

PEDAGOGICS AND HORTICULTURAL THERAPY:
THE FAVORITE TASK OF MR. HUBER, DIGGING UP POTATOES

K.R. Neuberger
Association Gardening and Therapy Rheinland
Rheinische Landeslinik Langenfeld, Koelnerstr. 82/49
40764 Langenfeld, Germany

Konrad R. Neuberger
Oberkeller Allee 301
+49 227 Düsseldorf Oberkell

Abstract

The field of gardening covers educational aspects as well. It has always been a way to get direct access to one's environment, to the living world as well as to inanimate/physical nature. Gardening extends education: **theoretical** knowledge can be transformed into practical work. Three aspects are recommended: improvement of the self-image, improvement of awareness and contact, and the activation of resources. By sensual experience, a new process of **learning** may develop. Working with plants increases confidence in one's abilities and may activate one's resources. People, challenged by significant mental, physical, or social problems and thereby used to a pattern of helplessness and passivity, can start to organize their environments in an active and creative way. One can experience self-effectiveness, independence, and identification. A case report provides examples of how gardening can improve abilities and competence. The evaluation of the program by participating patients indicates what they find meaningful.

Key index words

Psychiatry, Therapy, Education, Evaluation by patients, **Pedagogics**, Horticultural therapy

1. Introduction: **pedagogics** and horticultural therapy

Our ancestors were more aware of and close to nature. Natural proceedings were often considered as models of development. The process of growth and maturation used to be described in comparison with man and plant (Neuberger, 1988). Observing plants and nature prompted trust in one's own ability to live naturally. Symbolism reaches far back into human history. Plants are one of the richest sources in the illustration of growth and development (Menninger, in **Daubert** and Rother, 1981). Parallels between human and plant development (Schein, **1985**; Rice, 1993) are evident: both are determined by rhythm and cyclical processes, such as rising, ripening, and passing (Rice, 1993). Relf (1981) extends this: most people make a ready translation between the life cycle of plants and their own human life cycles.

For this paper, the terms pedagogics and education are used synonymously. Education means to prepare the ground and the atmosphere to enable development and

growth. There are overlappings between pedagogics and therapy. Pedagogics is seen as more related to learning and pursuing goals; therapy more guided by insight and emotional growth.

Horticultural therapy is widely used in Germany (Przygoda, 1990), but little research has been done.

1.1. Institutional setting

Langenfeld Psychiatric Hospital, founded in 1900, is a regional hospital in a small town between two major cities, Cologne and Duesseldorf, in Germany. Members of the medical staff are nurses, psychiatrists, psychologists, social workers, sport teachers, as well as ergotherapists. The hospital serves 700 patients, diagnosed as being mentally ill,

Introduced to the hospital in 1983, horticultural therapy, a form of ergotherapy, is prescribed by a psychiatrist or by a psychologist. Three horticultural therapists offer treatment opportunities for 15 patients daily. They produce vegetables organically, without pesticides or artificial fertilizers. The produce is sold. The work style is mainly task- and group-oriented. Patients stay in the program an average of 16 weeks.

The program's schedule includes 3.5 hours of gardening in the morning and 3 hours in the afternoon. Patients differ greatly in their treatments, demographic characteristics and diagnoses. Participants in the HT program (1989-1994: 125, 31.7.1994) are diagnosed as follows: (non-organic) psychoses - 41%; alcohol/drug abuse - 27%; mental retardation - 6%; others - 18%; not specified - 8%; included are 11% forensic patients.

1.2. Horticultural therapy (HT) and pedagogics in psychiatry

From an educational perspective, many aspects of psychiatric disorders can be understood as misdevelopments and maladjustments of the patients in their courses of socialization. Acknowledgement of HT as a kind of education is fairly widespread (Williams, 1989; Nordvig, 1975; Hiott, 1975; Heck, 1978; Williams, 1989; Riemann, 1990), but has not been studied systematically.

1.3. The paper's purpose

The purposes of this paper are to characterize horticultural therapy activities that result in personal improvement (Azar and Conroy, 1989) by focusing on the relationship between pedagogics and horticultural therapy; to suggest three educational aspects to be combined with horticultural therapy. They represent a valuable mode to focus the diverse expectations in a psychiatric setting; and to present the results of five years of surveys of patients to indicate what issues they felt were important in their participation in the program.

2. Methods. indications

The methods used are first interviews of patients, interviews of related ward personnel, casuistry, indications, goals reviewed, field notes, and a questionnaire.

First interviews may explore biography to receive decisive data. Casuistry shows empirically (all) relevant information to assess a certain case. Field notes taken cover the variables under observation. Goals are specified for their educational aspects. Goal-related issues represent indications for patients seeking HT treatment.

Educational aspects are selected with regard to the improvement of three variables, self-image, awareness and contact, and the activation of resources.

The questionnaire is designed to obtain feedback on what patients think of the horticultural therapy program. For this survey, the two questions offering multiple-choice answers containing 14 items are evaluated. Between 1989 and July 1994, it has been completed by 80 patients. The number of patients in that period in the program for more than two weeks was 105; however, 25 patient releases were unforeseen.

3. Results

Results will show three aspects: observations, educational goals, and evaluations by participating patients.

3.1. Observations and a case report

Let me give you two examples. They are by no means fortuitous, nor do they represent causality. By working in a garden, the patient comes to realize that his/her emotional needs cannot always be immediately satisfied. Seeds sown today provide results and ripen only after days and weeks. The following exemplifies a special side.

Example No. 1: Why don't my seeds germinate?

A participant in the program reacted with anger when his seeds did not germinate simultaneously with those of other patients. He accused the therapist of giving him bad seeds. Later, when they had germinated, he talked about it and recognized that he used to be called a late starter in his childhood, something that was true for his seeds, too. When the projection could be recognized, a new way of looking at his self-image arose. He started to see himself as feeling different rather than being slow.

Gardening is a very distinct and special kind of work. You work with your feet on the very ground that carries and nurtures you. You become aware, perceptive, and joyful.

The following part of a case report shows some aspects of pedagogics in a horticultural therapy program.

Example No. 2: Case report "Digging for potatoes"

There was a handy young man of 30. His diagnosis was drug addiction on glue and personality disorders. His little and ring fingers of the left hand were irrevocably contracted. He lived on the balcony of his mother's flat. His father had died of alcoholism at the age of 51. His only social contacts were his mother, his brother, and the sniffing scene of his home town. He has had some work experience between 16 and 20 and had done some garden work. Jobless for 10 years, he had been a sniffer

of glue for 14 years. Sniffing had brought him into the hospital. He said he was not interested in anything: he would even prefer glue to a girl friend. He was afraid to start something new because he thought he might fail. There was no frustration tolerance, minimal self-esteem, and many inhibitions, especially toward women.

The leading ideas for his participation in the HT program were to offer positive and broader stimulations for his nose, to give his hands something to hold, to prevent his finger nails from cutting into his palm, and to work in a group.

We worked out a step-by-step approach. First, make a start on rough activities. Second, handle different tasks. Third, work with a female assistant. Fourth, watch use of left hand. Fifth, select different tasks. Sixth, cooperate with different patients. Seventh, work to order vegetables, and eighth, assist in selling the garden produce.

The following may have been decisive: The HT program offered new experiences. He met colleagues; had something to grasp and to move in reality; and had the whole range of decent, natural scents of plants and dirt available. The fact that he presented himself as a very sympathetic person was mirrored back to him when the horticultural therapist said that he had the potential to evoke sympathy and the golden way was by using his nose. At that point in time, he had already followed points 1 to 5 on our activity list with no difficulty. When he was asked to harvest potatoes, he readily agreed. After a while, he formed a constant cooperative team with one patient. The garden rows were 100 yards long. Despite the fact that a machine could be used, he wanted to dig up potatoes by hand every harvesting day. Asked why he chose to do so, he laughed and said, "There is nothing like it. You see what comes up." It was like digging for a treasure. Even though he did not precede to points 7 and 8, his performance was optimal.

After three months, he started to date women for the first time in 12 years and soon had a girl friend. He stayed in the HT program until he was discharged. Two years later, he came by with his girl friend. He said he had never again used glue, had a job, and enjoyed life anew. Presently, he works in a fruit and vegetable business.

What modifications occurred for what reasons? He learned working and enjoyed the feeling of being appreciated. This was in contrast to his mother's home, where he was only tolerated. Garden work gave daily structure, and he was occupied meaningfully. Reasons for his continuity may lie in the experience of a meaningful daily routine; the amazement about what came out of the soil; and that he had found **someone** he could cooperate with, a person whom he had chosen. He used more and more the communicative opportunities provided, especially when he was digging potatoes. Other forms of treatment, like joiner's work, would not have been so effective because gardening is holistic and offers more work with hands and tools. The same is true for communicative aspects. Many work conditions change that you have to talk about. Moreover, gardening requires one to move. You cannot discover something without moving it or yourself, say Oberholzer and Lässer (1991). Because he was really engaged and "stuck his nose into the soil," he experienced self-effectiveness. In this way, his awareness and contact increased, and his self-image improved as well.

In examples like this, we are looking for phenomena and structures to provide a systematic approach. A background of educational aspects seems adequate.

3.2. Three educational aspects in horticultural therapy

There are three educational aspects in horticultural therapy that we suggest: improvement of the self-image, improvement of awareness and contact, and activation of resources.

A. Improvement of the self-image:

- self-affirmation
- positive feedback
- self-esteem
- creativity
- initiative
- autonomy, increased independence

B. Improvement of awareness and contact:

sensory awareness by stimulation

body awareness, new experience and better understanding

- emotional identification
- awareness: being perceptive, joyful, alive
- preference, selection: develop interests
- develop a relationship with the environment
- learn cooperation
- experience responsibility

C. Activation of resources

- support healthy parts of the person
- regain capabilities - can lead to:
 - stimulating growth of plants stimulates the patient
 - experience of self-effectiveness

Many gardening activities have a strong influence on the self-image of the patient (Neuberger, 1992, 1993): harvesting, plant care, and selling are among the most popular activities. But most often, tasks for personal improvement need to be detected by patient observation.

The second aspect is the improvement of awareness and contact. Many patients are not aware of what leads to hospitalization. They are often isolated and no longer appreciate their animate and inanimate environment. Experiencing less fear and more awareness in the HT program, they may feel "alive" again. Interest may develop and even more: they may grasp with their hands and understand with their feet (Kiikelhaus, 1987).

Resource orientation is the key in the third aspect. Without resources, there would be no garden. Without resources on behalf of the patient, there would be no cure. Interest and effort in the garden give rise to changes and developments because stimulating new growth of plants stimulates the patient. This is the experience of self-effectiveness,

3.3. Evaluation of the HT program by patients (n=80, *n=26 ,+n=58)

The following is important to me:

Action-oriented items

• I like to work in fresh air	86%
• It is beneficial to create something together	75%
• I like to deal with plants	64%*
• I exercise myself and notice, it is good for me	63%
• I see that I move and change something	60%
• I am glad if I can do something on my own (self-reliance)	56%
• I notice that I improve personally	55%+

All in all, the horticultural therapy program is for me:

Awareness-oriented items

• a work that makes sense	71%
• gardening is varying	66%
hard effort, that I like once in a while	24%
• gardening is monotonous, boring	9%

Contact-oriented items

• an opportunity to work at my problems	61%
• better than expected	38%
• an intact world that I need sometimes	31%

How did Mr. Huber use the questionnaire? He filled it out after two weeks. Actually, he forgot to fill out his name and the date. His reasons for coming were to pass time and for distraction. He also wanted to improve his coping with work standards. He placed a cross at four items: working in fresh air; gardening is monotonous, boring; an intact world, that I need sometimes; and better than expected. This reflected 10 years of boredom and glue dreams. After his second week, he had not yet begun to realize what lay ahead.

Ten items ranked above 50%, whereof we find seven in the activity section. The underlying objective, an activity-oriented program where everybody is busy growing vegetables and hope, is well-reflected in these numbers.

Awareness-oriented items were less represented in the questionnaire. Two of these items were chosen by 71% and 66%. If we look at the 9% response under this aspect, it is not only Mr. Huber who appreciated the monotonous side of gardening. Even one sound might yield something very meaningful.

Contact seems the less appreciated side of gardening. But in the action-oriented items, we find an equivalent: the joy of creating something together. Mr. Huber, isolated for 10 years, found two items in this section meaningful: the intact world and the unexpected.

4. Discussion

The questionnaire brought good results, but **needs** a revision to be more precise and have more power. A factor analysis is advised. Further investigation should include a test to assess personal development. Katamnestic studies (after one, two, or more years) are advisable, but will be difficult to execute.

This survey gives rise to the assumption that horticultural therapy activities result in an awareness of one's inherent possibilities, a prerequisite for personal improvement. The social setting as well as the activities need to be explored as to which result in personal improvement. More casuistry will be collected to examine the interaction between hospital treatment and horticultural therapy. Psycho-social variables appear to be important predictors for success in horticultural therapy.

On the one side, it might be crucial to distinguish educational and horticulture-therapeutic effects from other therapeutic and environmental influences. But on the other side, it might be more fruitful to combine the different approaches systematically. It might be possible to transfer new ideas from a family therapy context to the horticultural therapy context.

To improve the effects of HT, we must examine phenomena and structures. We need to find out which horticultural activities are to be applied at a certain point in time.

5. Conclusion

Gardening is educational because theoretical knowledge can be transformed into practical work. By physical experience, a new process of learning may develop. In this way, pedagogics does more than just deliver knowledge; it prepares for the fruitful moment when recognition develops. While working with plants and considering one's own condition, a connection to one's life experiences may develop. Where can this happen most easily?

I want to conclude with a quote from an ancient Roman, Cicero: "Humanity develops when you nurture your capabilities with the same attention that you give to soil and garden" (Heck, 1978).

Acknowledgements

My special thanks go to A. Severin, R. Rafferty (HTT), G. Kamp, G. Walsken, and K. Elsner, in recognition of their contributions for setting up, preparing, reflecting, and translating this text.

References

- Azar, J.A. and T. Conroy, 1990. The development of an empirical instrument designed to measure the effects of horticultural therapy. *J. Ther. Hort.* 4:21-28.
- Daubert, J., and Rothert, E.A., Jr., 1981. Horticultural therapy at a psychiatric hospital. Chicago Horticultural Society.

- Heck, I., 1978. Oekologische Denkweise als didaktische Dimension und schulische Aufgabe, Darmstadt. 109, 122.
- Hiott, **J.A.**, 1975. Hortitherapy program for the mentally handicapped. Research S.157, **11**, Clemson University, South Carolina.
- Kukelhaus, H., 1987. Organ und **Bewusstsein**, Koln. 1.
- Neuberger, K., 1988. Some Conceptual Ideas in Horticultural Therapy. J. Ther. Hort.. Gaithersburg, MD. 9-13.
- Neuberger, K., 1992. Horticultural therapy in a psychiatric hospital: **Picking** the fruit. The Role of Horticulture in Human Well-Being and Social Development. D. Relf (ed.), Timber Press, Portland, OR. 185-188.
- Neuberger, K., 1993. Die arbeit **im garten** als **metapher** und ausschnitt der **wirklichkeit**. Praxis Ergotherapie 2:88-93.
- Nordvig, O.K., 1975. Horticultural therapy in public education. California Horticultural Journal **36**(1):36-37.
- Oberholzer, A. and **Lässer**, L., 1991. Gaerten fur kinder. Ulmer, **Stuttgart**. 21.
- Przygoda**, H., 1990. Foerderungsmoglichkeiten fuer Benachteiligte in der BRD. Diplomarbeit, Weihenstephan.
- Relf, D., 1981. Dynamics of horticultural therapy. Rehabilitation Literature **42** (5-6):147-150.
- Rice, J.S., 1993. Self-development and horticultural therapy in a jail setting. Dissertation. San Francisco.
- Riemann, B., 1990. Chancen und probleme der beschaeftigung psychisch behinderter auf landwirtschaftlichen betrieben. Diplomarbeit, Gesamthochschule Kassel Universitaet.
- Schein, J., 1985. How do you relate to your lettuce? Gardens for All News **1**:21-23.
- Williams, S., 1989. Evaluation of a horticultural therapy program in a short term psychiatric ward. J. Ther. Hort. **4**:29-38.