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Autor: Tenngart Ivarsson, Carina / Grahn, Patrik

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Patients' experiences and use of a therapeutic garden: from a designer's perspective

Carina Tenngart Ivarsson Swedish University of Agricultural Sciences (SE)*
Patrik Grahn Swedish University of Agricultural Sciences (SE)

Patients' experiences and use of a therapeutic garden: from a designer's perspective

The object of this study is to broaden our knowledge on how a therapeutic landscape is used and experienced by its patients. Data refer to qualitative, semi-structured and hour-long interviews with ten patients in a Swedish healing garden. All patients have stress-related diseases and are participants in a rehabilitation programme with nature-assisted therapy. A thematic analysis resulted in two main themes: "to escape, observe and get sensory stimulation" and "to achieve satisfaction, socialize and re-evaluate", with two and three sub-themes respectively. To grasp both the experience and the use, the themes are described both as phenomena and in relation to where they occur. The experiences described and how they might be aspects of healing, as well as the need to include a perspective related to this process in the design of therapeutic settings, is elaborated on in the discussion. Aspects of results in the thematic analysis are discussed with relation to design and theories in environmental psychology and can be seen as a kind of evaluation of the design of the garden. Also discussed is how this information can be used to contribute to a more evaluation-based knowledge in the design of therapeutic settings.

Keywords: environmental psychology, landscape architecture, preference, qualitative, restorative, stress
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* P.O. Box 88, SE-230 53 Alnarp, E-Mail carina.tenngart@ltj.slu.se

In Sweden, stress-related illnesses reached the level of a national disease approximately a decade ago. Most common among stress-related illnesses, causing people to stay on the sick-list for more than six months, is a disease labelled exhaustion syndrome (Socialstyrelsen 2003, Nordh et al 2009). This disease is related to mental fatigue, burn-out, depression, neurasthenia, and to some extent even to post-traumatic stress-disorder (Socialstyrelsen 2003, Gunnarsson 2003).

At the Swedish University of Agricultural Sciences in Alnarp, we had at that time already started to study the connections between human health and the use of urban green areas (Grahn 1991, Grahn 1994, Grahn et al 2000). Our results supported findings suggesting that a stay in a natural surrounding facilitates the recovery of people suffering from stress (e.g. Ulrich et al 1991) and mental fatigue (e.g. Kaplan & Kaplan 1989). In the USA horticultural therapy has been used since the 1940s to treat soldiers suffering from post-war psychiatric symptoms, or at least from post-traumatic stress-disorder (PTSD; Stigsdotter & Grahn 2002, Horticultural Therapy 2009¹). In line with our own research, taking into account theories concerning how people recover

from stress and mental fatigue and with practice concerning PTSD, we designed and laid out a healing garden – "The Alnarp rehabilitation garden" – during the autumn of 2001 at the Swedish University of Agricultural Sciences on the Alnarp campus outside Malmö in southern Sweden (Cooper Marcus 2006, Stigsdotter & Grahn 2002, 2003).

All gardens might be therapeutic but "the healing effects of a garden will be powerfully enhanced by how it is detailed to support other sought-after activities beyond the basics of being in a plant-filled space" (Cooper Marcus & Barnes 1999, p. 4). This particular garden is supposed to meet both the need in our society to treat and rehabilitate patients suffering from exhaustion syndrome and the need to evaluate this kind of therapy on a research basis. Here we started to develop a new kind of therapy that combines the use of restorative natural areas with horticultural therapy, traditional occupational therapy, physiotherapy and psychotherapy, by offering treatment in a healing garden.

¹ Horticultural Therapy (2009) Horticultural therapy educational program. www.ktalbot.com/ht.html (12.11.2009).



Fig 1 The kitchen garden to the left and the wildlife garden to the right. The meadow, in the rear, is experienced as a twodimensional barren field.

Photo: Caroline Hagerhall

The design of the therapeutic setting

In the healing garden, the patients with stress-related diseases are participating in a rehabilitation programme with nature-assisted therapy, lasting at least six weeks, but more often for twelve weeks. The setting is approximately 20 000 m², adjacent there is a large park of 40 hectares. The lay-out of the garden has been planned from both theory and research, aiming at evidence-based health design. Theories from landscape architecture (on preferred park dimensions), environmental psychology (on landscape preference and restorative environments), psychiatry (on demand levels for coping in crisis), horticultural therapy (on the healing effects of horticultural activities) and occupational therapy (on activity levels) have been merged into the work on the design of the garden. As a consequence, the garden was very deliberately designed to incorporate both restorative qualities, assessed in Tenngart Ivarsson & Hagerhall (2008), and more traditional cultivation areas with plant beds, having qualities focusing on activities. The design of the garden is based on variation and contrasts, providing different garden rooms for different purposes. Most important is the fact that the garden contains areas for rest and contemplation, as well as for activities and work.

Different areas in the garden

The different garden rooms (Figures 1 and 2) are intended to induce experiences related to eight dimensions: Nature (wildness), Space (extent), Peacefulness, Prospect (vista), Species-richness, Culture, Refuge (shelter) and Social (Stigsdotter & Grahn 2003).

- The Welcoming Garden is the first garden room visitors enter. It should be experienced as interesting and attractive. The visitors should feel welcomed, safe and secure here and that they can be themselves. Close to the building they are intended to experience dimensions such as Social and Culture. Further from the building they are intended to experience the more restorative qualities of Refuge and Species-Richness.

- The Grove in the north-western part of the garden consists of old fruit trees (apple, pear, plum and cherry) and is treated more as a natural area. Dimensions: Nature, Peacefulness and Space.
- The Meadow is another part characterised by being more nature-oriented and involving no cultivation. Dimensions: Prospect and Peacefulness.
- The Wildlife Garden Room offers cultivation possibilities in an organic and nature-like design differing clearly from the straight and strict lines of traditional gardening. Dimensions: Refuge, Nature and Species-richness.
- The Traditional Cultivation Room is designed as a traditional garden, focusing on cultivation, with

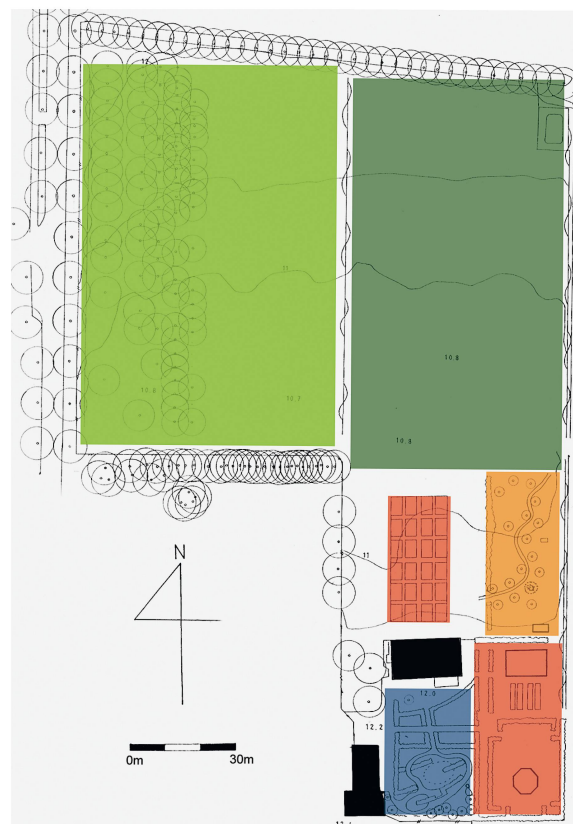


Fig 2 Plan of the Alnarp rehabilitation garden, with the different garden rooms: the Welcoming Garden (blue), the Grove (olive green), the Meadow (forest green), the Wildlife Garden Room (orange) and the Traditional Cultivation Room (red).

two greenhouses and plant beds of different heights. One of the greenhouses is built as a dome and is called the Grow Point. Dimensions: Culture, Species-richness and, to some extent, Social.

For a more detailed description of the theories and the design choices behind the layout of the garden, see Stigsdotter & Grahn (2002, 2003) as well as Grahn et al (2010).

Purpose and aim of this study

This study is part of a larger explorative single-case study (Yin 2003) with the purpose of providing designers of therapeutic settings with more substantiated information to guide their design choices. The point of departure for the present study is the hypothesis that the design of special garden rooms in the therapeutic garden support the rehabilitation activities proposed by the therapists in the garden. This study focuses on the behaviour of the participants in the rehabilitation programme. Do they seek support from different garden rooms during their rehabilitation programme? If so, can we find a certain pattern in that process? The intention, on a larger scale, is to broaden knowledge on the environment-behaviour relations needing to be taken into consideration when working in the field of environmental design (Rapoport 2005). The main aim of this particular article is to investigate how patients experience and use a therapeutic setting that has been designed specifically to meet their needs.

Method

Data collection

Ten qualitative semi-structured interviews with patients were conducted, each lasting approximately one hour. The interviews were conducted in connection with the patients' participation in the therapy programme, i.e. during or after a day's participation. All interviews took place in a neighbouring property, cut off from the rehabilitation garden, as a means of avoiding bias, probable if the interviews had been conducted in a place where parts of the healing garden could be seen. An interview guide with 14 open-ended questions, including follow-ups in terms of probes and prompts (Gillham 2000) and a map of the garden was brought to each occasion as a basis for the discussion. Permission for the study was obtained from the Ethics Committee.

The participants

All participants are patients with stress-related diseases and are participants in the rehabilitation programme located in the healing garden. The time each patient in this study has spent in the garden therapy differs from six weeks to spread out over eight months.

The initiative for the patients to choose this kind of therapy differs. Some have heard or read about garden therapy and become interested themselves. Others have heard of it from colleagues and still others have been recommended by physicians, welfare officers or social insurance officers to take part in this horticultural therapy programme in the healing garden.

Data analysis

The analyses of the interviews were made thematically. First of all, a structural analysis was made. In the next step the themes were condensed into themes based on content and meaning. This way of analyzing is a method of content analysis (Gillham 2000) and has similarities with how Kvale (1997) describes Meaning Condensation, which is an empirical phenomenological method for analyzing qualitative interviews. A third step in the analysis was to relate the emergent themes to design, i.e. to describe the environments that seem to support these phenomena.

Results: Description of themes and where the phenomena occur

The analysis gave rise to two main themes, with two and three sub-themes respectively. The themes are described by one of the participants as she explains how, when she was feeling sad, she walked around randomly, looking at flowers. She had not planned anything, but only wanted to "be", clear her mind, forget and revive. This represents the first theme "to escape, observe and get sensory stimulation". She continues to explain that as she got better she was able to walk away and pick berries, put them in her mouth and also to talk to others who were doing things. This represents the second main theme "to achieve satisfaction, socialize and re-evaluate". Each theme is described both as a phenomenon and with regards to the setting where this phenomenon occurs.

Main theme 1: To escape, observe and get sensory stimulation

This theme is about experiencing peace and quiet, escaping into yourself and understanding one's appropriate level of stimulation. This creates a new personal basis to build on, a foundation.

1a) An escape from reality

The informants talk about "allowing oneself an escape from reality". Someone expresses it as: "being outdoors is being unreachable". Many informants talk about "just being", which can be either walking off alone while wandering randomly or actively seeking a refuge, something "to escape into".



Fig 3 The pile of boards, a safe place to lie down.

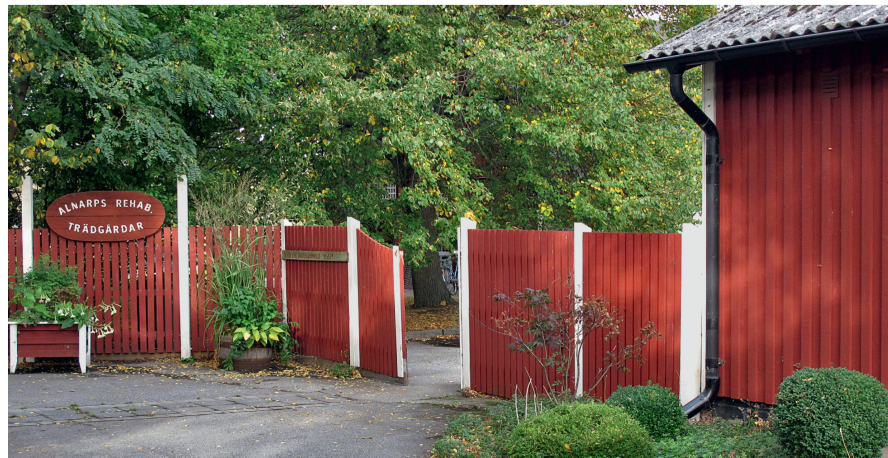


Fig 4 The entrance to the garden.

The refuge can be a place to sit in, to lie down in or somewhere to wander. Some mention that when they feel sad they find themselves often walking around without a specific plan of where they are heading for. One woman says sometimes her head is so heavy she does not know what she is thinking while she is walking in the garden. Another woman describes how, during the first months, she actively went into the park in order to experience silence and get away from others. She did not want to listen to anyone, that was something she had done for years in her work. Winter time is difficult for escaping, because there is not enough room for every one to find a refuge inside.

During the escape something starts to come to life. The patients talk about being restored, getting new ideas and that “something new has awakened”. It is a non-demanding pleasure just to stroll around, to be outdoors and “philosophise”. One woman’s favourite place to escape to was behind a pile of boards (Figure 3) where she laid down in the grass. It was really hard for her when the boards were used somewhere else. This was her most safe and secure place, her space. “It is kind of an energy source there. When I lay down I felt it was almost like connecting to pipes in the ground. I just lay there, re-

fuelling myself with new energy.” Another refuge was a bench behind a curved willow fence and yet another was a seating area in a bower grown with artichokes. These are good places for a rest, when you are sheltered both from behind and from the sides.

The winter garden is also a peaceful place. It constitutes the border between inside and outside, but you do not feel trapped, because you have a complete view through the glass. One man says: “It is so harmonious; I become peaceful when I sit there. There are special kinds of flowers in there. Not very much is flowering, because they are succulent plants”. Another man mentions that his refuge is inside one of the greenhouses, called the Grow Point. He points out that what the arrangement of furniture is signalling is very important.

Walking away is one way of escaping. The walks mostly take place on the paths in the southern part of the garden or where there is something one wants to see. Some patients say that they have taken endless walks along the loop around the pond. One woman says: “You stroll around there and enjoy it and it is a kind of a labyrinth. Even today I can get lost there though it is so small. [...] It is kind of silly, but anyway that is how it is, and I have picked so many beautiful flowers there”. Another woman describes it like this: “Many times I have walked to the rabbit cages and then I have just walked up and down these paths for a while, and then sat down on the bench [behind the willow fence]. I cannot really tell what I have been doing”. Many patients say that they enjoy walking past things to look at; the animals, the flowers, the pond, the winter garden, the Grow Point or the Wildlife garden room.

The non-demanding atmosphere of the environment is mainly created by the attitude of the staff. In the design it is important to include areas where patients can influence and participate in the development of the space. It is also important to create opportunities for people to be alone, to get away. The fence and the gate surrounding the garden (Figure 4) are also mentioned as being something very important. The safety the fence provides helps the patients achieve the psychological peace they need to be able to relax in the setting. One participant expresses it as “kind of nice that it is enclosed and that there is a gate because when you close that gate you sort of shut off the rest of the world and inside it is all right to be as you are”.

1b) Getting sensory stimulation

Many patients indicate that they start being more and more aware of sounds and smells. They observe the beauty in nature and think it offers comfort and pleasure. One woman says that she was walking partly to get into better shape, but also to get sensory stimulation. A non-demanding environment is again very important. These aspects together



Fig 5 The kitchen garden in early autumn.



Fig 6 The Grow Point greenhouse, with the surrounding provocative gravel area.



Fig 7 The winter garden as in-between indoors and outdoors. Photo: Anna Bengtsson

give the patients the possibility to find rest. They mention finding the right scale, the right pace and peace in time and space as important consequences. With this it becomes easier to choose, to peel off unimportant things. One patient says that he believes “encounters with nature let the brain be low down in the rev range and then the body follows”.

Sensory stimulation by hearing is triggered in a positive way by the sound of water. One of the patients says he missed that sound before the pond was

built. At the same time the motorway, a kilometre away, is a negative experience. Touch is mentioned by one woman who said she wanted to walk on a soft ground, not on asphalt. Along with the sensitivity for sensory stimulation comes susceptibility to shapes and colours. Sight is very much related to colours. A couple of participants state that they cannot stand straight lines or square shapes as they are too perfect. They do not like the kitchen garden (Figure 5), because it has straight lines. A part of the garden where edible plants are grown in a much more organic way, in more organic shapes, is much more preferred.

The patients are very sensitive and very careful about their environment. They are seeking a balance between the sensory and the peaceful in opposition to activity. Others speak about a balance between natural parts of the garden as opposed to the more cultural. The space around the Grow Point (Figure 6), a big open gravel area, is found to be very provocative. One patient even says: “I hate passing that area”.

The winter garden is a nice spot (Figure 7), because “when the door is open you can be in there alone and still hear the hens roaming around outside”. The animals also provide great sensory stimulation. They are mentioned as fun, nice, picturesque and important. Many participants point out at the same time that they are only nice to watch and to have as a loan, but not to be responsible for. The hens are fun, they walk around freely and meet you like a dog does, but they do not demand anything from you. To go to the rabbits, in their cages, demands an active choice that many do not want to make. Some also avoid the kitchen garden, because they think it is too demanding.

The meadow (Figure 1), even though there is high grass and weed, is considered inhospitable. The field is too open and the patients experience it as cold, naked and barren. They feel it offers no support or shelter. One patient says: “I do not want to go there. I walk along the trees instead”. Most of the participants say that the main thing they would like to improve in the garden, is to change the big two-dimensional fields, the open spaces, into smaller rooms in three dimensions. They speak about more grown up and lush vegetation, cosy rounded rooms, more woodland and more trees and bushes in general. As an answer to the question what they most find missing, one participant says: “It would be more rooms with bigger trees, where you could hide, like groves”. The trees are described as fascinating and they create safety and beauty. Others say more trees are needed, because they offer a stability that is otherwise lacking.

The fact that the garden is experienced as non-demanding is mentioned by many as being very important. What creates the non-demanding experi-

ence is not a stripped or denuded environment, or the lack of activities or of possibilities for doing things. Instead, it is important to have an atmosphere where things are “allowed”, where you can make your own choices and where signals the staff are transmitting bring about the right feeling for the environment. One participant says that it was very visible to her that the garden was important to many people, that many people were working in it and that many people were allowed to participate in building it. For her, this means that the garden is animated. Others speak about openness and a possibility to influence things. It gives a sense of freedom that the garden is not considered finished. Many point to the fact that the staff are very conscious of details that are small and beautiful, but also simple (Figure 8). They use the phrase “unpretentious” to describe the environment. Caring about the environment, an interest and understanding for both plants and humans, is much more important than a specific style.



Fig 8 An example of consciousness of simple, but beautiful details.

Main theme 2: To achieve satisfaction, socialize and re-evaluate

This theme is about starting to be fascinated and experiencing satisfaction, about meeting others and being attentive to a symbolism that helps to give a new perspective on oneself and one’s situation.

2a) Fascination and satisfaction

This sub-theme is also about getting sensory stimulation, but not only by observing. Here it is about participating in an activity that helps create

this stimulation. Activities that create this interactivity are digging or picking birch twigs, plums, apples, flowers or herbs. Someone mentions that discovering the flowers, or seeing something brown and greyish developing into a flowering plant, is lovely and gives her joy. It is also about exploring nature. One woman talks about how she enjoyed digging in an overgrown herb garden in the meadow, discovering what herbs had been there, getting satisfaction from seeing the results when you have been using your hands. The act of choosing also provides satisfaction.

Regeneration is a word used by many. It is associated with creative activities. Many have not been giving themselves time to be creative. Although they like it, others things in life have taken over. The garden provides many opportunities for regenerating, the taking of one thing and making something new out of it. One example is making herbal tea, which many participants liked a lot. Another example is making pesto from harvests in the garden. An important aspect is also the ability to take things home with you. Not only the things themselves, but also the phenomena experienced; like drinking the herbal tea or making the pesto from the recipe they have learnt at Alnarp. This makes people happy. Many patients say taking things home feels very weird in the beginning; it is “like an unusual luxury”. “You are not used to getting things free from others. It is really a favour”, one said. “It almost felt like it was not real.” It is not only recipes for food that are taken home, but also instructions for the creation of perennial borders or benches. It is about understanding the care of the simple, but beautiful details, and now also about being able to do it yourself. This makes them proud. One woman says that the first thing she had noticed when coming to Alnarp was the wickerwork that was used for serving bread (Figure 9). To be allowed to make such a wickerwork dish, and to have done it, was to her as if she had been given a diamond.

2b) Social contacts

In this rehabilitation programme the patients meet others in the same situation, learn to appreciate their presence and start to open up. Meeting others who are in the same situation, but who have progressed further in the rehabilitation process, is experienced by many as something very positive. One thing that opens doors is to see the others daring to be themselves in a way that is not normal out in society. “I could not imagine that I would feel that there are people who understand me, without me having to say anything. Here were participants who were almost rehabilitated. Poor you, a lady said, and I cried and then I fell asleep. Imagine, I fell asleep surrounded by six strangers. I felt I was ill then, which I have not done since.”



Fig 9 Some of the wickerwork produced in the garden.

If you are too tired to be active you can watch others participating in activities. One woman puts it like this: "I have been walking alone down there, a little bit away from the action, because I have been so tired. Instead, I have watched those being involved in activities".

The animals are also part of the social network (Figure 10). One participant actually says his favourite place is where he takes care of the animals. "Every morning I have been able to go out and do something for another living creature, which has appreciated me." Another participant was very fond of the rabbits. She had a feeling they could recognise her voice, because every time she approached the cages they bounded up and came to the front.

Some participants admit to having a need to be alone and thus trying to be just for themselves. Others say they have been more drawn to other people and to the animals, so they have stayed mostly around the house. One woman says: "When I got better I laid down where I could see other people". Another patient says: "I have a feeling that I have been more drawn to other people in the end [of her time in the garden]".

"Sometimes when I have been sad I have been walking off and crying in the far corner of the garden. I have been alone then. In the Grow Point [a greenhouse] you talk to the others as you are busy with something, or we talk when we are taking a walk together. So all of it, as a whole, has meant a lot."

2c) Time and symbolism – an evaluation of life

Many patients talk about following a plant from seed to flower as interesting. It provides satisfaction to walk around and to see how the plants have grown. One of the participants talks about an

occasion when she saw one of the horticultural therapists squeezing the soil for a very long time, feeling it. She realized she never gave herself, or anything else, that time. Another participant says she thinks horticultural therapy is such a good method, because it focuses on the garden and not on performance.

From what is happening in the garden it is easy to draw parallels to one's own life. One part of the time aspect is that not everything needs to be done perfectly. It does not need to be straight lines. You do not need to do everything in one day. One participant says she learned that she does not need to take away all brown leaves in one day. "It does not matter if I have finished today or tomorrow. I can do it tomorrow or another day. It will only be somewhat more withered then." Raku ceramics is also providing the patients with evidence of the beauty of imperfection. It results in ceramics with cracks. They comment on this as something you can learn to appreciate, that it is not supposed to be perfect, not even from the beginning.

To learn from someone else's point of view is broadening one's own outlook. The staff talk about different plants, their distinguishing features and hallmarks. The plants then become individuals. At one time the gardener made a presentation of different seeds: their sizes, shapes, colours and strategies for growing. Many relate this as a very important moment. They could see clear similarities with their own life and with how humans behave as they learned about the different seeds, their way of behaving and needing different amounts of time to sprout. Another participant says that once she had been asked by the therapists to pick a bunch of flowers, with three different sorts of leaves. She did not find her bouquet as nice as the others and she did not want to take it home with her. One of the therapists asked her to do it anyway. She put it in a vase at home and realized that she was viewing the bouquet the way she viewed herself. There is always something wrong, it is never really satisfactory, which is a depreciating view. "Actually I did like the bouquet even though it was not a big fancy one. After a couple of days it bloomed and it became more and more beautiful. I think it told me a lot actually. It is that way in life, you make a lot of effort, but it does not always turn out the way you thought in the beginning."

The variability is mentioned by a patient, who states that the variability in the garden mirrors life. Life itself changes constantly and that creates hopefulness. One person says that he especially likes working in the greenhouses. There it is warm and you can work at your own pace. The rate of work "gives you a chance to reflect upon the fact that it is you who decide the speed". One participant says he had learnt that it is not only about breathing out-

wards, but also about breathing inwards. A woman expresses that she has re-evaluated a lot of what is important. For her, many existential questions were evoked during her time in the garden, and this she put in relation to the things that were feeling uncomfortable and pushing her down. One patient says that in her view, the meeting with the rehabilitation programme and the garden in Alnarp was like undertaking an evaluation of her whole life.



Fig 10 Some of the hens and the rabbits.

Discussion

Even though the purpose of this study is to provide designers of therapeutic settings with more substantiated information as a guide in their design, it also becomes evident that questions relating to how the garden is experienced reveal information on aspects of the rehabilitation process. A therapeutic landscape, according to Gesler (1996, p. 96), is characterized by being where “physical and built environments, social conditions and human perceptions combine to produce an atmosphere which is conducive to healing”. In this study the patients do not use the word healing, instead they speak about how a stimulating environment, the social contacts and experiences of a non-demanding atmosphere help them create a new foundation and re-evaluate their life. Although implicitly said, it is the equivalent to healing.

One possible interpretation, looking at resulting themes in this study, is that sensory stimulation opens doors, a prerequisite for making patients open to fascination. In turn, fascination creates an interest in occurrences in the garden which, as the next step, offer a multitude of possibilities for seeing parallels and symbolism within the patient’s own situation. This can give new insights that might change the outlook on one’s life and be an opportunity to find new ways of dealing with it. This outlook, related to the process, is pointed out, in relation to design, by Barnes and Cooper Marcus (1999, p. 87) who state that “creating a therapeutic space requires an interface between two objectives, creating a place and facilitating a process”. This is, according to them,

a recent addition to the job of the landscape architect who is normally best trained in creating spaces.

As stated earlier, the layout of the garden is related both to theory and research, aiming for evidence-based health design. The purpose has always been to try to evaluate this design. Sometimes the garden has been called a full-scale model. The main hypothesis was that the participants would need different garden rooms to fulfil different needs. This mainly relates back to the two theories that have influenced the design the most; the eight experienced dimensions (Stigsdotter & Grahn 2003) and the pyramid of strength of mind (Stigsdotter & Grahn 2002, 2003).

The pyramid of strength of mind has four levels. When you are at the base, level 1, you have a need to seek support from a biological context. This is called inwards-directed involvement. People avoid other humans and instead turn to nature for feedback. This is very much in line with what the informants described in the first main theme “to escape, observe and get sensory stimulation”, but here it is even more outspoken than was anticipated. Here it is expressed as a need for shelter and refuge. In the sub-theme 1a “an escape from reality” there are many detailed descriptions about why the participant want to escape. In an evaluation of a psychiatric ward (Tenngart Ivarsson 2009) a member of staff said that he had the feeling that psychotic patients have a larger personal territory and need more space than normal. That might be part of the explanation for the need of escaping. In the garden, the areas for escape are found, for example, by the pond, in the area with the labyrinthine paths in the welcoming garden and in the Grow Point, where the glass makes it possible to see through outwards but not inwards. The results here point to the fact that there is a greater need for places like this and that there should be more of them. These places also need to be cosier, more rounded as someone put it, than they are today. It is also without any doubt that the garden needs to be complemented with a lot more trees. The fondness for trees is well known through previous preference studies; for a review of the preference studies on landscapes and vegetation see for example Hägerhäll (1999). The fence and the gate were experienced as something very positive.

Also the sub-theme 1b “getting sensory stimulation” supports this hypothesis. The Species-richness-dimension is probably good but the garden might need more positive sounds, instead of the negative sound from the motorway. In the design of the garden it was hypothetically presumed that the Welcome garden would be good in the first phase of rehabilitation, but the Grow Point would not. This study confirmed that assumption.

In the pyramid of strength of mind the next level is level 2, emotional participation. Here you be-

gin to take interest in your social surroundings although you still want to experience it from a distance. Level 3, active participation, is when you take part in a group that does something together. In this study this is in line with the main theme 2 and especially sub-theme 2b "social contacts". Here examples of a kind of social development can be found. The informants say that when they were tired they were only watching from a distance, but as they got better they sought more and more contact with the others. After a while they even appreciated meeting others in the same situation. The hypothesis was that the garden work should be divided into a demand-gradient, with the work in the kitchen garden being the most demanding, work in the greenhouses less demanding and work in the wildlife garden room the least demanding. This study does not confirm these initial ideas. Instead, working in the greenhouses seems to be the least demanding. It might have to do with the pace at which one is working and this might be affected by the fact that it is easier to adjust the climate and the working position in a greenhouse than it is outdoors.

The symbolic meaning of a garden, including activities within the garden, was only briefly discussed in the design of the garden. Here, in sub-theme 2c "time and symbolism" – an evaluation of life – it stands out as very important. The animals are important aspects in the second main theme; "to achieve satisfaction, socialize and re-evaluate", but natural features like seasonal changes and a richness of species are probably also important for creating symbolism. Hypothetically, more cultural elements could also be good at creating symbolism, but these are not mentioned and thus might be lacking in the garden. A cultural element present in the garden is the compost; one would imagine that it could be such a cultural creator of symbolism, but it was not mentioned in this study.

Level 4 in the pyramid of strength, outgoing involvement, is about having enough mental strength to lead a group of people. The patients are in a worse condition than expected and seldom reach level 4. Their poor condition is also revealed by the fact that they cannot stand the open spaces in the grove and the meadow. Concerning the use of the eight experienced dimensions in the design, it can be concluded that the dimension of Refuge needs to be increased and so does Peacefulness. Prospect, on the other hand needs to be decreased. This is true for all open spaces. What is described as theme 1 here, "to escape, observe and get sensory stimulation", is what occupies the patients most of the time and is what also needs to be the main focus in the design. This means more and smaller rooms for escape and more elements that stimulate sensory experiences. However, as mentioned in the beginning, the garden was designed with variation and contrast. As the one de-

fines the other, this should not be read as a wish to exclude everything the patients do not like, for example the open spaces. Defining what one dislikes is probably also a necessary step.

This study does not build upon the presumption that studying one case provides a recipe for an ideal design of a healing garden. Instead, it aims at an increased understanding of how a healing garden can be experienced and how this can relate to design. The study itself does not generalize but instead tries to describe the topic in depth. Yin (2003) states that case studies, like experiments, can be generalized to theoretical propositions, but not to populations or on universal levels. This can be seen as "analytical generalization" as opposed to "statistical generalization". According to Stake (1995) the concept of "naturalistic generalization" is appropriate to single cases. People form naturalistic generalizations from a mixture of their own experience and the explicated generalizations they receive from others. Naturalistic generalization is indeed applicable to this research, as it is very similar to the way architects work with assignments. In this way it is possible to learn much that is general from just a single case. ■

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Patientenerlebnisse und Nutzung eines therapeutischen Gartens aus der Perspektive des Gestalters

In der vorliegenden Studie wird untersucht, wie Patienten eine therapeutische Landschaft nutzen und erleben. Die Daten beruhen auf einstündigen, qualitativen und teilstrukturierten Interviews mit zehn Patienten in einem schwedischen Heilgarten. Alle Patienten haben stressbedingte Leiden und nehmen an einem Rehabilitationsprogramm teil, unterstützt durch eine Naturtherapie. Die inhaltliche Auswertung bringt zwei Hauptthemen zutage: «Entfliehen, Beobachten und Stimulieren der Sinne» sowie «Zufriedenheit erlangen, Austausch pflegen und Neubewerten», mit je zwei beziehungsweise drei Unterthemen. Um die Erlebnisse und die Nutzung des Gartens zu verstehen, werden die Themen als solche beschrieben und in Bezug zum Standort gesetzt, an dem sie auftreten. Die Erlebnisse und ihre mögliche Heilwirkung werden diskutiert. Zudem wird die Notwendigkeit eines prozessorientierten Ansatzes bei der Gestaltung einer therapeutischen Umgebung postuliert. Aspekte der thematischen Analyse werden besprochen und mit umweltpsychologischen Theorien in Verbindung gebracht, woraus eine Art Evaluation der Gartengestaltung resultiert. Zuletzt wird darauf eingegangen, wie die Erkenntnisse zu einem evaluationsbasierten Wissen über die Gestaltung einer therapeutischen Umgebung beitragen können.

Le vécu des patients et l'utilisation d'un jardin thérapeutique du point de vue de l'aménagiste

La présente étude analyse comment les patients vivent et utilisent le paysage thérapeutique. Les relevés proviennent de longs entretiens qualitatifs et partiellement structurés avec 10 patients dans un jardin thérapeutique suédois. Tous les patients souffrent de pathologies liées au stress et suivent un programme de réhabilitation comprenant une thérapie naturelle. Le contenu des entretiens livre deux thématiques principales «fuite, observation et stimulation des sens» ainsi qu'«atteindre la satisfaction, soigner les relations et réévaluation» avec deux, respectivement trois, thèmes subordonnés. Afin de comprendre le vécu et l'utilisation faite du jardin, les thèmes sont décrits et mis en relation avec les lieux où ceux-ci apparaissent. Le vécu et son éventuel effet thérapeutique ainsi que la nécessité d'inclure des aspects de ce processus dans l'aménagement de l'espace thérapeutique sont présentés. Divers aspects de l'analyse thématique sont examinés à la lumière des théories de psychologie environnementale, avec pour conséquence une évaluation de l'aménagement du jardin. La contribution apportée par les résultats de cette étude aux connaissances fondées de l'aménagement d'un environnement thérapeutique est présentée en conclusion.