



What is Therapeutic Horticulture?

...and how can it support the work that I do?



Team Discussion:

What benefits have you personally experienced from interacting with plants?

What other benefits exist?



Understanding the Benefits

- Horticulture therapy has been widely promoted over the past few decades, although we have discussed that it has been around for much longer
- Many publications, but relatively few quantify effectiveness (Sempik et al., 2003)



Gardeners Know the Benefits

- Gardeners are aware of the benefits
- Philadelphia: Why do you garden? (Blair et al., 1991)
 - 144 gardeners interviewed
 - recreation (21%)
 - mental health (19%)
 - physical health and exercise (17%)
 - produce quality and nutrition (14%)



Why Should We Care?

- What are some of the major health issues that face our society at present?
 - obesity
 - diabetes
 - cardiovascular diseases
 - cancer
 - mental health and wellbeing
 - dementia
 - stress
 - depression
 - substance misuse
 - harmful behaviors associated with some of these conditions



In General: Physical Health

- Horticultural activities can...
 - Reduce obesity risk and improve attitudes about healthy eating
 - Reduce physical pain and help with recovery from surgery
 - Cope with challenging circumstances – cancer or living with chronic illness (asthma)



In General: Mental Health

- Horticulture activities can...
 - Provide social interactions and community cohesion
 - Reduce stress occurrences and severity
 - Reduce reliance on medication, self-harming behaviors, and visits to psychiatric services
 - Improve alertness, cognitive abilities and social skills



In General: Mental Health

- Horticultural activities can...
 - Alleviate symptoms of Alzheimer's disease – agitation and aggression
 - Provide manual activities for individuals who are drug or alcohol dependent
 - Help with distress management in challenging life circumstances (i.e. hospice)



Horticulture Therapy

- Horticultural therapy is a clearly defined treatment procedure
 - Focus on horticultural or gardening activities to treat a specific problem in a patient
 - The treatment has a goal that can be measured and evaluated
 - Overseen and delivered by a certified professional



Reducing Physical Pain

- Use horticulture to reduce chronic pain or discomfort in patients (e.g. Park et al., 2008)
- Gardening as a tool to cope with pain from cancer (Unruh, 2004)



Rehab and Recovery

- In rehabilitation after illness or trauma (i.e. strokes), horticulture has been documented to improve:
 - motor skills
 - speech skills
 - cognitive skills (Söderback et al., 2004)
- Used to benefit cancer survivors (Eunhee, 2003)



Dementia

- A growing population in Wisconsin
- Horticultural therapy has been documented to:
 - alleviate the symptoms
 - improve quality of life
 - improve cognitive functioning (e.g. Yasukawa, 2009)



Inmates

- Horticultural therapy improves psychosocial functioning
- In follow-up studies, Rice and Lremy (1998) found:
 - lower depression in subjects who had emotionally detached mothers
 - reduced substance misuse
 - a sustained desire for support

Therapeutic Horticulture

- Engaging groups, or individuals, in practical activities with positive outcomes.
 - Individuals may have a disability resulting in being excluded from social situations or from work.
 - Examples: offenders, socially excluded groups like recent immigrants or refugees, or individuals dependent on drugs or alcohol
- Not built specifically in to a recovery plan, but does provide individual benefits



Green Spaces

- Besides the activity of gardening, viewing and engaging in green space (with plants) has positive effects on mental health and stress.
 - Improve productivity at work (Lohr et al., 1996)
 - Reduce well-being and opportunity to recover from stress (Pretty et al., 2007)
 - Neighborhood greenness = mental health (Sugiyama et al., 2008)
 - Symptoms of ADHD relieved by green space (Kuo and Taylor, 2004, many other studies with children)



Happiness

- Gardening provides feelings of achievement or success
- Completing a physical task can provide contentment and relaxation
- The rhythm of the gardening year and recycling of resources may improve wellbeing
- “Those who are involved in gardening find life more satisfying and feel they have more positive things happening in their lives than those who are not” (Blair et al., 1991)



Stress

- Globally, stress and stress-related illnesses are on the rise.
- Physically:
 - increased muscle tension
 - increased blood pressure
 - increased pulse
 - increased sweat gland production
 - increased production of adrenalin and hydrocortisone
 - reduced digestive system activity
 - aggravates many illnesses (i.e. cardiovascular diseases, high blood pressure, depression, anxiety, thrombosis, digestive problems, chronic fatigue, aches and pains, allergies, increased risk of infection, mental illnesses)
- How might horticulture activities reduce stress?



Horticulture & Stress Reduction

- By simply allowing views of a green space or a semi-natural scene (Aspirus ICU rooms)
- Botanical walks (Cooper Marcus and Barnes, 1999, Ulrich, 1999)
- Gardens (Mayer et al., 2008)
- Programs with plants (Pretty et al., 2007)



Stress Relief

- Gardening can promote relief from acute stress
- Stress-relieving effects of gardening vs. reading (Van den Berg and Clusters, 2011)
 - 30 patients with acute stress
 - Both groups saw cortisol decreases during the recovery period, however decreases were significantly stronger following gardening
 - Positive mood was documented after gardening



Depression

- 12-week therapeutic horticulture program in Norway (Gonzalez et al., 2010)
- Looked at change in depression severity, perceived attention capacity and rumination (brooding) in individuals
- Found a clinically relevant decline of depression ('Beck Depression Inventory') in 50% of the participants
- Maintained scores at 3-month follow-up

Reach the 'Unreachable'

- Horticultural activities reached groups of participants who would often be difficult to engage in activities
- Documented increased numbers of appropriate behaviors within these groups in care facilities (Jarrot and Gigliotti, 2010)



Physical Benefits

- What are they? (Park et al., 2008)
- Calorie calculators provide estimates of calorie expenditure for different gardening activities, indicating that garden work burns around 250 - 500 calories per hour, depending on the level intensity of the activity
- In the UK, the low-income diet and nutrition survey showed that men and women living in households that grew food consumed more fruit and vegetables (Nelson et al., 2007)



Cancer

- In an online survey:
 - 41 gardeners living with
 - 80% say that gardening helps reduce stress and anxiety, and helps take their mind off treatment
 - Reported that gardening also had a positive impact on their physical wellbeing



Asthma

- Sadako (2002) carried out horticultural therapy three times a week for children with intractable bronchial asthma who were hospitalized
 - Helped them recover their confidence through experience in growing plants from the beginning
 - Felt a sense of the seasons
 - Felt freedom from an ordered life in a ward
- Kamata (2008) provided horticultural therapy for long-stay asthmatic children. Improved:
 - Interactions with nature
 - Involvement with others
 - Education on growing plants



So what can we DO?

- Establish gardens
- Provide educational programming
- Gardening packs/“Garden in a Box”
 - 75% of gardeners living with cancer said that gardening during and after treatment helped them manage feelings of depression and sadness
 - Cancer support group provided gardening packs to encourage people to ease into physical activity after cancer treatment





***Thank you for your
time today!***

***Interested in learning more?
Please attend future lunch
sessions, and spread the word
about therapeutic horticulture
in our communities.***



8/24/18 | WHAT ARE YOUR NEEDS?

**Discuss how UW-Extension can support YOUR
needs through horticulture programming.**

**Please bring your lunch | All programs are scheduled NOON-1 PM
212 River Drive, Room #5 Wausau, Wisconsin 54403 Tel 715.261.1241**

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