



Therapeutic Horticulture

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The History of Therapeutic Horticulture

Using plants and outdoor environments to heal people's ailments and support their health goals is a concept that dates to ancient times. As far back as 2000 BC in ancient Egypt and Mesopotamia, as well as during the Middle Ages, there is documentation that a walk through the garden was noted as a therapeutic tool. Plants and gardens were used medicinally and helped patients find joy during their recovery periods. However, the use of horticulture in a professional setting under a certified therapist was first utilized by Benjamin Rush in the early 1800s. Rush worked with mentally ill patients, encouraging them to grow and eat from their own garden, and to take an active role in the facility garden spaces. This research helped to propel the idea of nature and garden spaces as potential tools for individual therapeutic goals. In the 1940's and 1950's the use of horticulture for therapy began branching out to support not only mentally ill patients, but also the rehabilitative care for veterans. This propelled the use of horticulture for therapy for a wider range of participants. In the 1970's, the American Horticulture Therapy Association (AHTA) was founded and continues to expand. For local horticulture therapy in the Oklahoma area, reach out to "Horticulture Therapy of Oklahoma" on Facebook.

People that Utilize and Benefit from Therapeutic Horticulture

Today many fields of professionals are using plants and gardens to provide people with positive and rewarding experiences. The use of plants to achieve a health goal has been referred to as "horticultural therapy" or "therapeutic horticulture." The American Horticulture Therapy Association defines therapeutic horticulture as "the process through which participants enhance their well-being through active or passive involvement in plant-related activities." A horticultural therapist is a trained professional who has specific horticultural therapy credentials through the American Horticulture Therapy Association. Other professionals without an AHTA accreditation can utilize the vast benefits of therapeutic horticulture by implementing the themes of nature and plants into their participant's health goal setting

and programming. Horticultural therapists and professionals such as nurses, teachers, prison staff and others engage in plant-based activities to support a range of treatment goals that are specific to each participant's needs. See Table 1 for further details about professionals and participants who may utilize therapeutic horticulture practices. These professionals work in a wide range of settings with people who have an illness, disability or compromised social involvement in locations such as hospitals, prisons, nursing homes, mental health care facilities and schools. Typical benefits of a horticultural therapy program include a wide range of psychosocial, cognitive and physical benefits. See Table 2 for further details about skill building goals within therapeutic lenses.

People who participate in therapeutic horticulture programming have a variety of life experiences, limitations and needs that can be positively influenced by the intentional participation within the world of plants. All of us can derive pleasure from working with plants or being out in nature. People who have eating disorders, PTSD, depression, anxiety, developmental disabilities, dementia, brain injury, cancer or physical disabilities are just a few examples of the populations who can benefit from intentional horticultural therapy programming by a trained and certified professional. This list is non-exhaustive. Prior to implementing a program, professionals will assess client needs and abilities to make a program that will fit within the bounds of the strengths, interests and life goals of the participant. This programming can be entirely passive with activities such as bird watching, listening to nature sounds or sitting in nature. Programming can also be entirely active with participants physically sowing seeds or digging in the soil as well as any combination of active and passive activities. See Table 3 for further examples of active and passive activities. The set up for a therapeutic horticulture program can be implemented face-to-face, in small groups or in large groups, depending on the needs and ability levels of participants. A program coordinator's job is to create meaningful programs that fit within the boundaries of a participant's personal or environmental limitations.

Table 1. Participants and Professionals that Could Utilize Therapeutic Horticulture.

Examples of Participant Experiences that Might Benefit from Therapeutic Horticulture		Examples of Professionals Who Might Use Therapeutic Horticulture Techniques with Patients/Clients/Participants	
<ul style="list-style-type: none"> • Cancer patients • Cancer survivors • War veterans • Nursing home residents • People in prison/jail • Stroke survivors • Survivors of abuse 	<p>People who have:</p> <ul style="list-style-type: none"> • Recent amputation • Autism • Anxiety/depression • Eating disorder • Body dysmorphia • Developmental disability • Physical disability • Dementia • Traumatic brain injury • Seizures • Parkinson's Disease 	<ul style="list-style-type: none"> • Doctors • Nurses • Nursing home staff • Drug and alcohol rehabilitation clinic staff • Veteran Affairs hospital staff • Recreation therapists • Jail/prison staff • Long-term care facility staff • Master Gardeners 	<ul style="list-style-type: none"> • End-of-life care staff • School teachers • School counselors • Therapists • PTSD support groups • Cancer survivor support groups • Applied behavior analysis line therapists • Occupational therapists • Physical therapists

Table 2. Examples of Benefits or Skill Building in a Therapeutic Horticulture Program.

Skill Set	Definition	Examples	
Psychosocial Skills	Skill building that supports psychological and/or emotional problems as well as social skills. Also known as social emotional skills.	<ul style="list-style-type: none"> • Problem solving • Gaining confidence • Making appropriate decisions 	<ul style="list-style-type: none"> • Making friends • Resolving conflicts • Gaining awareness of others' feelings
Cognitive Skills	Skills that support the brain's understanding of information and ability to retain information.	<ul style="list-style-type: none"> • Memory • Visual processing • Spatial processing 	<ul style="list-style-type: none"> • Self-awareness • Motivation & goal setting • Focus and attention
Physical Skills	Skills that support the body, movement and independence/autonomy.	<ul style="list-style-type: none"> • Gross motor skills • Fine motor skills • Flexibility 	<ul style="list-style-type: none"> • Reduced pain • Physical fitness • Increased mobility

Table 3. Examples of Non-Active (Passive) and Active Therapeutic Horticulture.

Passive Therapeutic Horticulture Activities	Active Therapeutic Horticulture Activities	
Enjoying a garden view from a window or bench.	Sowing	Making a bouquet
Having a colorful potted plant in the room.	Weeding	Painting a still-life of flowers
Passively meditating in a garden.	Harvesting	Transplanting
Watching a loved one's garden.	Planning and/or maintaining a garden space	Pruning
Talking about past gardening experiences.	Propagating	Cooking or eating fresh garden produce

Therapeutic Garden Design Considerations

AHTA defines a therapeutic garden as “a component of a treatment, rehabilitation or vocational program,” which they describe as being “therapeutic in nature when it has been designed to meet the needs of a specific user or population.” It is important to note that one space can utilize multiple garden designs, with benefit potential for all gardeners and visitors. The garden is designed to accommodate participant’s goals and to facilitate people-plant interactions. For client-centered organizations that are interested in having a garden for therapeutic benefit, there are different types of gardens that can be created that serve to support different therapeutic benefits. These rehabilitative healing gardens include structures such as a sensory garden, memory or meditation garden and enabling garden.

Sensory Garden

Sensory gardens are designed specifically to center around the visitors’ five senses as they explore plants (Figure 1). A sensory themed garden might have herbs that can be smelled or eaten, plants of various textures (such as lambs’ ears or African violets) that can be touched and many different colors and sizes of flowers for a visually appealing space. A sensory garden could also have a noise element like flowing water or wind chimes. This type of sensory garden space is meant to encourage both active and passive engagement within the garden and create a sense of calmness within its visitors.



Figure 1. Sensory garden at The Botanic Garden at Oklahoma State University. (photo by David Hillock)

Memory/Meditation Garden

Memory or meditation gardens are a design choice for an intentional garden space within a client-centered organization. This type of garden design may focus on attracting birds and pollinators while providing a calm, relaxing place for visitors. For example, nursing home residents with dementia would directly benefit from this type of garden space, since it encourages exploration, independence and memory stimulation in a way that is designed to be safe. A memory garden in a dementia facility with a garden space where people can freely roam could show incredible benefits. Someone who gets tired easily or cannot walk very far will need shaded benches throughout. For people with dementia, it is important that they don’t get lost or eat something poisonous on accident, so designing the garden space to be conducive to that specific population’s needs are vital. Memory gardens with flowers and memorial plaques might also be a healing space for mothers who have lost their children. This space can be intentionally designed for healing and calm meditation (Figure 2).



Figure 2. Labyrinth garden on Oklahoma State University campus. (photo by Bruce Dunn)

Enabling Garden

An enabling garden could be used within settings like outpatient clinics, mental health facilities, botanical gardens, community gardens or schools. This is designed to encourage active involvement in otherwise passive garden visitors. Enabling gardens are used as a hands-on teaching garden that anyone can utilize. People who need physical accommodations can learn to use gardening as a therapeutic tool when the proper accommodations are made. Although not limited to physical impairment, this type of design will benefit many kinds of physical injury or disability such as limited mobility or visual impairment. In this type of garden, the plants chosen are an important consideration to drawing the interest of gardeners who utilize the space. For a visually impaired person there should be fragrant plants like herbs and flowers, as well as various textures of plants that are soft, smooth or otherwise unique.

Site Considerations

In addition to plant choice, each site should include a list of considerations about the people who will be visiting the garden space. It is important to make the space as user-friendly and accessible as possible. A therapeutic garden is designed with a specific population of person in mind. Once we know who we want to attract to the garden, we need to know what their needs are. If for example the garden is designed for nursing home residents, it should be designed with wide aisles to accommodate wheelchairs and walkers. It should have smooth flat surfaces to reduce tripping hazards and promote autonomy for residents with limited mobility. It might include raised beds or planters so individuals can see the garden at eye level and engage actively with the plants (Figure 3). In a therapeutic garden for nursing home residents there might also be strategically placed benches and shade structures for anyone who cannot be in the direct sun for extended periods. If the garden is instead being designed for a children’s Applied Behavior Analysis (ABA) facility, the needs of the space are going to look different than those for a nursing home. ABA is commonly used with children and adults who have autism. Children with autism and nursing home residents have vastly different needs and necessary accommodations.

Therapeutic Gardening Indoors

Therapeutic horticulture can happen indoors, such as in a greenhouse, a community room, or even at the kitchen table. Within a greenhouse, there can be raised beds and benches that are height appropriate for any gardener. A greenhouse

used specifically for therapy, should have wide aisles between benches and more floor space for wheelchairs, walkers and small groups of people compared to a greenhouse designed for commercial production. In therapeutic gardening, the goal is to make connections between the plants, the world and the individual so fewer benches would be preferred to allow for more flexibility of the space. Therapeutic horticulture can also be visiting a local botanical garden's greenhouse/conservatory to stroll around the paved walkways and enjoy sights of nature.



Figure 3. Raised garden built from plastic barrels and lumber. (photo by David Hillock)

The Power of Intrinsic Motivation

Just like one garden can be used for several different garden types and purposes, a therapeutic horticulture activity or program can also be used to achieve a wide range of goals. One person doing an activity such as sowing seeds could be working on four different unrelated goals all at the same time. The important part is that the participant is doing something

intrinsically motivating and intentional. Intrinsic motivation refers to a person's desire to do an activity purely for the enjoyment of engaging in it rather than for an external reward. Someone sowing seeds could be working on fine motor skills, social skills, communication skills and stress reduction all at the same time. The same idea can be true for the types of plants that are used for therapeutic horticulture goals. A small flower garden can be used for an infinite number of activities and goals with any ability level of participant. If intrinsic motivation for experiences with nature or plants is present within participants, a meaningful and beneficial program can be created. Examples of how many different activities and goals can be made from a single flower garden are given in Table 4 below. The examples given in Table 4 are only examples because the list is non-exhaustive, and the benefits derived from an activity differ from person-to-person.

How to Become an Accredited Horticultural Therapist through AHTA

There are several eligibility requirements for professionally registering with the American Horticultural Therapy Association. Anyone interested in becoming certified must have a bachelor's degree in horticulture or a combination of academic credits that meet the standards of the professional academic requirements. These credits include some human science, plant science and horticulture therapy credits. They must also have completed a 480-hour internship under the supervision of a horticultural therapist as well as apply for the certification exam and AHTA membership. Once certified, registration must be renewed annually. To find out more information, go to their website at www.ahata.org

Table 4. Examples of How a Flower Garden Can Support Many Different Participant Goals.

Activity using cut flowers	Example goals/skills participant may be working on	
Grow and care for a flower garden as a group.	<ul style="list-style-type: none"> • Gross motor skills • Problem solving 	<ul style="list-style-type: none"> • Social awareness • Fine motor skills
Make a flower bouquet for a loved one or friend.	<ul style="list-style-type: none"> • Decision making • Fine motor skills • Stress reduction 	<ul style="list-style-type: none"> • Focus and attention • Empathy toward others • Optimistic thinking
Paint a bouquet of flowers as still-life on canvas.	<ul style="list-style-type: none"> • Decision making • Optimistic thinking 	<ul style="list-style-type: none"> • Focus and attention • Fine motor skills
Make dried flower and/or pressed flower greeting cards.	<ul style="list-style-type: none"> • Fine motor skills • Focus and attention • Stress reduction 	<ul style="list-style-type: none"> • Social interaction skills • Decision making • Confidence building
Make a group lunch that includes fresh flower petals and enjoy it together.	<ul style="list-style-type: none"> • Collaboration • Problem solving • Optimistic thinking 	<ul style="list-style-type: none"> • Making appropriate decisions • Emotional regulation • Stress reduction
Photograph flower fields or flower farms.	<ul style="list-style-type: none"> • Increased mobility • Gross motor skills 	<ul style="list-style-type: none"> • Decision making • Goal-directed behavior

**Resources for Further Information about
Therapeutic Horticulture:**

[American Horticultural Therapy Association \(ahta.org\)](http://ahta.org)

[Horticultural Therapy of Oklahoma | Oklahoma City OK | Facebook](#)

[Gardening as a Mindfulness Practice | NC State Extension \(ncsu.edu\)](#)

[Therapeutic gardening - Washington State University \(wsu.edu\)](#)

[Gardening with special needs: The benefits of horticultural therapy - MSU Extension](#)

[Accessible gardening for Therapeutic Horticulture - Detroit Lakes Tribune | News, weather, sports
from Detroit Lakes, Minnesota \(dl-online.com\)](#)

[Horticultural Therapist - Seed Your Future](#)

[FS1208: Enabling Gardens: The Practical Side of Horticultural Therapy \(Rutgers NJAES\)](#)

[WhatIsTH_20July2018.pdf \(wisc.edu\)](#)

[The Benefits of Gardening & Horticulture | Newport Academy](#)

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