

Healing Spaces: Gardening Activities for Stress-Reduction

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Abstract

The therapeutic benefits of peaceful garden environments have been understood since ancient times. As healthcare professionals begin to recognize the benefits of using the natural environment and plants as a therapy modality, Horticultural Therapy is emerging in many hospitals, nursing homes, and mental health facilities around the country. The purpose of this project was to create a resource manual for use in a group home for people living with HIV/AIDS and comorbid mental illness. The manual, which will be used by volunteer “CareTeams” working in the home, offers ideas on creating a healing space for the residents, as well as therapeutic gardening activities for stress reduction. It also contains a resource list of local organizations and businesses that could aid the home in eventually creating and maintaining a healing garden.

Purpose Statement

The purpose of this project was to create a garden activity/resource manual and activity poster set for an adult family home specializing in the care of individuals with mental illness, substance dependency, and/or dementia in addition to a diagnosis of AIDS, to promote stress reduction and improve overall quality of health for the residents. The ultimate desired outcome of the project was that the home would use the manual to eventually create a healing garden for the residents.

Background and Literature Review

Healing gardens have been around for centuries; however, the healthcare community has only recently begun to integrate them into their facilities and therapies. With cultural trends moving toward greater acceptance of alternative medicine and “green” practices, many people are beginning to recognize the beneficial and restorative effects that gardening and natural settings can have on health. Horticultural therapy (HT) is gaining attention as a form of rehabilitation in medical fields; especially in the fields of occupational therapy and nursing (Mizuno-Matsumoto, Kobashi, Hata, Ishikawa, & Asano, 2008), and many hospitals, nursing homes, and mental health facilities have now incorporated gardens onto their campuses to be used by both patients and visitors for therapeutic benefits.

Many patients benefit from gardening experiences in therapy by learning skills, adaptations, and gardening methods that allow for continued participation to garden at home (American Horticultural Therapy Association, 2011). Some horticultural therapy techniques include constructing wheelchair accessible entrances and paths, utilizing raised beds and containers, adapting tools for people with disabilities, creating sensory-

stimulating environments with plants selected for fragrance, texture and color, and utilizing accessible greenhouses that bring the garden indoors for year-round enjoyment. All of these adaptations and gardening methods allow patients to transfer therapy techniques to their home gardens, and allow for continued enjoyment and participation in gardening.

Evidence has been progressively building to support the use of horticultural therapy with people who are struggling with a variety of illnesses, including depression, stress, and anxiety (Rappe & Kivela, 2005). These health problems are particularly evident in the elderly population, and the use of gardens as therapy has been shown to have positive outcomes. A quantitative study by Rappe and Kivela (2005) with 30 elderly participants in a skilled nursing facility showed that more than half of them had improved mood, quality of sleep, and better concentration after either observing, or walking in, their facility's garden. In another study, 40 adults over the age of 65 were treated for depression using a garden walking intervention over a period of six months (McCaffrey, Hanson, & McCaffrey, 2010). The findings of the study showed that this "simple" intervention had a significant impact on the participants; decreasing depression in 60% of the participants after four months, while non-walking participants of the study reported no changes in their mood.

Another very recent study designed with two single-study groups, assessed whether horticultural activities ameliorate depression severity and existential issues. A 12 week therapeutic horticultural therapy program was designed for the study, and included both active and passive gardening activities. The active parts of the program included

sowing, potting, planting, cultivating, building beds; and the passive parts included bird and butterfly watching, sitting on benches, walking around and picking flower bouquets. Additionally, the program had a 3-month follow-up. In both studies, it was found that depression severity declined significantly during the intervention, and remained low at the follow-up (Pachana, McWha & Arathoon, 2003). These findings are in line with the idea that therapeutic horticulture is experienced as an existential meaningful intervention in clinical depression (Gonzalez, Hartig, Patil, Martinsen, & Kirkevold, 2011).

Another population for which horticultural therapy has been shown to be beneficial is patients who have cerebrovascular disease. In a recent study involving five patients with cerebrovascular disease, research was conducted on the changes of brain activity after horticultural therapy interventions were introduced. These five patients were invited to participate in HT for a month, in addition to receiving the routine medical and physical treatment given in the hospital. The purpose of the HT program was to bring about effects in mental healing, cognitive re-organization, and training of sensory motor function (Mizuno-Matsumoto et al., 2008). Following the program, magnetic resonance imaging (MRI) scans were performed on all five patients. These scans indicated that HT can stimulate parts of the brain not always affected by routine physical rehabilitation, and that HT can compensate for routine physical rehabilitation and help to improve damaged brain function (Mizuno-Matsumoto et al., 2008). The doctors involved with this research noted that the overall health of all of the patients had improved following the horticulture therapy intervention.

More recent studies have focused on how various therapeutic horticulture projects may serve as important public health interventions for various populations. One of these

studies was a systematic review of existing evidence for nature-assisted therapy (NAT). The authors of this study “subdivided NAT into social and therapeutic horticulture focusing on horticultural activities for therapeutic benefits and natural environments therapies that emphasize the provision of an environment and activities appropriate for the patients’ needs” (Annerstedt & Wahrborg, 2011, p. 385). From this review they were able to show significant improvements for varied outcomes in diverse diagnoses, spanning from obesity to schizophrenia. In a similar study, a survey of 836 active social and therapeutic horticulture projects showed that many different client groups benefit from these projects, particularly people with mental health illnesses or learning difficulties (Centre for Family and Child Research, 2004).

With the advent of better medical technologies, chronic illness, such as AIDS, back pain, diabetes, cancer, stroke, and heart disease, has replaced acute illness as the predominant disease pattern in developed countries (Petrie & Revenson, 2005). New evidence has shown that therapeutic natural environments can have a positive effect on the psychological and physical health of people with varying conditions and comorbidities (Sempik, 2010), and that the ability to heal and cope with a chronic illness at any stage can be reinforced by incorporating aspects of nature into built environments (Downing, 2008). Horticulture therapy is one way to address the treatment needs of people living with chronic illness by providing a sense of order, safety and privacy for those dealing with the chaos induced by illness. Gardening creates more outward perceptions rather than inward self-consciousness, which can provide a valuable “escape” from everyday challenges (Epstein, 1998).

Additionally, as “Baby Boomers”, and subsequent generations begin to grow older, trends indicate that these populations will not age like any generations before them. Medical breakthroughs and technological advances, in combination with healthy lifestyles, will help improve the lives of older Americans (Greenblatt, 2011). Culturally, future generations of aging Americans will likely have very different needs and desires, and many treatments and activities enjoyed by the current elderly population will change. Horticulture therapy can be offered as one of these “new” changes, and help to improve the overall well-being of people as they age.

As more hospitals and institutions recognize the healing effects of the natural environment, more therapeutic gardens and horticultural therapy programs are being added to healthcare settings. Several agencies and hospitals in the Pacific Northwest are currently including varying levels of horticultural therapy as part of their service to patients. One such organization is Legacy Health Systems in Portland, OR, which has been on the forefront of implementing gardens for rehabilitation. Pioneered by Teresia Hazen, a Registered Horticultural Therapist and educator, this non-profit organization currently oversees nine therapeutic gardens working with various patient populations; including those with psychiatric disorders, dementia, acute care needs, and burns (Legacy Health, 2011). Other local organizations include The Bailey-Boushay House in Seattle which provides a greenhouse for people in hospice, and VA hospitals that have installed therapeutic gardens for their patients and visitors.

With the support of these trends and research, the focus of this project was to provide stress-reduction gardening activities for residents living in a group home in Seattle, as well as ideas on how to eventually create a healing garden for the home.

Addressing the need and target population

Multifaith Works/Rosehedge is a non-profit organization that offers an “Enhanced Assisted Living Program” providing both long and short term housing in three facilities; two in North Seattle and one in Capitol Hill. According to the website, each of the three homes is “structured and staffed to ensure high quality of care and support for people living with HIV/AIDS.”

The DeWolfe Home, one of the organization’s homes, is located on Capitol Hill and houses six people living with HIV/AIDS. The home has a home health aide on duty 24 hours a day to provide assistance with dressing, bathing, and all activities of daily living. On-site nurses manage medication, conduct health assessments, and coordinate medical care. A staff social worker offers counseling and referrals for day programs, drug treatment, and other social services. An on-site cook prepares meals and snacks in accordance with each resident’s dietary requirements and volunteer “CareTeams” assist with transportation, maintenance, and one-on-one social interactions.

The garden at the home is currently very sparse and under-utilized, and is maintained by a couple of the residents and volunteers. It has the potential to be an area that could actively assist the residents with stress-reduction and overall health.

Procedure

Much of my past employment in landscaping and agriculture, as well as experience working with people living with HIV/AIDS, informed this project. To learn more about the use of plants as therapy, I interviewed two leading horticultural therapists working in the region, and did extensive web searches on therapeutic gardening. Additionally, much of the research I reviewed for this topic was presented at a public

symposium for occupational therapists and students in the form of a Critically Appraised Table, and was subject to many peer and faculty reviews.

From my previous employment working in HIV/AIDS, I had experience with Multifaith Works/Rosehedge and approached them with the project. I contacted the Volunteer Director, Cherie Schumacher, and we partnered in February 2011. Cherie connected me with the residents of the DeWolfe Home and I began meeting with both Cherie and the individuals living in the DeWolfe Home to find out their needs and desires in regards to this project. From the beginning, my idea was to create a garden project that would have a “biomechanical approach”, where the residents would actually do work in the garden. However, after discussions with the residents, it became apparent that they had more interest in utilizing the garden for stress and anxiety reduction, and the project soon became focused on improved mental health.

I contacted landscape designers in the area who specialized in the creation of therapy gardens, but was unable to find someone willing to work on the original plan of creating a pilot healing garden without substantial compensation. Because of this, the original plan of creating a healing garden was put on hold until funding could be raised for its development. Instead, the project was modified to provide the organization with an activity/resource manual and poster set, and was presented in May 2012 as partial fulfillment of the Master of Occupational Therapy degree from the University of Puget Sound. The manual and posters will help the volunteers and residents utilize the existing garden for activities, while also providing the organization with resources to eventually create a healing garden as time and money allows.

Description of the Final Project

An activity and resource manual was created to provide the organization with ideas for stress-reduction activities, as well as to provide a list of available resources to help create a healing garden. The manual was created for the volunteer Care Teams working in the facility to offer ideas on creating a healing space for the residents, provide therapeutic gardening activities for stress reduction, and offer a list of resources of local organizations and businesses that could be helpful to the project.

The manual is separated into four main sections. The first section offers an introduction to horticultural therapy, research to support the use of horticultural therapy, and the concepts behind planning a healing garden. The second section is broken into ways in which a healing garden can be planted to invoke the five senses for reducing stress; for example, planting certain flowers for aromatherapy or colors that create a sense of peace and calm. The third section focuses on using the garden to create projects or activities for stress reduction; for example, drying flowers or making essential oils. And the final section offers physical activities for reducing stress, such as stretching or meditation that can be performed in the garden. To accompany this final section, a laminated poster set was placed around the existing garden to illustrate these stress-reduction movements. The posters will be used by the residents, and are also general enough to be used by similar populations in other settings.

The existing garden at the DeWolfe Home will eventually be modified to provide an outdoor healing space to be enjoyed by residents. A landscape architect or certified therapeutic landscape designer will be consulted to create the garden for this purpose. Local businesses will be solicited for the planting materials, and volunteers who

currently work at the home will be organized for modifying the garden. Residents who are interested in creating the garden will also be involved. The final part of the manual provides a resource list of organizations, supply vendors, and examples of existing healing gardens to offer ideas and help with the eventual modification of the DeWolfe Home garden.

Outcome of Project

The desired outcome of this project was for the residents of the DeWolfe House and CareTeam volunteers working at the facility, to have a resource tool available to them for incorporating stress-reduction activities for use in the home's garden. The organization will also be able to adapt and generalize the manual and posters for use in their other group home settings that have access to a garden.

The success of the project was determined by providing the residents and Care Team volunteers at the DeWolfe House an opportunity to read and use the manual and posters, as well as offer verbal and written feedback for improvements.

Project Goals & Objectives

Goal 1:

Upon utilizing the manual, the Care Team volunteers at the facility will become aware of the benefits of using the natural setting as a therapy modality for stress-reduction.

Objective 1:

Upon utilizing this educational product, the Care Team volunteers working at the facility will be able to identify three ways a healing garden can be used to improve mental function for greater stress-reduction.

Objective 2:

After the Care Team volunteers at the facility have utilized this manual, they will be able to identify three activities that can be done in the healing garden that will lead to stress-reduction.

Goal 2:

Upon utilizing the educational posters, residents of the facility will be educated about techniques and tools to be used for stress-reduction in a healing garden.

Objective 1:

Upon utilizing the educational posters, residents of the facility will have three meditation techniques that can be used in the healing garden for stress-reduction.

Objective 2:

Upon utilizing the educational posters, residents of the facility will be able to perform three gardening activities that will reduce stress.

Implications for Occupational Therapy

This project has much relevance to occupational therapy, as the concepts and goals addressed in this project are already well understood within the occupational therapy community. The goal of this project was to create stress-reducing and relaxing activities for individuals residing in a group home who all have HIV infection and comorbid psychiatric disorders. Rest and relaxation are important aspects of mental health that contribute to an overall sense of well-being, and gardens can provide a restful space for healing to occur. Using plants, gardens, and the natural world for therapy and rehabilitation is a time-proven practice, and numerous studies have proven the psychological, physical and social health benefits of horticulture (Puliti, 2006). By

providing a garden activity manual for meditation, relaxation, and stretching, this project offers the residents unique activities for stress-reduction.

Application of the Ecology of Human Performance Model

The model chosen to guide this project was the Ecology of Human Performance (EHP). This model describes the dynamic between person and environment, and how these interactions ultimately influence occupational performance. In this model, the word “task” is used, instead of “occupation”, to describe “all possible activities available in the universe” (Brown, 2009). Using the term “task” encourages an interdisciplinary method to intervention within the model. There are five intervention strategies included in the EHP: (1) establish/restore the person’s ability to perform in context; (2) modify/adapt contextual features and task demands to support performance in context; (3) alter the context to better match the individual’s abilities; (4) prevent problems by anticipating difficulties; and (5) create circumstances that promote more typical or complex performances in context (Brown, 2009). This wide range of intervention strategies offers the occupational therapist a dynamic approach to enhancing occupational performance.

Application of Theoretical Model

Individuals with HIV infection and comorbid psychiatric disorders are impacted in all areas of occupation. One of the most common illnesses in these individuals is major depression, which leads to an inability to perform daily occupations or have meaningful social interactions (Colibazzi, Hsu, B.A., Gilmer, 2006). By using the establishing/restoring, modifying/adapting, and prevention interventions provided by the EHP model, my project focused on the utilization of an existing garden as a supportive space that can be used for stress-reduction. By providing this space, the desired outcome

of the project was to promote effective activities for these individuals to deal with stress, emotional regulation, and enhance overall occupational performance.

Application of the OT Practice Framework

The purpose of the *Occupational Therapy Practice Framework* (OTPF) is to define the ways in which the profession of occupational therapy “promotes the health and participation of people, organizations, and populations through engagement in occupation” (American Occupational Therapy Association [AOTA], 2008). The framework defines “occupation” as “everyday activities” that give meaning to an individual’s life. These occupations can range from self-care to leisure and vocational pursuits. By recognizing the importance of the relationship between physical and mental health in relation to occupation, the occupational therapist utilizes the framework to create client-centered interventions that allow individuals to engage in meaningful occupations.

This project addresses the areas of occupation that include rest, leisure, and social participation. Rest is defined in the OTPF as “engaging in relaxation or other endeavors that restore energy, calm and renewed interest in engagement” (AOTA, 2008). The “healing garden” will eventually be designed to promote peace and rest, and enhance social participation through restoration of energy by offering a calm space for reflection. Through modification, the garden will effectively become a place that will provide fulfillment and a general sense of well-being for all members of the group home. The OTPF supports this by recognizing health promotion through the interactions of people with their environments.

Special Circumstances, Limitations, and Considerations

Garden activities may be limited during different times of the year due to the number of volunteers available to help the residents. The weather also greatly affects the use of the garden, and what kinds of plants would be available at different times of the year. Additionally, the residents themselves have mental and physical limitations that may prohibit them from interacting with the garden at certain times. Developing and creating the healing garden relies heavily on volunteer resources from a nonprofit organization, and donations from companies and individuals, and it may not be completed as quickly as desired.

Sustainability

This project was feasible in that the manual and posters for this project were completed in April 2012. The garden will be an on-going process as funding for the project is generated. Small portions of the project will be implemented as funding, time, and energy allow.

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