, if you suspect that a child (or adult) has eaten quantities of any of these plants (or any of their parts), or if you notice symptoms such as illness or dermatitis after handling these plants, call your Poison Control Center" (Univ. California, 2021). Note that people react differently to plants, sap, ingestion versus handling of plants, or may have allergies to specific plants. Watch for reactions.

A good practice of reviewing the literature prior to using a given plant will help to identify safe and toxic plants. Most practitioners avoid the following plants, listed in the major toxicity category: pansy seeds, angels trumpet, heather, delphinium, foxglove, hydrangea, morning glory seeds, azalea, tulip bulbs, lantana, lupine, Chinese lantern/ground cherry, oleander, vinca/periwinkle, seeds of almond/apricot/cherry/peach/nectarine, and green parts of potato plant (Univ.California, 2021). This is not a definitive list.

Resources are readily available on plant toxicity:

Poisonous and Non-poisonous Plants An Illustrated List. (Poison Control National Capital Poison Center)

All Poisonous Plants (Canadian Poisonous Plants Information System)

Safe and Poisonous Garden Plants. (University of California, 2021). Retrieved from https://ucanr.edu/sites/poisonous_safe_plants/Toxic_Plants_by_Scientific_Name_685/

Guide to Poisonous Plants (with visuals). (WebMD). Retrieved from https://www.webmd.com/skin-problems-and-treatments/ss/slideshow-poison-plants-guide

Horticulture Techniques

To Dig or Not to Dig

By Lesley Fleming, HTR
Photo by G. Hoffman.Pexels

Raised beds are wonderful. But are there alternatives? Gardeners and farmers who practice permaculture or biodynamic methods say absolutely, seconded by a wide range of gardeners who have chosen other ways of creating planting beds.

No Till Lasagna Garden: Layer cardboard, compost browns (leaves, shredded newspaper), and greens (grass clippings, garden trimmings), repeating the layers of brown and green until a 2 foot pile is created. Decomposition will occur throughout the winter, ready for spring planting. Many subscribe to the theory that less disturbance to soil preserves microbial life. And composting practices are an added bonus to lasagna gardens.

Double Dig: Compacted soil can benefit from this method where the top 12 inches of soil are dug up and transferred to a second location. Continue digging up 12 inch wide patches in the double dig process. Adding soil amendments will enrich beds with the fluffy soil composition. Wheelbarrow recommended.

Hugelkultur: German growing method involves burying large branches covered in soil which utilize composting-decomposing process. Items bound for the compost heap can be included – coffee grounds, grass clippings, manure, food scraps and egg shells. The hugel method relies on wood retaining water which will reduce the need to water as frequently.

Barth, B. (2016). Double digging: How to build a better veggie bed. *Modern Farmer.*
Joffe, D. (2014). *Citizen Farmers: The Biodynamic Way to Grow Healthy Food, Build Thriving Communities, and Give Back to the Earth.* New York, NY: Harry N. Abrams.
Miles, M. (2010). The art and science of making a hugelkultur bed – transforming woody debris into a garden resource. *PermacultureNews.*
Stone, C. (2015). *The Urban Farmer: Growing Food for Profit on Leased and Borrowed Land.* New York, NY: New Society Publishers.
Vanderlinden, C. (2020). How to make a lasagna garden. *The Spruce.*

Junior Master Gardener Program Offers Hands-On Plant Activities Appropriate for All Ages and Abilities

By Lesley Fleming, HTR

The Junior Master Gardener program is an international youth gardening program based in the United States. It has 7 program components:

Level 1 (elementary children)	Level 2 (middle/jr. high students)
Junior Master Gardener	*Operation Thistle*
Wildlife Gardener	*Operation Water*
Literature in the Garden	
Health & Nutrition from the Garden	
Learn, Grow, Eat & GO! (LGEG)	

The Junior Master Gardener (JMG) programs and curriculum use hands-on activities which seek to "promote a love of gardening, develop an appreciation for the environment, and cultivate the mind" using both individual and group activities.

The primary users of JMG materials are schools, after-school programs and school-aged children. What has evolved since its inception in the early 2000s, is the use of these materials for a range of purposes and populations in addition to school children. The following are some of these broader applications:

Special Events - JMG provides many ideas for special events for any type group that wants a hands-on nature-based fun activity: fundraisers, parties, or summer camp activities.

- *Health & Nutrition Guide from the Garden* activity - build a bean teepee at a birthday party (p.36)
- *Operation Thistle* activity - make a soothing aloe jelly recipe for a spa night

Garden-based Learning - Not just for children or teens in classrooms. Many groups are seeking intellectual stimulation - opportunities to learn new things. Senior citizens, community garden participants, active aging populations, and teachers can find learning opportunities indoors and outside, integrating literature, nutrition and more into gardening.

Photo: L. Fleming

- *Literature in the Garden - Miss Rumphius* is a story about a seaside community beautified with lupines
- *Health & Nutrition Guide* - nutrition knowledge using an apple surprise (p.88)

Using JMG Chapter Themes - Useful when planning or developing curriculum or projects that require sequential or themed sessions for camps, boy/girl scouts, or community service projects, the JMG materials thoroughly cover plant topics using science fiction, games, eco-art and more. Also available are Golden Ray Certificates, shorter excerpts from JMG chapters, useful for multi-session projects and convenient for programming when the full JMG program is not deliverable.

- *Operation Water* - chapters on soils & water with related activities
- *Junior Master Gardener Handbook* - chapter themes of plant growth, soils, ecology & environmental horticulture, insects & diseases, fruits & nuts and more

Source of Horticulture Information - For concise, user friendly information on plant and related topics, JMG materials can be a quick "go to" resource for basic and advanced concepts.

- *Operation Water* - aquifers, watersheds & wetlands (Ch. 6)
- *Wildlife Gardener* - definitions for nectarivore, omnivore & crepuscular animal (p.27)

Therapeutic Horticulture Programming - Registered horticultural therapists source out plant and gardening activities that engage the special populations they work with. JMG activities are fun for all ages and abilities!

- *Junior Master Gardener Handbook* activity - sombrero (p.4) & mud pies (p.26)
- *Health & Nutrition Guide from the Garden* activity - paper towel gardening (p.26)


Photo: L. Fleming

Used by Many Populations - Individuals and groups find JMG hands-on activities easy to follow, with clear step by step directions. Educators and health care professionals have commented that accommodating/modifying JMG activities for populations with mental, physical or behavioral challenges promotes inclusion, self-esteem and positive leisure activity.

Improving School Culture - *Learn, Grow, Eat & GO!* was specifically developed to improve school culture by combining 10 weeks of plant-based lessons with programmed physical activity. It is described as an "interdisciplinary program combining academic achievement, gardening, nutrient-dense food experiences, physical activity, and school & family engagement". Other examples:

- *Operation Thistle* activity - memory quilt garden: career awareness (p.127)
- *Wildlife Gardener* activity - all people are special career exploration (p.101)

Strengthening Master Gardener Skills - JMG is one of many programs master gardeners deliver. Familiarity with it broadens their skill set and knowledge base while also providing potential applications for other groups in the community.

- *Junior Master Gardener Handbook* - insect orders (p.72-73 with photos)
- *Literature in the Garden* – the book *Westlandia*'s earth clock

Garden Installations - Instructions for planning and installing many types of gardens are suggested in the 7 JMG programs. The ideas have inspired home gardeners of all ages as well as gardens at community centers, churches, schools and therapeutic facilites.

- *Learn, Grow, Eat & GO!* - solarizing a garden
- *Wildlife Gardener* - mini meadow (p.122) & design a [garden] deterrent (p.63)

The Junior Master Gardener Program offers hundreds of interesting, creative and scientifically sound concepts, activities and programming options for a wide array of groups and individuals. The breadth of its programming, with its trademark hands-on activities makes it appealing to many, not just educators. It is multi-functional as an educational tool, primer for horticulture enthusiasts, platform for collaborations and research, garden instruction guide, and repository for creative nature-based ideas.


Photo: A. Earl.Unsplash

Lesley Fleming, MA, is a Registered Horticultural Therapist (HTR) who has been a Master Gardener for more than 20 years. She has used JMG program resources since 2003 and continues to draw from the wealth of materials it offers. This article is based on a 2015 Florida Master Gardener conference session titled 10 Ways to Use Junior Master Gardener: Thinking Outside the Box.

Contracting Therapeutic Horticulture Services

Text & photo by Lesley Fleming, HTR

Therapeutic horticulture is delivered at a wide range of facilities, and continues to expand as newer populations participate in this type of health service and more facilities decide to use existing green space for therapeutic activities. Contracting with trained horticultural or recreation therapists to deliver plant-based programming is a viable option for many organizations.

This may be appealing and cost-effective for urban farms, health service facilities, hospices, hospitals and community gardens, particularly if there are existing gardens, raised or in-ground beds, greenhouses or labyrinths. Schools can also be a delivery site for therapeutic horticulture, and often have appropriate set-ups for plant-based programming like outside tables, butterfly and food gardens, and storage areas.

Organizations with constraints on hiring new employees may consider contracting these services as an option, where this suits their financial, programming and human resources. Contracting involves specifying product or services to be delivered, length and duration of services, fee, and client group. Most horticultural therapist use a short contract outlining the details, agreed upon by both parties.

Private Practitioner Perspective
A two session interview discussing issues related to being a HT private practitioner. Lesley Fleming, HTR shares her experience and insights with Leah Diehl, RLA, HTM, Director of Therapeutic Horticulture, Wilmot Gardens at the college of Medicine University of Florida.

Contracting Horticultural Therapy Services: Insights from a Practitioner

Part 1 https://youtu.be/oLUsomKZXzM

Part 2 https://youtu.be/pO9aVYWO6Z8

CONTRACTING MODELS

Contractor Delivering Therapeutic Horticulture at a Facility

In this scenario, a contractor would deliver therapeutic horticulture at a facility for a specified duration, type of program, with a designated population of participants. This could include children, seniors, hospital patients, social service clients or other. This programming could be a one-time format or a series of sessions.

Rental of Facility for Contracted Therapeutic Horticulture

In this model, an organization would rent a facility/site for delivery of therapeutic horticulture to be delivered by a contracted therapist who is not an employee of the green space/delivery site or the host organization, but one trained in the profession. Contracts with the delivery site, and with the horticultural or recreation therapist would be initiated by the host organization, specifying fees, scheduling, material usage, liability, maximum group size, safety protocols, and rules for facility usage.

One Time Therapeutic Horticulture Session

This model would accommodate drop-in programming (and pre-registration) for visitors, school classes, church groups, and youth groups. A therapeutic horticulture program/single activity would be offered to community organizations, typically with a per person fee structure that would cover contracted horticultural therapist fees and material costs. Group size would be determined based on participants' abilities. This model requires advanced scheduling, and could develop into a contracted series of therapeutic horticulture programming.

Therapeutic Horticulture Workshops

Similar to one time sessions, workshops delivering plant-based programming may or may not have related health goals (for wellness or other populations). These might provide professional development or training to professionals (teachers, nurses, therapists, architect students, caregivers etc.), programming for specific populations, public health-food security focus or horticulture focus like propagating, composting or nutrition. The therapeutic horticulture contractor would deliver sessions as specified in the contract.

Consulting

Consulting can also be considered contracted work. Professionals might be hired to consult on garden design or development of programs, distinct from actual delivery of programs.

Workshop Ideas

* *Therapeutic Landscapes Workshop*: Targeted audience of architecture students, garden designers, facility activity directors, school garden coordinators, emerging horticultural therapists

**Caregiver Go Carefree Workshop*: Targeted audience of care partners of people living with dementia, mobility impaired clients, homecare workers, and family members. Focus would be on using gardening or plant activities to relieve stress associated with the demands of providing care to others

**Herb Workshop*: Targeted audience-anyone who would be interested in using herbs to reduce stress, improve mood, add herbs as nutritional element to diet, begin growing plants as a hobby

Canadian Horticultural Therapy Association

By Lesley Fleming, HTR & Mary Partridge, HTR
Graphic by CHTA

The Canadian Horticultural Therapy Association's mission is to promote the use and awareness of horticulture as a therapeutic modality (https://www.chta.ca/). It is the national professional body that grants professional registration to qualified applicants, sets standards of practice, links educational/community resources, and posts job opportunities. Since 2020 the board has expanded its work, focused on providing an inclusive approach to its membership and larger community, making events accessible to members and the public. It has worked towards strengthening regional groups and providing opportunities for emerging professionals.

General Information about Horticultural Therapy in Canada

The Canadian Horticultural Therapy Association (CHTA) was established in 1987 and currently has close to 275 active members from across Canada and abroad, with almost 2,500 followers on social media. Membership includes registered horticultural therapists and professionals from diverse fields, including occupational therapists, physiotherapists, recreation therapists, social workers, nurses, psychologists, landscape architects, and horticulturists. The CHTA's membership also includes students and people interested in people/plant connections. It is a non-profit/social-profit, volunteer-driven organization, providing information, support, and resources about the practices and benefits of horticultural therapy (HT) and therapeutic horticulture (TH). Horticultural therapy professionals work in many different settings practicing:

"Horticultural therapy (HT) the formal practice that uses plants, horticultural activities and the garden landscape to promote well-being for its participants. HT is goal oriented with defined outcomes and assessment procedures. HT sessions are administered by professionally trained horticultural therapists.

Therapeutic horticulture (TH) the purposeful use of plants and plant-related activities to promote health and wellness for an individual or group. Goals and defined outcomes for individual participants are not necessarily considered nor clinically documented" (CHTA, 2021).

Professional Registration for Horticultural Therapist Registered (HTR) & Horticultural Therapist Technician (HTT)

The CHTA provides resources including Guidelines for Professional Registration and HT Core Skills & Knowledge in support of people working towards professional credentialing for the two levels of registration. Related information on code of ethics, professional competence and fees is listed on their website.

To be eligible to apply for professional registration status the applicant must be a fully paid CHTA member in good standing for one year. Once an applicant attains registered status, an annual

Professional CHTA Membership will be required to maintain the status of registration. There are professional membership options - Individual or Business.

The Guidelines for Professional Registration are frequently reviewed and updated to make them easier to use/understand and to ensure that they are reflecting a high set of professional standards, as well as being inclusive of the current education and practical opportunities available. Refer to the website for the most up to date version. Contact the Registration Committee Coordinator (registration@chta.ca) for assistance in planning and applying for professional registration.

Earning Points Towards Professional Registration
There are many ways to earn points towards professional registration. Some changes have occurred since 2019, with expanded opportunities via virtual access. The point system mandates that an applicant have some points from both categories required, education and practical experience.

"In order to be considered, applications must include documentation of both education and practical experience in the following 3 areas: 1) Horticulture, 2) Human Services/Therapy, and 3) Horticultural Therapy. As formal education and relevant work and volunteer opportunities are expanding quickly, please contact the Education Committee Coordinator (education@chta.ca) to learn more about the wide variety of options for earning points at any given time.

Writing articles for the *CHTA Newsletter*, and/or recognized publications such as the Nova Scotia Horticulture for Health Network's *Digging In* epublication, are eligible for points under the professional contributions category" (Cheney Creamer, CHTA Chair, 07.27.2021).

Book Clubs, Regional Networking Sessions, Events - Virtual book clubs were new initiative in January 2021 hosted by CHTA board and committee members with books like: *The Lost Language of Plants, Braiding Sweetgrass* and *A Walk in the Wilderness.* Regional networking sessions were conducted virtually in Spring 2021, with more of these forums expected. HT Week was celebrated March 14-20, 2021 and included '15 Days of Nature' series and an email campaign promoting HT/TH across the country.

Webinars - CHTA hosted a series of webinars in 2021 including Introduction to HT/TH, Pursuing Registration and Educational Pathways in HT/TH. Online programs and live Q & A sessions in Fall 2021 and Spring 2022 are planned.

Conferences – The 2021 annual conference *Branching Out – Nurturing Connections and Community* will be delivered virtually Sept. 16-18. Topics include: Metis Wisdom, HT & Indigenous Tools for Healing; Grand River Food Forestry; Techniques of Vertical Farming; Virtual Guided Nature Walk and more.

Canadian Horticultural Therapy Association (2021). The Canadian Horticultural Therapy Association. Retrieved from https://www.chta.ca/

Authors Lesley Fleming, HTR and Mary Partridge, HTR are both members of CHTA. Mary is a member of CHTA's Education Committee. Both are committed to promoting HT and opportunities for emerging HT professionals. Input was provided by CHTA's Cheney Creamer, Bianca von der Stoel and Sheryl Hanula.

Horticultural Therapy

Accessibility to Professional Development Expanded with Horticulture for Health YouTube Channel

Text & graphics by Lesley Fleming, HTR

A recently created YouTube channel "Horticulture for Health" offers professional development with webinars and videos developed by horticultural therapists. Topics include: plant-based programming, horticultural therapy, special populations, hands-on activities and more. This platform makes professional development accessible to a broader audience.

Therapeutic Programming: Gardening & Plant Activities with People Living with Dementia
Plant activities can transform lives. This is a presentation by a Registered Horticultural Therapist, offering creative plant activities for people living with dementia, care partners and health professionals.
https://www.youtube.com/watch?v=0qs2aAc3OVQ

Borrowing from Laughter Therapy to Enhance Plant-based Therapeutic Recreation and Therapeutic Horticulture
Identifying the physiological and psychological benefits of laughter and humor, citing current research and theory, the session will identify applications of laughter therapy concepts and techniques using plant-based humor appropriate for laughter with all special populations, for use by health services professionals.
https://www.youtube.com/watch?v=MK3dEaq8D6c

Contracting Horticultural Therapy Services: Insights from a Practitioner
An interview by Leah Diehl, HTM with horticultural therapist Lesley Fleming, HTR examines aspects of delivering horticultural therapy/therapeutic horticulture as contracted services. Sessions recorded as part of the University of Florida's Certificate in Horticultural Therapy.

Part 1: Topics include marketing programs, delivery sites, session logistics & fees. https://youtu.be/0LUsomKZXzM

Part 2: Topics include benefits & challenges of contracting, working with facility staff & volunteers, sourcing materials, and evaluating sessions. https://youtu.be/pO9aVYWO6Z8

Resources Fall 2021


Photo: L. Fleming

Gardening Trends, Weltschmerz and Therapeutic Horticulture article by horticulturist Susan Morgan offers insights and links related to current plant obsessions. https://www.htinstitute.org/blog/gardening-trends-weltschmerz-and-therapeutic-horticulture/

PaRx, a BC Parks Foundation initiative created with health-care professionals (based on the U.S. Parks Prescriptions movement), encourages people to connect with nature as health strategy. https://www.parkprescriptions.ca/en/about

Therapeutic Learning Environments article explores four essential attributes for restorative school settings. https://essentials.edmarket.org/2021/01/therapeutic-learning-environments-implications-applications-research-and-proof-through-practice/

Nova Scotia Horticulture for Health Network
To receive current or back issues of *Digging In* contact NSHHortNetwork@gmail.com
NS Horticulture for Health Network

Winter 2022 Issue of *Digging In:*
Reflexology Paths, Guided Imagery

Publisher & Editor in Chief Lesley Fleming, HTR
Special Contributor Susan Morgan
Christina Wilson, Florida Horticulture for Health Network, Marion Kuster, Nancy Ellis, Susan Morgan, Eat Breathe Garden.com, Kelsey Grentzer, Ted Fleming, Jeff Fleming, Chris Fleming, Leah Diehl, Beth Waller, Mary Partridge, Canadian Horticultural Therapy Association, Bianca van der Stoel, Sheryl Hanula, Cheney Creamer, W. Hassleman, A. Brun, R. Schram, M. Tegethoff, Q. Al, Y. Kageyama, A. Hliamshyna, J. Brown, A. Earl, H. Muleba, Unsplash, G. Hoffman, Pexels,