

HORTICULTURE: A THERAPEUTIC TOOL

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Horticulture is not a new therapeutic tool. Before psychiatry became a science, work in the garden was prescribed as a curative for ills of the mind and nervous system. In 1768, Benjamin Rush maintained that digging in the soil had a curative effect on the mentally ill, and by 1806, hospitals in Spain were emphasizing the benefits of agricultural and horticultural activities to the mental patients. Dr. Gregory in North Scotland was reported to have gained fame in the early 1800s for curing insanity by compelling his patients to work on his farm. Farming and gardening have been an important part of the work therapy program at Pontiac State Hospital, Pontiac, Michigan, since it was founded in 1878. These early programs were primarily oriented towards maintenance of the institution and the production of food. However, as the therapeutic values of such activities became apparent, emphasis shifted to programs more therapeutically oriented. Today centers throughout the country are using horticulture for educational, therapeutic and recreational purposes.

The specific goals toward which a horticultural therapy program is directed may differ distinctly from one institution to another and from one population of handicapped individuals to another. However, the ultimate goal of these programs is the improved physical and mental health of the individual. The benefits may be seen in four areas - intellectual, social, emotional, and physical development.

Intellectual Benefits

1. *Attainment of new skills.* The individual gains many new abilities as he learns the techniques and methods of horticulture such as plant propagation, gardening, and flower arranging.
2. *Improved vocabulary and communication skills.* Participants in the program learn new terms as well as new concepts.
3. *Aroused sense of curiosity.* Plants are fascinating. They arouse many questions. How and why do plants grow the way that they do? They offer opportunities for experimentation.
4. *Increased powers of observation.* Watching the interaction between plants, man and animals helps develop deeper understanding and ability to evaluate relationships. This also leads to improved ability to plan and make decisions.
5. *Vocational and prevocational training.* Many different schools and institutions place participants in horticultural related jobs after completion of their programs.
6. *Stimulation of sensory perceptions.* Vision, hearing, touch, taste, and smell all play an important role in gaining the full benefit from a horticultural therapy program. At the same time that sensitivity to one's surroundings increases the perception of details increases.

Social Benefits

1. *Interaction within the group.* The members of a group learn to relate to one another in a more meaningful way as they work together toward a common goal. They learn to respect the rights of others, to be more cooperative, and to share responsibility. They also have an opportunity to develop leadership qualities.
2. *Interactions outside of the group.* For individuals within an institution as well as handicapped members of the community the opportunity to meet with others at garden clubs, flower shows and on field trips is an important experience in their social growth. The opportunity to share the products of their own effort with others is also an important aspect of horticultural therapy. The vegetable garden at the Menninger Foundation has traditionally supplied food for several youth homes in Topeka as well as for victims of emergency and disaster. According to Dr. Will Menninger, "as they share the product of the work with people less fortunate economically, patients picture themselves, often for the first time, as productive members of society."

Emotional Growth

1. *Improved confidence and self esteem.* Plant materials and activities can be selected that guarantee some degree of success to the participants in the program. Pride in the completed project, a sense of responsibility and accomplishment, all lead to an improved self-concept.
2. *Opportunities to relieve aggressive drives in a socially acceptable manner.* From the breaking up of old flower pots for use in the greenhouse to the clipping of hedges, a horticultural therapy program provides many aggressive outlets, leading to improved self control through redirection of these aggressive drives.
3. *Activities that promote interest and enthusiasm for the future.* This is a particularly important aspect to the elderly and the emotionally disturbed individuals who have lost interest in the future. Interest can be rekindled as they anticipate a flower bud opening or a seed germinating.
4. *Opportunities for the satisfaction of creative drives.* Creativity and self expression are evident in flower arranging, landscaping and many other aspects of horticulture.

Physical Benefits

1. *Development and improvement of basic motor skills.* Specific activities can be used to improve muscle coordination and to train unused muscles, for example, transplanting of seedlings can be used to practice grasp and release and flexion of the thumb and forefinger.
2. *Increased outdoor activities.* Flower and vegetable gardens as well as landscape maintenance activities provide many opportunities for meaningful outdoor activities.

It is not necessary to have expensive facilities or a large garden to initiate a successful horticultural therapy program. With imagination and initiative even the most limited facilities can be modified to accommodate horticultural activities. If there is no greenhouse available, a sunny window can be used. If there is no window, special lights can be installed for growing plants. If there is no place for a garden, pot plants, dish gardens and terrariums can be used.

The following is a list of some of the activities can be modified and adapted to suit the specific handicap of the individuals involved and the specific goals of the program.

A. Arts and Crafts

1. Indoor crafts

- a. Model gardens
- b. Artificial flowers using paper, ribbon, cloth, plastic films, etc.
- c. Collages of pictures from garden catalogs and magazines (wall hangings, trash boxes, supply bins, etc.)
- d. Needlework projects such as decorating garden gloves, making aprons for yard work, cross-stitching flowers, etc.
- e. Jewelry making from seeds, cones and dried flowers
- f. Weaving with materials from the garden
- g. Funny figure designs using seed pods, pine cones, apples, sweet potatoes, etc.
- h. Wall plaques such as seed mosaics, seed pod pictures, and dried flower plaques
- i. Stationery and note cards using such techniques as leaf and flower prints, potato block prints and pressed flowers
- j. Book markers (i.e. pressed flowers encased in clear plastic)
- k. Sachet bags filled with herbs, flowers, pine needles, etc.
- l. Planters made from plastic milk jugs, coffee cans, sand casting, etc.
- m. Paper-mache fruits, vegetables, vases, etc.
- n. Plaster of paris casts of wild flowers, ferns, etc.
- o. Bulletin board displays
- p. Drying flowers (air dry, borax and sand, silica gel, glycerine, pressing)
- q. Christmas crafts such as ornaments from seed pods, wreaths, corsages, Christmas Cards, etc.

2. Outdoor Crafts

- a. Wind chimes from flower pots or bamboo
- b. Stepping stones
- c. Garden sculpture
- d. Garden Furniture
- e. Bird attractors (i.e., feeding stations, houses, baths, etc.)
- f. Planters and window boxes from redwood, clay drain pipes, concrete, etc.
- g. Scarecrows

B. Group Activities

1. Games (garden bingo, flower quizzes)
2. Stories (story telling pictures, felt board pin-ups, myths and legends, pantomime, skits, etc.)
3. Movies and slide shows (many available through libraries, arboreta, and garden clubs)

C. Excursions

1. Arboreta, gardens, and parks
2. Flower shows
3. Horticultural businesses (e.g. greenhouses, nurseries, orchards, vegetable producers)
4. Collecting trips (mount and display, save for other crafts); rocks, insects, weeds, wildflowers, cones, tree flowers, seeds and seed pods, mosses and terrarium plants

D. Plants - Indoors

1. Flower arranging, corsage making
2. Dish gardens, terrariums
3. Houseplants: culture, identification, propagation
4. Hydroponic cultures: sweet potatoes, *Cyperus atternafolius*, carrot and beet tops, watercress
5. Experiments: lights, temperature, water, fertilizers
6. Flower forcing: bulbs, spring branches

E. Plants - Outdoors

1. Flower, vegetable or herb garden: e.g. planning and preparing soil, liming and fertilizing, planting, weeding, watering, harvesting, etc.
2. Nursery: propagation, culture, watering, digging
3. Landscape maintenance: e.g. mowing, pruning, edging, weeding, transplanting, etc.

F. Related Fields of Study

1. Insects and diseases
2. Soils
3. Birds and animals in the garden.

Once the decision has been made to incorporate horticulture into the therapeutic program of a hospital or institution, three main areas must be given thorough consideration. These are 1) the individuals who will participate in the program, 2) the specific goals toward which the program is directed and 3) the techniques for implementing the program. The following guidelines give some of the factors which should be considered in each of these areas.

Consideration of the Individual

1. Consider the abilities of the individuals within the program; both physical and mental limitations.
2. Keep in mind that all members of the group will not have equal interest in plants. Encourage them to participate in related activities such as building bird houses or collecting insects, stones, etc.
3. Encourage group projects which make the best use of an individual's talents and abilities. For example, a horticultural exhibit would present an opportunity to plant the exhibit, gather the materials, build the displays and explain them to visitors. At the same time, it would promote social interaction, give group members and opportunity to show leadership qualities and teach cooperation.
4. Design your program so that each individual works according to his needs and abilities, making it possible for him to accept his achievements as the result of his personal capabilities.
5. As much as possible, plant the activities together. Encourage the participants to make decisions. Use your knowledge of horticulture to guide the direction of the activities.
6. Design the project so that the participants can manage most of the work themselves. Each

person will gain more from the program by doing things himself.

7. Avoid establishing competition between individuals by giving prizes or awards. A fine healthy plant and a word of praise will foster pride and satisfaction.

Maintenance of the Goals

1. Avoid "busy" work. Every activity should have a definite function and be an integral part of the entire program.
2. Avoid placing too much value on the end product of an activity whether it is the produce from the garden or a floral arrangement. It is the involvement that is important, not the finished product.
3. Except in vocational programs, remember that the purpose of the program is not to make gardeners or florists out of the individuals in the program. It is to encourage them to expand themselves through explorations with plants.
4. Avoid too scientific or complex an approach to horticulture. Present information about plants that will increase the enjoyment of gardening and encourage further activity.
5. Utilize projects which can be completed in a short time such as planting a terrarium so that the participants will get immediate reward for their efforts. But, also include projects such as a vegetable garden that are long-term and teach them to think in terms of future needs and activities.

Implementation of Techniques

1. Plan projects far enough in advance to form a continuum. For example, in a year round program, seeds can be started in early spring indoors in a greenhouse or sunny window for a summer flower garden from which flowers can be dried for winter craft projects.
2. In motivating the group members, utilize modification of activities with which they are familiar. Horticulture bingo, etc.
3. Exploit the passive benefits of a garden therapy program. The individual who cannot go outside and work in the garden may profit from the tranquility of sitting near a window and observing nature in the garden.
4. Make use of flower shows and other exhibits to give the individuals an opportunity to display their talents. It is often possible to incorporate your program into a local garden club show so that the people in your program can display their horticultural abilities with nonhandicapped amateur gardeners.
5. Encourage the participation of local garden clubs, nurseries and florists. They often have materials they would be willing to donate.
6. Know each activity thoroughly- be able to present it in a clear, organized fashion. Present it completely once a demonstration, then repeat as necessary to teach member of the group.
7. In planning a vegetable garden, consider how the produce will be used (consumed on the premises or elsewhere, sold, given away) and what facilities are available to handle it after harvest.
8. Make use of public and private parks, gardens, arboreta, and greenhouses for field trips.
9. Incorporated projects to show the interrelationships between various aspects of nature with emphasis on how this affects plants. Study soils, insects, birds, water, etc.
10. Make use of various audiovisual materials available. Slide shows, movies, magazines and

garden catalogs are of great interest to all gardeners. They provide excellent activities for winter days.

11. Remember that inexpensive material will provide as much therapeutic value as more expensive ones. Flowers grown by the participants are of more value in a flower arranging class than roses from the local florist.
12. Be sincere and be enthusiastic. If you are not already an enthusiastic gardener, try it. You will find great enjoyment in it; then share it with others.

Regardless of age or handicap a horticulture program, properly designed and implemented, can be of great value in any therapeutic, educational or recreational setting.