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Lower Austria's path to supporting therapeutic gardens!

In 2003, with the „Natur im Garten“ („Nature in the Garden“) campaign, the state of Lower Austria began to implement the therapeutic use of gardens in clinics and care institutions. The activities range from the integration of „therapeutic gardens“ in public tenders, through to research work in this area – e.g. guiding principles for open spaces in care homes –, a study into clinical gardens, and also include providing consultation via the Gartentelefon (Garden Hotline). The ETC (European Territorial Cooperation) project „Gartentherapie“, or „Horticultural therapy“, is the current highlight. Thanks to the Natur im Garten Academy, the sustainable dissemination of the knowledge gained thus far is secured, not least through the sample gardens created at the GARTEN TULLN.

Networking

Since 2009 „Gartentherapie-Jourfix“ University College for Agrarian and Environmental Pedagogy Dean Haase

Regular participation every two months. All of the Austrian scene is represented (therapists, doctors, care services, course graduates, the Austrian Gardening Association (ÖGG), government representatives, Viennese Association of Healthcare Institutes, ...), and international experts are also frequently in attendance;

Embedding

Involvement in the „Therapiegartenstandard in Österreich“ („Standards in Austrian Therapy Gardens“) expert working group; the requirements for horticultural therapy and therapists have been summarised in a statement of principles. Currently, an occupational profile for horticultural therapists is being developed in collaboration with the International Association of Horticultural therapy (IGGT).

<http://www.greencare.at/index.php/greencare-international/jggt>

Specialist consultation has been provided since 2003 in the form of tripartite consultations on the topic of therapeutic gardens (around 75 institutions). Proportion of costs borne by an institution in Lower Austria for this service: € 210.-; Registration via the Lower Austrian Gartentelefon (+43 2742 74333) or via email gartentelefon@naturimgarten.at

Four consultants with the relevant expertise are available for this service:

Stefan Streicher – academic expert in horticultural therapy

Brigitta Hemmelmeier-Händel + Karin Schauer – both work for lebensorte, the technical office for landscape planning and continuing education programmes in horticultural therapy, <http://www.lebensorte.at>

Robert Lhotka – Head of the Natur im Garten Academy

Most recent project: Landeskrankenhaus Mostviertel Waidhofen /Ybbs.

<http://www.naturimgarten.at/>

Funding

For state care homes carrying out construction and renovation work, funding is reserved for therapeutic gardens in the budget of the Lower Austrian state government's Department for State Care Facilities. The state clinics follow a similar procedure. Other socially orientated institutes and associations have the option to apply for funding: Natur im Garten

http://www.noel.gv.at/Umwelt/Umweltschutz/Natur-im-Garten/Natur_im_Garten.html

Science

2008 study Freiräume für Pflegeheime (Open spaces in care homes) 2010 brochure „Freiräume für Pflegeheime“ Authors lebensorte + Fauler; published by Natur im Garten; was ordered for AT, CH, DE, and the USA.



Lower Austria's path to supporting therapeutic gardens!

2010/11 study „Gesundheitsförderliches Erleben und Handeln in Frei- und Grünräumen medizinischer Einrichtungen in NÖ – Erarbeitung einer Checkliste zur Analyse, Beurteilung und Optimierung“ („Health-promoting experiences and actions in the open and green spaces of medical institutions in Lower Austria – Developing a checklist for the purposes of analysis, evaluation, and optimisation“) Financed by the Lower Austrian Healthcare and Social Fund (NÖGUS); authors Medical University of Vienna + Lebensorte; consulting collaboration partner Natur im Garten

Therapeutic garden at GARTEN TULLN

This was created in 2006 by the Austrian Gardening Association (President P. Fischer-Colbrie). In 2013, the therapeutic garden was regenerated and reworked as part of an ETC project in coordination with the Austrian Gardening Association. As part of the ETC Gartentherapie project, a second therapeutic garden was also created on the grounds of the GARTEN TULLN.
<http://www.oegg.or.at/>

ETC therapeutic garden 2012-2014

Expansion, redesigning, and reworking of the „therapeutic garden“ sample garden, as well as an additional garden area; the design of the garden and the implementation of horticultural therapy features are being developed in the course of externally supported workshops with experts. The lead partner is based in the Czech Republic.

Workshop upon request

„Unser Therapiegarten“ („Our therapeutic garden“) for small groups from interested institutions is carried out on the grounds of the GARTEN TULLN and in the respective Lower Austrian institution.

Workshop

„Natur im Klinikgarten“ („Nature in the clinic garden“) Offered in the education catalogue of the Lower Austrian Landesklinikenholding; this seminar is held at the LK Tulln.

We recommend the following social institutions in Lower Austria that emphasise horticultural therapy:

Reha Klinik Bad Pirawarth
www.klinik-pirawarth.at

Rehabilitationszentrum Weißer Hof
www.auva.at/rzweisserhof

Pflegeheim Senecura Grafenwörth
www.senecura.at

Therapiezentrum Ybbs
www.wienkav.at/tzy

Interkultureller Garten ÖJAB Greifenstein
<http://greifenstein.oejab.at>

Emmaus City Farm St. Pölten
www.emmaus.at

Psychosoziales Zentrum Schiltern
www.schloss-schiltern.at

Landespflegeheim Wilhelmsburg
www.lph-wilhelmsburg.at



Radiästhesie.

Ray seekers - ray avoiders

You too will probably be familiar with this experience: some areas of your home or your private or therapeutic garden are pleasant and encourage you to linger there, while other areas create an unpleasant feeling either immediately or after some time, making you want to leave. This behaviour has generally been observed in animals which are instinctively guided by the quality of their environment, e.g. the way cats prefer to find stimulating environments, while dogs, given the choice, will only settle down in neutral environments. As living entities, plants also react to more than the quality of the garden they are situated in.

These phenomena can frequently be linked to the subtle influence of energies emanating from the earth – the so-called „earth rays“. Earth rays may be caused by subterranean water courses, shifts, faults, or other geological abnormalities, such as ore or crystal seams, changes in rock type, or global grid systems. The stimulation or disruption zones they cause influence all life on earth.

Influence on people

Fundamentally speaking, humans are „ray avoiders“. Neutral, disruption-free spaces have a calming and restorative effect on people, and are thus ideal environments in which to spend longer periods of time, e.g. when sleeping or resting. But even environments with very high ray intensity can have a positive effect for limited durations, as the body and mind are e.g. stimulated in energy-conducting („clock-wise“) environments, and calmed in energy-detracting („counter-clockwise“) environments. As with all environmental influences, the reaction of the human body to earth rays depends on the type, intensity, and duration of their effect, as well as, of course, on the individual person's physical and psychological sensitivity. Therefore, one cannot

assume that earth rays are damaging in general terms to humans. Instead, it is better to consider the phenomenon in terms of stimulation zones and, with regard to those living and garden areas mentioned above, of disruption zones or geopathic zones, where people run the risk of incurring physical damage due to the intensity of the rays and to spending too much time there.

Experience has shown that it is particularly people who are already undergoing horticultural therapy for existing disorders that are especially sensitive to the respective qualities of the work and rest spaces. This is why these spaces should be consciously chosen for horticultural therapy, and incorporated into the therapy in a targeted manner.

Influence on plants

Just like humans and animals, plants also react to any radiation influences in their surroundings. Depending on whether they are „ray avoiders“ (radiation-intolerant) or „ray seekers“ (radiation-tolerant) species, the quality of the respective environment is especially crucial to them as rooted organisms. In neutral environments, they usually experience normal, regular growth. In environments of strong energy conduction with a growth-stimulating effect, one finds the greatest concentrations of large trees, whereas for „ray avoiders“ in particular, energy-detracting environments can cause problems in growth, blossom, and crop yield, increased incidence of disease and vulnerability to pests, and in extreme instances lead to strong growth anomalies (e.g. forked growth, spiral growth, or crooked growth, and malignant stem growths, among others) or even death. The pot plants and bedding plants used in horticultural therapy also react to the various environmental qualities, depending on whether they are „ray seekers“ or „ray avoiders“.

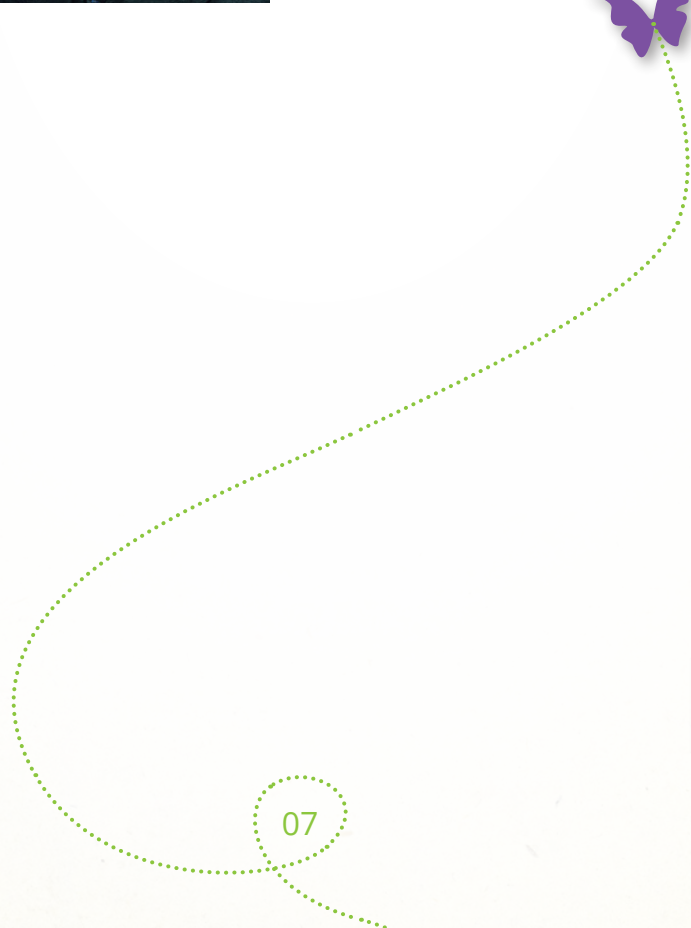
Radiästhesie. Ray seekers - ray avoiders

Because the thriving or non-thriving of the plants is of essential importance to the success of the therapy, the choice of plants should be geared towards the respective qualities of the environment. Included here you will find a list of „ray seekers“ and „ray avoiders“, based on many years of extensive experience.

Information beyond the scope of this workshop and regarding a proper examination of the environmental qualities (dowsing) in your private or working surroundings can be found at www.radiaesthesieverband.at.



**DI Dr. Peter
Fischer-Colbrie**



Learning through Landscapes

School grounds range from the very traditional asphalt area for games and physical recreation to developed areas for play, outdoor learning right across the curriculum, food growing activities, 'green gym' fitness suites, wildlife areas and more.

Some schools have fruit orchards, some even have farms with livestock, crop growing spaces and food processing areas. Others have the more traditional fixed play equipment, turfed sports fields, multi-use games area and traditional seating.

The potential for school grounds to contribute to the health and wellbeing of our children is critical. By providing stimulating and interesting outdoor spaces we can encourage children to access the many benefits that being outside has to offer.



This is an example of a sensory garden that has been planted for younger children, you can see the fruit for them to pick and eat, the scented lavender draped across the pathway where they will brush into it and release the scent, the spiky plants that they can touch and the bright colours of the flowers that provide the visual stimulation.

In addition to the well documented positive effect on health from an increase in physical activity there are many evidenced benefits in terms of children's behaviour, motivation, attainment, social skills and attitude that can be attributed to being in a natural environment in particular.

Children who are encouraged to engage in growing food in their school grounds show an increased interest in the world about them and a better understanding of sustainability issues, they tend to eat more healthily and waste less. They also experience deeper richer learning in terms of the application of scientific and environmental schemes of work.

Learning through Landscapes runs a number of programmes in school grounds across the UK. We currently have a specific programme looking at the benefits of allowing children to play and learn in very natural environments. As well as creating play spaces from living materials such as willow and bamboo, the project also looks at how beneficial it is for children to create their own play environments through the use of a range of loose materials such as logs and ropes, tarpaulins and bricks.



Learning through Landscapes

Learning through Landscapes programmes run on the principle that every subject, not just physical education and the environmental sciences can be delivered outside. By using the outdoors to introduce concepts around literacy and creativity the scope for imaginative learning is enhanced, the children are not constricted by the walls and limited landscape of the classroom for their inspiration. Maths and science can be studied on the larger scale inviting exciting and challenging projects just not possible indoors.

Principles relating to horticulture and agriculture are better addressed and demonstrated through the use of real spaces, off site learning visits can be expensive and difficult to administer – learning in the school grounds is immediately accessible and requires no additional staffing.

Learning through Landscapes helps schools to understand the importance of engaging everyone in the school in any proposed changes, the importance of maintenance and community involvement and the engagement of the pupils to ensure that they feel a sense of ownership.

It is critical to involve teachers in the design of the grounds, if they do not feel confident in those spaces then they will not use them for teaching and learning.

No school grounds should ever be considered to be 'finished', there should always be room for the areas to grow and develop encompassing new technologies, new curriculums, new innovations in sustainability and new generations of children coming into the school to learn.

Designed and managed well all school grounds can become richly diverse and beautiful areas that convey positive hidden and explicit messages. Places that make children

want to learn and places that encourage learning and imagination without limits.

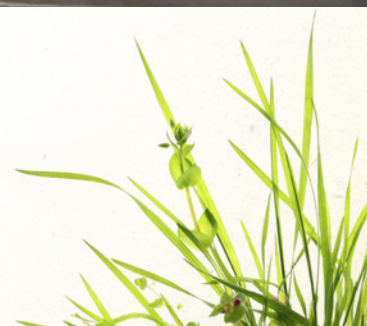
So let's explore Learning through Landscapes' role and history a little more closely

Up until 23 years ago there was no real consistency about how well, or otherwise, school grounds were utilised.

Around about that time a landscape architect from Hampshire County Council began to look at school grounds and what impact they could have on pupils and their learning experiences.

He discovered that in all but the most exceptional cases the school playground was a tarmac space good for bouncing balls on but not a lot else. This is especially interesting as there is clear evidence as far back as 1906 to suggest that some schools were indeed very creative in their use of the school grounds space to teach and inspire children. Mabel Brown's book 'Child Life in our Schools' details some of this but it would seem that by the late 1960's a lot of the spaces had become increasingly dull and used only for the more formal aspects of physical education. Quite why schools reduced their creative use of the outdoors is unclear.

Cold in the Winter and unbearably hot in the Summer these spaces can fill smaller children with terror and gave bigger children little more than a place to run around.



Learning through Landscapes

For any children with disabilities such as restricted movement, hearing or visual problems the spaces were even more terrifying.

The impact of the design of school grounds also reaches inside the building. One of the commonest cause of super-heated internal spaces is large expanses of tarmac, mown turn and roof coverings outside as you can see in our picture. These generate higher levels of heat not just in the immediately adjacent school buildings but also in the surrounding communities.

Often in the Summer months this means that schools need to spend money on artificially cooling their inside spaces.

Indeed today it is fascinating to see the wide variety of products on sale through expensive educational suppliers that recreate external benefits in an internal environment, benefits such as:

- 'natural' lighting
- Air conditioning
- Fragrance and scent
- Natural colour schemes to promote a positive learning environment and enhance concentration and improve behaviour

How much easier it would be to just take children outside!

23 years ago there was very little research into the impact and potential of school grounds. Learning through Landscapes was initially formed to look at this subject and the first piece of research published was called 'Learning through Landscapes – a report on the use, design, management and development of school grounds'

Focussing on schools in England and Wales the report, published in 1990, was the culmination of a three year study from 1986 to 1989 into the design, use and management

of the land surrounding schools. A number of subsequent Government documents made reference to the publication.

The report made a number of recommendations including that:

- Schools should consider use of their grounds for purposes beyond just that of the physical education element of the curriculum
- Designers, managers, administrators, parents and politicians should advocate school grounds being used to further all aspects of the national curriculum
- There should be a new vision for how school grounds might look in the future
- Schools need to recognise the benefits of outdoor play for children and to develop their school grounds into good play environments providing richer and more stimulating environments
- The role of school grounds as an important social and cultural setting should be acknowledged and designed for

On the back of this piece of research Learning through Landscapes was formed as a registered charity and a subsequent piece of work four years later looked very specifically at how schools could address the recommendations through better design, planning and use of their school grounds.

Special Places, Special people, another book, this time by Wendy Titman developed the school grounds themes further and explored specific questions such as:

- The significance of the Hidden Curriculum of school grounds
- The relationship between the management of the informal curriculum and children's attitude and behaviour
- The correlation between the design of the school grounds environment and the quality of a child's experience

Learning through Landscapes

- The critical elements in the process of change and development of school grounds in terms of children's behaviour and attitude

Case studies included in the report detailed a wide range of benefits in addition to the educational and play outcomes, these included:

- A reduction in vandalism
- Changes in social behaviour and attitude
- The development of a new ethos of care for place and people
- Increased levels of community interest and involvement
- Reduction in truancy
- Improvement in discipline

Learning outside suits everyone – but in the UK our boys are slower than the girls to develop academically... Let's take a closer look at boys and how they learn:

Foundation stage statistics tell us that more girls than boys in the United Kingdom are meeting or exceeding early learning goals. We know that boys' brains develop differently to girls and it is widely acknowledged that they learn differently, boys for example develop concepts of movement and space first so it makes sense for teaching and learning to take place in an environment such as the outdoors that allows these concepts to become concrete.

Around about the age of four boys also experience an increase in testosterone levels which can make sitting still for any length of time something of a challenge. One of the ways to overcome this is to provide them with a multi-sensory learning environment that can hold their attention while allowing them to move around more.



Boys naturally engage in more rough and tumble than girls and this can be seen as challenging behaviour, however research suggests that a boy's natural interest in systems that makes him keen on construction toys and outdoor activities is a similar process to those interests which emerge in girls as empathy.

Boys are interested in movement, exploration, action and big things and this is readily provided for in the outdoors, and rather easier to manage than in an internal classroom context.

There will, of course, be plenty of people who will argue that this is too general a statement and that many girls also exhibit interest in things mechanical, have excellent spatial awareness and tend to be more boisterous.

For some though, it is undeniable that learning undertaken outdoors is easier, more effective and can overcome some issues.

Working with older people

Learning through Landscapes are beginning to explore how the things that we have learned while working with children can be applied to older people, especially those with dementia.

There is a range of research that points to the positive health benefits of regular and repeated access to the outdoors, and in particular the natural environment.



Learning through Landscapes

More recently activity focussing on individuals living with dementia has suggested that there maybe particular benefits for this group including:

- Improved relaxation reducing anxiety
- Improved focus improving concentration and short term memory
- A sense of location in place and time
- Improved sense of wellbeing
- Improved physical health and mobility

There are also associated benefits for families and carers of being able to visit with their loved ones in a calm and pleasant outdoor environment.

Anecdotal examples suggest that gardening and outdoor activities can unlock latent skills and interests in individuals. In addition self worth and self esteem can be boosted by users bringing flowers and produce from the garden into the centre for the benefit of others.

People who have dementia often respond in certain ways to the layout and colour scheme of internal environments and much work has been done by the King's Fund in England to look at how we can make those environments safer and pleasanter places to be.

By taking these principles and applying them to the external environment we can ensure that people can have full access to all of the benefits of the outdoors.

Campaigning

An important part of our work is our campaigning – every year we run National School Grounds week which takes a theme and develops that theme with a range of activities that schools can do in the school grounds.

National School Grounds Week aims to show just how easy – and worthwhile - it can be to take teaching and learning outdoors. Each day will explore the different types of resources we waste and will offer schools the opportunity to come up with some creative recycling ideas and discussion topics suitable for early years, primary and secondary children.

International School Grounds Month has been taking place across the globe. Schools as far apart as Pakistan, Sweden, Japan and USA have been going outside to celebrate their grounds and show everyone how important they are to their pupils. Schools who wish to join in can register on the International School Grounds Alliance website at where they can find ideas to take into their grounds.



Juno Hollyhok

Learning through Landscapes



Horticultural therapy programme in the Czech Republic

Till the beginning of the project in 2011, the term „horticultural therapy“ was unknown as a therapeutic concept in the Czech Republic, despite the fact that some schools, social institutions, and healthcare institutions had been using gardens for therapeutic purposes – activities in the garden, receptive horticultural therapy, or the processing of natural materials and products. In general, these activities were a component of ergo therapy or a way of learning about the environment and nature.

Horticultural therapy in healthcare

In the area of psychiatry, horticultural therapy was continuously used when creating the first institutions for the mentally ill. However, this was most often in the form of so-called occupational therapy, where clients worked in the garden and thereby contributed to the financial independence of these institutions. Today, horticultural therapy as part of psychiatric care is implemented by experts from various fields, but only on an intuitive basis and without the requisite theoretical background.

Thanks to the education work being conducted in the context of a horticultural therapy concept, the established practice is gradually being altered and the garden is very slowly becoming a space used for alternative therapy. Therapists at the university hospital in Brünn are learning new techniques of horticultural therapy, and this hospital is set to become the first medical institution where horticultural therapy forms a part of the healthcare provision. Project activities are provided in close collaboration with another project partner, Lipka - Teaching Institutions for Environmental Education.

Horticultural therapy as part of social welfare

Garden work and the utilisation of nature as a therapeutic space in the context of social institutions for the elderly have gradually developed, especially with regard to the changing structure among residents of care homes for the elderly. Before 2006, it was common that care homes for the elderly were populated with active people who had moved in primarily to solve the problem of their living situation. They freed up their apartment or house for the needs of their next of kin, and spent their final years in care homes where they no longer had to worry about cooking, cleaning, or laundry, yet without wanting to make use of nursing or healthcare services. Leisure activities were adapted to the needs of active seniors, and geared towards physical activities and crafts, and less towards garden-related activities.

In 2007, a new law (No. 108/2006) was passed regulating social services. The law fundamentally altered established practice by stating that „care homes for the elderly are intended for people whose independence is diminished, in particular for reasons of their age, and whose situation therefore requires regular assistance from another person“. As a result of the law, care homes are now taking in people who are largely dependent on nursing and healthcare services, are immobile, or suffer from dementia. Although the structure of inhabitants in care homes has changed, the leisure activities available and the way they are implemented are changing only very slowly. While the efficacy of a law can be very quickly established, the practical conditions affected by it change only very gradually. A prerequisite for change is the education of the carers so that they acquire new skills and experience. No ade-



Horticultural therapy programme in the Czech Republic

quate educational offerings for the altered conditions have been created, however, and it has therefore been necessary to look to international practice for guidance and make use of established work methods for the care of seniors.

The Mistr Křišťan care home for the elderly in Prachatice is a project partner. Here, modern, international elements are gradually being incorporated into its care practices. The first concept ideally suited to the changing practice in the Czech Republic was that of sensory activation as first used by Lore Wehner. As part of this concept, we not only make use of natural products and work with herbs and other produce from our garden. Fruit and vegetables are a work material for very old and disorientated people who process these products with great artistic skill. The point is also to help them orientate themselves naturally within the seasons. Every therapeutic horticultural activity is planned in such a way as to be tied to the seasons and to traditions. New insights gained by the carers during the project are naturally linked to the concept of sensory activation. A winter garden for year-round use has been created as part of the „Horticultural Therapy“ project. This space is wheelchair-friendly and features raised beds.

The project also features an outdoor garden which has been designed as a safe space for seniors suffering from dementia. Decorative shrubs have been partially replaced by edible fruits and herbs. The garden has been designed as a space that appeals to all the senses, but which also offers uninterrupted relaxation.

Horticultural therapy for the socially disadvantaged. Children and young people

Horticultural therapy is also made available to a group of socially disadvantaged peo-

le, i.e. those people who, due to poor physical or mental health, cannot usually make use of the activities on offer. As part of the project activities, a unique specialised work centre is to be created in the village of Baliny near Velké Meziříčí. This will be dedicated to horticultural therapy and the social integration of disadvantaged groups of children and young people. Chaloupky o.p.s. is responsible for building the work centre as well as for the entire project, thus creating a continuation of its previous work. The work centre will be used by a broad spectrum of organisations working with physically as well as socially disadvantaged children and young people. This centre for horticultural therapy will include a sensory exploration garden as well as the appropriate teaching rooms, etc.

Horticultural therapy as practically implemented in the Czech Republic offers new perspectives and advantages for numerous target groups, without any age limitations.



**Ing. Bc.
Hana Vojtova**



AZD (Dorothea's Vocational Training Centre) for young people aged 16 to 24 with special needs

The AZD was **founded** in July 2007 as a private initiative and as the result of the personal commitment of Thomas Chiari (care worker for people with special needs, Montessori teacher, and cranial-sacral therapist) and Dr. Hans Weiss (anthroposophist, teacher, economist).

The vision and objective is to increase the self-confidence of young people with special needs through independent activity. The embedded knowledge regarding their own capabilities, and the ability to deal in a matter-of-fact way with personal weaknesses, is intended to provide them with a great level of independence in the world of work and their everyday lives.

Conditions for acceptance on a traineeship include not only special needs requirements due to 50% disability, but also physical and mental aptitude, good knowledge of German, and the willingness to gain a foothold in the employment market.

Special needs may manifest themselves in the area of proprioception, fine motor skills and gross motor skills, physical coordination, planning ability, implementation processes, perseverance, intrapsychic experiences (self-esteem, emotions, rationality, ...), social interaction, concentration, attention, dyslexia, dyscalculia, etc.

The modular concept encompassing Preparation – Training – Further training

The traineeship runs for three years, and can be extended as needed. Young people between the ages of 16 and 24 can choose a traineeship in the areas of gardening / landscape gardening (vegetable-growing, garden and cemetery maintenance, garden landscaping), senior care/ward-based care, metalwork, and general manual skills (carpentry, painting, handicrafts).

In the Preparatory module

Arrival in a new environment, the focus is on learning basic skills and the foundation knowledge of the chosen subject. Achieving higher-level social competence (cognitive, emotional) in particular forms the central aspect of this introductory phase.

In the Training module

Choosing a specialist subject, specialised subject-specific knowledge and the necessary techniques are focused on.

During this period, we search for a subsequent workplace that is suitable for the individual young person, and tailor the traineeship to it. We believe that an outward-looking perspective is important, and the young person is prepared for the world of employment during periods of work experience lasting several weeks.

In additional **further training courses**, the young people are supported during their time at the AZD in completing a high-quality traineeship (qualifying examinations, driving licenses, other traineeships).

In the separate area of **occupational therapy**, we focus even more closely on the practical side of gardening. The long-term involvement of the young people in the gardening work performed at the AZD is intended to increase their self-esteem and their knowledge, so that they may eventually be suitable for integration into sheltered employment schemes.

Educational concept using gardening / landscape gardening

Our work is founded on the belief that every person is of value and able to develop. The traineeship is predominantly based on the principles of Waldorf education. The young people are supervised by staff with training in social therapy and the particular subject chosen by the trainees. They always work

AZD (Dorothea's Vocational Training Centre) for young people aged 16 to 24 with special needs

together with the young people to find and support resources (support planning).

All modules include a structured time plan for the week and the individual days; a seasonally orientated plan of the training content; therapeutic use of gardening activities integrated into the work plan; art therapy, and sport. Alongside the subject-specific training, emphasis is also placed on individual support in areas such as e.g. German language skills, vocabulary, numeracy, and the learning of life skills and specific preferences.

Some basic information on the use of gardening-related work processes as a therapeutic environment

Here, the prerequisite is that the scope and duration of the work is appropriately adjusted to the individual young person's state in general and on any given day. Clear targets provided by the supervisors support the young people in their personal ability to achieve targets. Moreover, the work is divided up into well structured assignments, and broken down into individual steps if necessary. This helps the young people learn to recognise, plan, and implement action-based processes. This provides them with security and self-confidence. „I know what to do, and how to do it.“

The slow, continuous increase in tasks and difficulty levels is applied in such a way that the young people are never overwhelmed. Yet they must still overcome „inner barriers“, and are always supported in this process by the supervisors in order to achieve their personal experience of success: „I've managed it.“

Examples of horticultural therapy-based activities

Activities which are rather physically de-

manding, such as mixing soil, preparing flower beds, turning over compost, mowing the lawn, etc. These activities are chosen to train physical awareness and coordination, and to increase enjoyment of physical activity as well as perseverance. The young people learn to pace themselves according to the task at hand. These tasks also allow the young people to rid themselves of tension and act on their need to be active.

Less overtly physical activities, such as thinning out seedlings, sowing seeds, planting out, harvesting herbs, weeding, etc., train the young people's fine motor skills, concentration, attention, and the ability to recognise differences and similarities.

In the joint reflection exercises and checking of the work stages, possible solutions are discussed and the target achievement examined. This helps the young people to recognise different approaches to the task. For this purpose, the young people also keep a diary so that they can once more reflect on the activities in written form, in order to cognitively embed what they have learned.

Karin Schauer presents AZD and NIG: Supervisor, AZD Gardening Group, www.dorothealaab.at
Freelance public space planner and landscape architect for lebensorte – technical offices for public space planning + landscape architecture, www.lebensorte.at
Specialist consultant for therapeutic gardens - Gartentelefon NÖ ((Lower Austrian Garden Hotline), www.naturimgarten.at/noe-gartentelefon



Garden therapy: research and practice in Switzerland

Research and practice in the field of horticultural therapy are mainly taking place in German-speaking Switzerland. The Zurich University of Applied Sciences (ZHAW), one of the leading Swiss universities of applied sciences, carries out research in cooperation with other universities. The research group Green and Health, which focuses on horticultural therapy, is part of the Institute of Natural Resource Sciences at the ZHAW School of Life Sciences and Facility Management. Over 1,300 students, out of a total of 10,000 at the entire ZHAW, are enrolled at this School in five Bachelor's and Master's degree programmes. As one of the largest universities of applied sciences in Switzerland the ZHAW has broad expertise and carries out disciplinary and interdisciplinary research in all its Schools. Results from the ZHAW's research projects are characterized by the fact that they are scientifically sound and feasible in practice.

Research at the ZHAW

So far projects have been realized in the areas of gerontology and inpatient rehabilitation. These include state-supported CTI (Commission for Technology and Innovation) projects and a project in the framework of a European research network (COST European Cooperation in Science and Technology).

- The CTI project „*Therapeutic gardens for retirement centres (2003-2005)*“ showed that a garden with needs-oriented plants, garden equipment and an appropriate range of garden therapy options increases the length of stay for interested elderly patients and improves their quality of life. More information can be obtained from the textbook ‚Garten therapie‘, published by Hans Huber, Bern (2010).

- In another project for the elderly, the COST project „*Design of outdoor spaces and*

horticultural therapy for dementia patients in the institutional context (2008-2010)“, which was carried out under the scope of Action 866, „Green Care in Agriculture“, a sophisticated interdisciplinary analysis was carried out of 5 different types of gardens for dementia patients, coupled with the development, implementation and evaluation of horticultural therapy programs. In addition, familiar garden concepts were updated. A guide to the use and design of such gardens has been published as a book entitled „Garten und Demenz“ by Hans Huber, Bern, 2013.

- Within the CTI Project „*Therapeutic and sensory garden at the RehaClinic Zurzach (2006-2009)*“, a therapy and experience garden was created and standardised horticultural therapy programmes for chronic pain patients were developed, tested and subjected to a quantitative impact analysis. The analysis showed that in addition to a standardised programme for pain patients, a horticultural therapy program increases their health-related life quality and physical performance and at the same time enhances pain coping strategies and reduces anxiety, in comparison to a control group. For more information, see Verra et al.: Horticultural Therapy for Patients with Chronic Musculoskeletal Pain: Results of a Pilot Study. Alternative Therapies, Vol.18. No.2 (2012) and the textbook ‚Garten therapie‘, published by Hans Huber, Bern (2010).

- The three-year CTI project that started at the end of 2011, „*Indoor planting of retirement centres in combination with plant-based health and nursing care*“, aims to increase the quality of life of the residents of institutions providing long-term care through user-oriented indoor planting and nursing interventions including indoor planting elements. Initial results are expected in 2014. Project homepage: www.gesundheit.zhaw.ch/gruen-weiss



Garden therapy: research and practice in Switzerland

Practice

During the last few years, the number of institutions that use plants in the context of therapy and/or activation has steadily grown. The increasing need for exchange among horticultural therapy professionals in Switzerland has been met by the creation of two networks.

Networks

- The Swiss Horticultural Therapy Association (SGGT), founded in 2010 in Wädenswil, near Zurich, supports horticultural therapy activities and promotes networking among members and with other institutions working with horticultural therapy. The homepage www.gartentherapie.ch is available in German and French.

- The *Swiss Horticultural Therapy Association* is also dedicated to meeting the needs of professionals in the area of horticultural therapy in the Italian part of Switzerland. The homepage www.htsa.ch is in Italian.

- In addition, information exchanges between professionals working in horticultural therapy and therapeutic gardens and other interested parties will be promoted for the third time in May 2014 at the Wädenswiler Garden Therapy Congress.

Continuing education and other services

- Through the CAS (Certificate of Advanced Studies) in „*Horticultural Therapy*“ offered at the ZHAW, the growing demand for therapeutic gardens and therapeutic garden services is being met. This is an area which requires innovative, specific knowledge, from both landscape architects and professionals from the health sector. This CAS comprises a basic module, two job-specific advanced modules and a completion module. Details can be

found on the homepage www.iunr.zhaw.ch/gartentherapie.

- The horticultural therapy company Thomas Pfister GmbH offers the creation of so-called garden clubs for retirement centres. In addition, training courses are provided for those working in horticultural therapy for the elderly. The latest product of the company is the film „Healing Gardens“ by Nico Gutmann and Thomas Pfister. More information is available on the homepage www.gartenundtherapie.ch.

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Horticultural Therapy and Research at Rusk Institute New York

Developing horticultural therapy programs and conducting research at a large, urban medical center presents both challenges and opportunities. This paper describes some of the horticultural therapy programs at New York University Langone Medical Center, and outlines corresponding research projects. Recommendations regarding program development are made, and design and methodology suggestions for conducting research in a clinical setting are explored.

Setting

New York University Langone Medical Center is a major academic medical center spanning from 30th Street to 34th street, along First Avenue. The Medical Center features Tisch Hospital an acute care facility, the Hospital for Joint Diseases, specializing in orthopedics and rheumatology; Hassenfeld Center for Cancer and Blood Diseases, and Rusk Institute for Rehabilitation Medicine.

The wide scope of treatment options at the medical center provides many opportunities to develop innovative horticulture programs. The range of programs delivered by the therapeutic horticulture team reflects this.

Inpatient Horticulture Programs include:

Physical Rehabilitation- Orthopedic, Stroke, Neuromuscular, Spinal cord injury, Pediatric. Psychiatry-Acute care groups. Epilepsy-Bedside programs.

Cardiac Rehabilitation- Rehabilitation and secondary prevention with focus on healthy lifestyle. Tisch Pediatrics- In coordination with Child Life programming.

Community / Outpatient Horticulture Programs include:

Budding Gardeners-Introduces children 3-5 years old to nature-based activities. Alzheimer's and Dementia-Group horticulture activities for individuals and their caregivers.

Hassenfeld-Children and their families participate in group activities during treatment.

Pre-vocational-Young adults with autism reinforce social skill goals while learning about nature.

Senior Services-Provides group horticulture activities at senior centers around New York City.

Reasons for Conducting Research

Conducting research and evaluating programs is important for a number of reasons including; evaluating new treatment options, meeting patient needs, and cost benefit analysis. Research can help fine tune treatment processes especially in a team context.

Research, especially in a clinical setting, poses various challenges. Recruiting subjects, randomization, unobtrusive data collection, and level of generalization of results can affect the validity of the study and need to be planned out carefully. Overall, the accumulation of knowledge built from a body of research contributes to evidence-based practice, and helps advance the field of study.

Horticultural Therapy and Research at Rusk Institute New York

Questionnaires

Questionnaires can provide useful information while being adaptable in terms of resource utilization and sophistication of data analysis. When the horticulture team wanted to assess the benefits that patients perceived while participating in HT sessions, a questionnaire was utilized. A specific survey was developed with the help of a patient focus group. Their input was analyzed and the common factors compiled into a six item survey assessing effects of HT participation on the recovery process, mood, level of distress, level of energy, level of pain, and satisfaction with their hospital stay. 96% felt working with others influenced their recovery positively or very positively, 96% felt more cheerful, 84% felt their distress decreased or decreased a lot, 83% felt energetic or more energetic, 61% felt their pain level decreased or decreased a lot, and 100% stated their participation in HT positively or very positively affected the quality of their stay. A final open-ended question solicited additional comments from respondents. The use of open-ended qualitative questions may take some extra time to analyze, but can provide useful information. This questionnaire provided data which was helpful in demonstrating program efficacy to administration. The results were based on a non-random sample of over 100 patients who attended HT sessions 3 or more times.

Quantitative Research and Cardiac Rehabilitation

Quantitative research is desirable because it can provide data which is more reliable, valid and generalizable to other populations and settings. Quantitative projects generally utilize higher numbers of subjects, a control group for comparison, and inferential statistics. Data needs to be interval or ratio, and previously validated scales should be used. When using a scale look for one that has shown reliability and validity for the population or intervention tested.

When the staff from the cardiac rehabilitation unit noticed that patients returning from their HT group were lively and animated, a study was initiated to measure the effects of HT on mood and heart rate (HR). The control group (n=48) attended a patient education lecture. The treatment group (n=59) participated in an HT session. Heart rate was recorded, and a mood scale, Profile of Mood States (POMS), was administered before and after each group's sessions.

There was a significant reduction in heart rate and significant improvement on the agitation subscale of the POMS for the HT group compared to the control group (see Wichrowski et al 2005). For this study it was important to have enough subjects to be confident that the treatment was significant in causing the observed changes. The POMS scale has been validated for this population and the data collection was brief enough that it didn't interfere with treatment. The use of physiological data (HR) increased the validity of this study and is recommended whenever possible.



Horticultural Therapy and Research at Rusk Institute New York

A Sample of Scales Commonly Used in Horticultural Therapy Research

Physiological Measures:

- Heart rate
- Blood pressure
- Cortisol levels in saliva
- Galvanic skin response
- Pain levels

Cognitive Measures:

- Digit span
- Necker cube
- Perceived Restoredness Scale
- Learning curves

Emotional Measures:

- Beck Depression Inventory
- Hospital Anxiety Depression Scale
- Geriatric Depression Scale
- Profile of Mood States
- Spielberger State-Trait
- Modified Cohen-Mansfield
- Agitation Inventory

The Effects of Plants on Pain

Many individuals experience a significant amount of pain during rehabilitation. This can interfere with progress in therapy and affect quality of life. The Gate-Control Theory of pain (Melzak 1999) posits that the experience of pain is a multi-dimensional process which can be influenced by environmental distraction and sensory input. The literature supports the use of nature in distraction from pain (Diette et al., 2003; Dijkstra et al., 2006; Park and Mattson 2009, 2004; Mandelbaum 2008).

When the team wanted to assess the effects of a plant filled room on pain and anxiety in orthopedic rehabilitation patients during physical therapy treatment, a mixed design was used. By combining both quantitative and qualitative methods it is possible to gather valid and generalizable data, and/or patient specific data meaning-

ful for the population, setting, or program. This was a three group between groups design. The first group was treatment as usual. The second group was treatment as usual, with privacy screens surrounding the treatment mat. The third group had treatment as usual, privacy screens, and plants surrounding the treatment mat. Pain was assessed using a 0-10 scale and is routinely assessed at the beginning and end of each session. Anxiety was assessed using the Spielberger State-Trait Anxiety Scale also at the beginning and end of each session. A follow-up questionnaire was given after treatment to assess patients' perception of specific aspects of the treatment space including lighting, temperature, privacy, cleanliness, presence of plants, and overall rating of the treatment space. Room for additional comments was also provided.

While there was a trend toward lower levels of pain and anxiety, this small pilot study had too few subjects and there was too much variance in the data to confer statistical significance. The qualitative questions did show that the patients liked the planted treatment area and would recommend it to family and friends. Patients also reported that they liked the additional privacy that the screens provided. An additional finding of interest was that patients rated other salient features of the environment higher in the plant condition than in the other two conditions, even though these features were equal across the conditions. Overall, patients' answers to the qualitative questions provided additional information that the quantitative scales did not. This helped in the interpretation of the data. Qualitative inquiry can provide rich sources of information and is a very useful method in pilot studies.

Horticultural Therapy and Research at Rusk Institute New York

Issues Relating to Clinical Research

In evaluating the passive influences of plants on patients the study was designed to minimize interfere with the treatment process. The scales had to be reliable and valid while being brief enough so as not to create patient reactivity or alter treatment structure. The clinic layout could only be slightly modified so that treatment as usual could be carried out during the study. This project would have benefitted from a power analysis to determine how many subjects would be needed to accurately evaluate the hypothesis.

Control Groups

Utilizing a control group can increase the validity of a study. One option is to use an active control, where the control group participates in an activity similar to treatment. Another option is to use a no intervention wait list to compare the treatment group with a second group, who receives treatment after the data collection is completed. When comparing treatment and control groups it is important to consider setting and practitioner. The treatment and control groups should be as similar as possible. Sometimes matching is used to increase homogeneity of the two groups.

Treatment

Since Horticultural Therapy takes many forms in different settings with different practitioners, it is very important to standardize the treatment methodology during the experiment. Consistency is important. Describe the treatment procedure thoroughly in the write-up.

Conclusion

The Medical Center provides many opportunities for program development and research. A well done project serves to fine tune the treatment process and improve patient centered care. Disseminating this through publication helps other practitioners, and serves to build an empirical foundation of knowledge in the growing field of horticultural therapy.



**Matthew
Wichrowski**



Horticultural Therapy at the Chicago Botanic Garden: Development, Training, and Programs

Horticultural therapy is a small profession. The American Horticultural Therapy Association currently has 420 members. There are many more people than that who are working as horticultural therapists, but still, in a country the size of ours there are not a lot. However, do not confuse numbers with value! Margaret Mead once said, "Never believe that a few caring people cannot change the world. Indeed, that is all who ever have." We are those few caring people!

My goal in my talk today is to describe the horticultural therapy program at the Chicago Botanic Garden, where I am the director. Coincidentally, the development of our program parallels the development of the profession in the US, as you will see. I would also like to spend a bit of time on my personal view of how Horticultural Therapy can contribute to human well-being. Finally, I'll share some of our current programs and a description of our training program.

History

Prior to the physical creation of the Garden, volunteers went to Veteran's Hospitals and gardened with the patients there for therapeutic purposes. There are records of their work dating from 1952.

The Learning Garden for the Disabled was one of the first 3 areas to be developed in the new Chicago Botanic Garden, and it was dedicated in 1977. What was going on in the late 70's that led to a commitment to serve this part of the population?

The 1960s and '70s saw the awareness of many minority groups raised. Racial groups, women and also people with disabilities began to advocate for fair treatment. In the US, the Individuals with Disabilities Education Act was passed by

Congress and for the first time, public schools were required to educate every child. The disability rights community worked for years and finally achieved passage of the first Americans with Disabilities Act in 1988. So, the dedication of this extraordinary garden was very much in step with the issues of the day.

Gene Rothert was hired in 1978 after completing rehabilitation for a spinal cord injury that he sustained as a college student. While Gene was not initially assigned to the Learning Garden, he was naturally drawn to it and by 1981 was named Director of Horticultural Therapy.

Gene took an active role when the Chicago Botanic Garden hosted the 1979 annual conference of the National Council for Therapy and Rehabilitation, which changed its name to the American Horticultural Therapy Association in 1987. The Chicago Botanic Garden remained instrumental in the development of the American Horticultural Therapy Association by supporting travel, time and physical space devoted to the new organization. Gene served on the Board from 1982-1996 and served 4 terms as an officer. Another garden employee, Maria Gabaldo, served as president twice and chaired the conference committee for 5 conferences. I am proud of how my garden has contributed to the development of the profession.

The Buehler Enabling Garden

In 1999 a larger, state-of-the art Enabling Garden was dedicated. This is Gene's masterpiece. It is 11,000 square feet and includes raised beds at 3 different heights, vertical wall gardens, baskets that can be cranked down on pulleys to a comfortable working height, a shed full of adaptive tools and more. There is an outdoor classroom where we conduct Horticultural Therapy

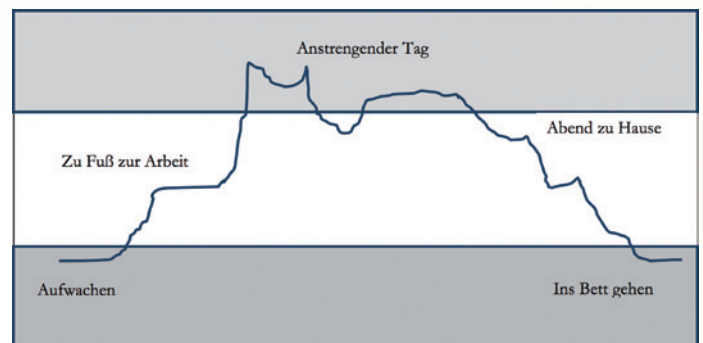
Horticultural Therapy at the Chicago Botanic Garden: Development, Training, and Programs

sessions and there are two large, accessible washrooms. This garden can be accessed by a service drive so that busses or cars can discharge visitors right at our garden gate. There is a kitchenette that helps when we are preparing something edible from the garden. This garden is the first and largest of its kind. It still attracts international visitors who come to see how gardening can be made accessible.

Theory of Neuroscience and Horticultural Therapy

As I am sure you know, we do not yet have a concise, universally accepted, well-documented evidence base for what we do. It is still evolving. We have a growing number of research studies that support our work, but they tend to come from other fields: landscape architecture, eco-psychology, and environmental design. My own education took me into the growing field of neuroscience which is what I specialized in when I got my Master's degree in occupational therapy. So this is the context my understanding has taken root in.

Graph of nervous system arousal levels during a day:



The model above is a modified version of one published by Wilbarger and Wilbarger in 1991. (Sensory Defensiveness in Children Ages 2-12: An Intervention Guide for Parents and Caretakers. Avanti Education Programs). They further postulate that we function best when our arousal state is in the middle ranges, neither highly aroused nor under aroused. It is my theory that horticultural therapy is effective because time spent in a natural setting is conducive to the mid-range of nervous system arousal. Horticultural therapy can be seen as being helpful in that it allows an individual to be ideally receptive and responsive.

Training

In 2012, we began our latest version of our Certificate of Merit in Horticultural Therapy. We rewrote our curriculum to work in a distance-learning format. Students take classes on-line where the content can be shared and online discussions can take place.

We felt very sure that we wanted each student to have exposure to horticultural therapy in action as well as a variety of therapeutic garden designs. That is why our program includes two immersion experiences of 5 days each. During tho-



Gartentherapie im Botanischen Garten Chicago: Entwicklung, Training und Programme

se periods, the students all come to the Chicago Botanic Garden together. We view some of the many therapeutic gardens in the area, and observe several therapeutic horticulture sessions. Students also work in groups to practice therapeutic garden design. They practice and gain confidence in presentation skills. They have a session devoted to funding programs through grant-writing and one devoted to developing a small business. Students are held responsible for knowing the most applicable research studies and for being able to critically appraise a research article that they read. It is my personal belief that the future of the horticultural therapy profession depends on not just high caliber work with our clients, but also with being fluent in the language of research.

Current programs at the Chicago Botanic Garden

- Stress-relief for veterans
- Building family bonds for returning veterans and their families
- Pre-vocational experiences for developmentally disabled adults
- Sensory exploration for blind and visually impaired adults and children
- Sensory regulation for students with autism spectrum disorders
- Life enrichment for elderly residents of continuing care facilities
- Gardening for nutrition and health for adults with autism disorders living in sheltered housing
- Sessions to promote engagement and socialization for veterans with substance abuse disorders

- Gardening to enrich the science curriculum for students with special needs
- Gardening to promote community integration for adults with long-term mental illness living in group homes
- Sessions to aid in self-expression for grief support groups

The future looks promising for horticultural therapists. There will always be a need for a well-trained person with a deep knowledge of both human beings and the rest of the natural world. The question becomes if and how and how well horticultural therapists will be paid.

It appears that horticultural therapists will continue to be very special people with a passion for the work that they do as well as energy and a broad skill set to apply to their efforts. Horticultural therapists are strong, intelligent, multi-faceted individuals. I am proud to call you my friends as well as my colleagues.



Barbara Kreski

Gartentherapie im Botanischen Garten Chicago: Entwicklung, Training und Programme



„Thrive“ Trunkwell Garden Project

History of STH (Social Therapy Garden) in the UK

- 1800's variety of evidence as 'gardening as a remedy', diversion and exercise
- 1900's and the World Wars where returning servicemen needed physical rehabilitation - moved away from diversion to purposeful activity which resulted in reduced hospital stays
- 1936 acceptance of gardening as a valuable occupational therapy tool for physical and psychiatric disorders by the Association of Occupational Therapists
- 1950's and 60's- Variety of start up programmes at hospitals giving wider use and greater knowledge
- 1960's the Disabled Living Foundation was created devoted to the development and application of horticultural therapy
- 1973 establishment of a professional organisation in the USA (AHTA)
- 1978 creation of the Society for Horticultural Therapy (Thrive)

Disability in the UK

- Over 10 million disabled people in Britain today – 5 million over state pension age
- 2 million people with sight problems in the UK
- 770,000 disabled children under the age of 16 or 1 in 20
- 150,000 people have a stroke each year – 3rd largest cause of death (HD & Cancer 1 & 2)

- 820,000 people affected by dementia
- 6.9 million disabled people of working age -19% of the working population
- 13.8 million people affected with mental ill health
- 1.5 million people have a learning disability in the UK – 230,000 – 350,000 with severe LD
- 8 million people have a neurological disorder

Disability- the reality

- Currently 1.3 million disabled people in UK available and want to work
- 23% of disabled people have no qualifications compared to 9% of non-disabled people
- Learning disabled are twice as likely to die from cardiovascular disease than the rest of the population and they are more likely to die from respiratory disease than any other group (Lancaster University 2005)
- Increasing numbers of adults and children with mental illness and behavioural disorders
- Disabled children are 13 times more likely to be excluded from school (National Autistic Society 2006)

National picture of STH

- In 2004 24,000 people were attending a garden or horticultural project weekly
- 45% of projects offer some sort of social skills development and 44% basic skills training.



„Thrive“ Trunkwell Garden Project

- Annual budget for social and therapeutic horticulture is approx £54m.
- Increasing involvement of social services and NHS in garden projects
- 30% new projects – fold within 3yrs

Thrive 1978 - 2013

National Charity whose aim is to enable those touched by a disability to transform their lives using gardening

Thrive Garden Projects

Our projects offer:

- A tangible demonstration of the principles and practices of social and therapeutic horticulture
- A focal point for quality standards and best practice in STH
- An opportunity to trial new practices and pilot gardening solutions which meet individual needs

What does Trunkwell Garden Project offer?

Specific programmes:

- Rehabilitation
- Learning Disability or Difficulty
- Mental health including dementia
- Vocational qualifications

Aims, outcomes, objectives and outputs

- Aims – The overarching purpose of the intervention
- Outcomes – The specific difference/impact we want to achieve

- Objectives- The planned activities by which we are going to achieve our aims and outcomes.
- Outputs – are all the detailed activities, services and products our project does or will do or provide to achieve the aims and outcomes

Programmes

Individually tailored that:

- Focus on the individual and their needs
Develop social skills
- Self worth, purpose and reward
- Improve functional goals- attention and concentration
- Physical Improvements - exercise, dexterity, mobility and stamina
- Development of skills and knowledge

Referral process

- Personal details
- Contact person
- Health info, allergies etc.
- Medication
- Prior gardening experience
- Attendance preference
- Risk or challenging behaviours
- Hobbies and interest or info to help you have a first conversation
- Referrers preferences particularly outcomes/impact

Initial assessment

Creating a baseline:

- Client preferences
- Physical ability
- Prior Learning
- Learning speed
- Social background



„Thrive“ Trunkwell Garden Project

- Cultural background
- Motivation
- Learning style

Ongoing Assessment The Insight Database

- Introduced in 2010 for all clients
- Demographic data:
Date of Birth, gender, condition
- Behavioural scores – a range of different behaviours recorded at each session which include social interaction, communication, motivation for example

Individual Progress

- Useful to show the effectiveness of STH
- Two approaches to analysing the data:
 - 'longitudinal' – see how the behaviour of 'new' clients changes during their time at Thrive
 - 'Cross-sectional' – how different are the behavioural scores of clients who have been at Thrive for different periods of time

Zwei Ansätze der Datenanalyse:

- „Langzeitanalyse“ – zeigt auf, wie sich das Verhalten „neuer“ Klienten während ihrer Teilnahme am „Thrive“-Programm langfristig ändert;
- „Querschnittsanalyse“ – wie unterscheiden sich Verhaltensdaten von Klienten, die zu verschiedenen Zeiten am „Thrive“-Programm teilnahmen.

Other methods of monitoring progress

- **Individual Development Plans**
where am I now; where do I want to get to; how do I get there; how is it going; how did I do; where next

- **Annual reviews**

personal goals achieved; issues and next steps for the following year.

- **Goal Attainment Scaling**

a method of scoring the extent to which an individual's goals are achieved in the course of intervention

Green Care White Care Horticulture meets healthcare

- Green Care within the UK and Europe is the umbrella term for interventions that use the natural environment to provide care
- Green care covers:
 - Care Farming
 - Green Exercise
 - EcoTherapy
 - Wilderness Therapy
 - STH



Susan Tabor

„Thrive“ Trunkwell Garden Project



Horticultural Therapy in Corrections – chances and challenges

GreenHouse Program on Rikers Island Correctional Facility

A collaboration between The Horticultural Society of New York, the NYC Department of Correction, and the NYC Department of Education

The US has the highest incarceration rate in the world. Some jails and prisons within the US are now also the largest mental health facilities nationwide.

Whereas the incarceration rate for the countries represented in this conference might vary significantly from the numbers for the US, and the demographics of who is incarcerated will be specific for each country, we might share many of the contributing factors. Researchers identify a lack of education, poverty, childhood neglect and abuse, exposure to violence, substance abuse, family history of incarceration, homelessness, mental illness and general lack of opportunities as some of the major contributing factors towards individuals getting involved with the criminal justice system and ending up in jails or prisons. Because many of the behaviors that lead to incarceration of an individual have been learned over years or decades, change is difficult, and the rate for recidivism is between 43% and 70%.

However, the vast majority of inmates will eventually return to the community. Can horticultural therapy play a role in showing an alternative path and encourage positive change in order to interrupt the cycle?

A large number of jails and prisons incorporate farming and horticulture in a variety of ways. Many facilities have grounds keeping work crews. Others teach horticulture as vocational training and sometimes collaborate with colleges or horticulture

schools to allow inmates getting certifications. Some grow edibles and partner with local not for profit organizations to donate some of the produce to underserved neighborhoods, and more. Programs offering Horticultural Therapy are still rare.

The GreenHouse on Rikers Island, a New York City jail, is one such program. Run by The Horticultural Society of New York in collaboration with the NYC Department of Correction and the NYC Department of Education, GreenHouse combines horticultural therapy, horticultural vocational training and class room education in a year round program. The participants are sentenced adult women and men who serve a year or less, and in a separate facility young male detainees age 19 – 21 who are waiting for their cases to be processed. Program participation may last from 6 weeks to 2.5 years. The curriculum can be adjusted according to needs and abilities of groups and individuals. Staff consists of 2 full time and one part time horticultural therapists and 8 – 12 volunteers and interns, as well as Correction Officers.

Program participants design, install and maintain several gardens on Rikers Island, featuring bird-and butterfly areas, vegetable plots with raised beds, rose gardens, native woodland areas with wildflowers, annual-and perennial beds and a pond. During winter they learn about indoor plant maintenance and indoor seed starting and receive classroom education. All students are awarded with a certificate at the end of their stay.

Upon return to the community, program graduates are eligible to enter a post release program called GreenTeam, where they improve horticulture skills as well as practice life skills in a paid internship. GreenTeam participants are required to actively work on maintaining sobriety and are



Horticultural Therapy in Corrections – chances and challenges

encouraged to obtain their GED. Eventually they apply for employment on the open job market. GreenHouse and GreenTeam work closely with a number of community based organizations providing services such as mental health care, homelessness prevention, substance abuse counseling, and more. The overall goal at the GreenHouse is to reach the inmate students on all levels of their being – emotional/ psychological/ social, cognitive and physical – to encourage and facilitate personal growth through actively dealing with plants and being immersed in the natural world.

Horticultural Therapy allows for an abundance of chances and benefits for inmate participants:

Emotional/ psychological/ social chances:

- Students become earth keepers. Their actions in the garden have an impact, even if the soil they work is in jail. Being responsible for a piece of garden, understanding and protecting it, empowers students who might feel powerless in their present situation.
 - Students can become more in tune with nature, take time to focus and be in awe in an environment that doesn't otherwise provide stimulation.
 - Students often have deep seeded fears of the natural world based on a profound disconnect or grave misinformation. Being immersed in the garden, they learn to let go of some of these fears and to trust the natural world as something that we're part of.
 - Students use the garden as space to reflect and come to terms with their situation, losses, guilt... This can help reconsidering their choices, making plans, and gain new hope for their lives.
- Nurturing plants together allows students to let their defenses down, to show soft spots they would otherwise hide. Students learn to take responsibility without being overwhelmed.
 - Time can be an adversary in prison. In gardening, it is an essential ingredient. Time isn't lost in a garden.
 - Students experience instant vs. late gratification. Many are used to expect instant gratification. In a garden, things take time. Ripe strawberries taste better than green ones!

Cognitive level incl. vocational component:

- Students discover new talents.
- Students experience that they are considered able to and worthy of personal growth and learning. They are respected in their quest for growth.
- Pride about personal achievements can lead to increased self-esteem.
- Students are exposed to new things, such as new foods, people and cultures in a safe and supportive environment. Despite being physically confined, their minds and spirit can "leave" to broaden their horizon.
- Students experience the satisfaction of starting and finishing a job that requires skill.
- They are gradually being allowed and encouraged to make landscaping choices and to carry them out.
- Students learn to take instructions without defiance and work as a team or individually to accomplish tasks from start to finish.



Gartentherapie im Justizvollzug – Chancen und Herausforderungen

Physical level:

Students experience that they are able to work physically after often having mistreated their body by substance abuse and life on the streets.

By eating home grown foods, they “ingest” their newly obtained knowledge. In learning about nutrition students are encouraged to enjoy physical sensations in a healthy way and share this with their families after release.

Students very much enjoy plants that provide sensory stimulation in a sensory deprived environment.

What are some of the challenges of Horticultural Therapy in Corrections?

Students can be transferred any time. Even if there is widespread support for the program within the jail, there are other variables that weigh heavier than the improvement a student makes while with Horticulture. The horticultural therapist has no control over the length of program participation.

Hand in hand with that goes that release often comes at a time when the horticultural therapist just sees growth starting. Release is independent of whether the student seems ready. Negative behaviors developed over years cannot be “undone” in a few weeks, and becoming “ready” might take years as well.

Tracking of former students is difficult, unless they join the GreenTeam or are voluntarily staying in touch upon release. Many students disappear. Thus long term effectiveness of the program is hard to determine, yet sound research and measuring of program outcome are essential to convince prison staff and funders of the benefits. These topics will continue to be challenging and are in the nature of working in corrections.

Despite these and several more challenges: Is horticultural therapy in jails and prisons of value and has positive impact? Without any doubt!

Horticultural therapy in corrections can help plant a seed. If and when it grows, how fast it grows and if it will bear fruit is never in our hands. But we as horticultural therapists can be partners by our participants’ side as they nurture that seed, and if they allow us to do so after release, we can remind them that the seed is within them and is ready to sprout.



Gartentherapie im Justizvollzug – Chancen und Herausforderungen

**I will give one of our students the last
word in the form of a poem:**

*Let nature take its course, only nature can
correct man.*

*And Man finds that it is difficult to correct
nature.*

Still we try.

*We are like seeds who grow if only fertilized
in opportunity, watered with hope and placed
in a bed of ambition.*

*Instead of heavy restraints give us light
so we see the direction in which to rise.*

*Consider that mistakes are similar to weeds
They are easily noticed yet let them not
distract you from our beauty.*

*They grow as we grow and their roots
lay deep.*

*So be patient in understanding that as some
flowers bloom, some leaves dry and fall.*

*But a seed is never looked at as it is, or as
it was but a seed is looked at as what it
can be.*

E. S., who spent nine months with the GreenHouse program



Hilda Krus



More Information

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