



Roots and Shoots: Embedding horticulture as a meaningful daily activity in disability services

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Overview

Social Therapeutic Horticulture (STH) is seen as a therapeutic movement, using horticulture-related activities to promote the health and well-being of disabled and vulnerable people. Our Roots and Shoots project uses elements of STH which will enable staff to provide therapeutic horticultural activities that are integrated into the daily living of the people supported at the Old Vicarage.

In our Roots and Shoots project we are upskilling our colleagues with horticultural expertise so that the therapeutic nature of working in the garden can be delivered across themes of 'ground to table' and 'seasonal planting'. The model is built from academic evidence and our own research exploring the best support for the people we are here to serve.

This paper details the evidence underpinning this, our model of support, and the delivery approach.

Introduction

Harnessing nature through interventions that include 'green care' or care for nature is increasingly seen as positive for individual mental health and overall well-being (Harris, 2017).

Well-being and horticulture have long been linked together. Carrying out a variety of gardening tasks can help improve our physical health. Depending on the task being carried out it can:

- raise your heart rate
- work different muscle groups
- strengthen core muscle
- improve flexibility
- develop and improve dexterity, specifically hand to eye co-ordination

Horticultural practices not only improve our physical health but they also improve our mental health. There is growing evidence and research that shows time spent productively outside can:

- increase feelings of happiness and well-being
- allow time and space to recharge our minds
- develop new knowledge, skills and interests
- reduce stress levels and negative or challenging behaviours
- develop mindfulness skills and improve memory
- increased feelings of satisfaction and achievement

Social Therapeutic Horticulture (STH) is one such model utilising interaction with nature. STH is seen as a therapeutic movement, using horticulture-related activities to promote the health and well-being of disabled and vulnerable people (Sempik et al., 2005, Fieldhouse and Sempik 2007).

As time has gone on, the activities that support STH, planting, cultivation and other garden work are seen as both meaningful and 'productive' with evidence growing that this mix of activity contributes to health, well-being and social inclusion (Diamant and Waterhouse, 2010).

Perhaps this is unsurprising. Wilson 1984 explained the intrinsic attraction towards nature – biophilia - that we all feel which is deeply rooted in the psychological response that is seen. Research models exploring this have developed deeper understanding of the multidimensional benefits to STH, which build on notions from biophilia. Factors range from individual, social, emotional and even spiritual (see figure 1).



Figure 1 – Activities, processes and outcomes of STH adapted from Sempik, J., Aldridge, J., & Becker, S. (2005). *Health, well-being and social inclusion: therapeutic horticulture in the UK*. Policy Press.

What can be added to the model above, is that more recently the social dimensions of nature based interventions have an indirect benefit financial health of health care systems (Harris, 2017). This comes from the positive outcomes seen from such ways of working. They facilitate a holistic approach to support which comes from structured, meaningful activities.

Developing a way of working

In our research exploring a life worthwhile (see Mackrill, 2019), the people we support told us that relationships, meaningful activities (purpose) and health and wellbeing are most important for them. We used this to map against the social determinants of health to inform new services design and delivery.

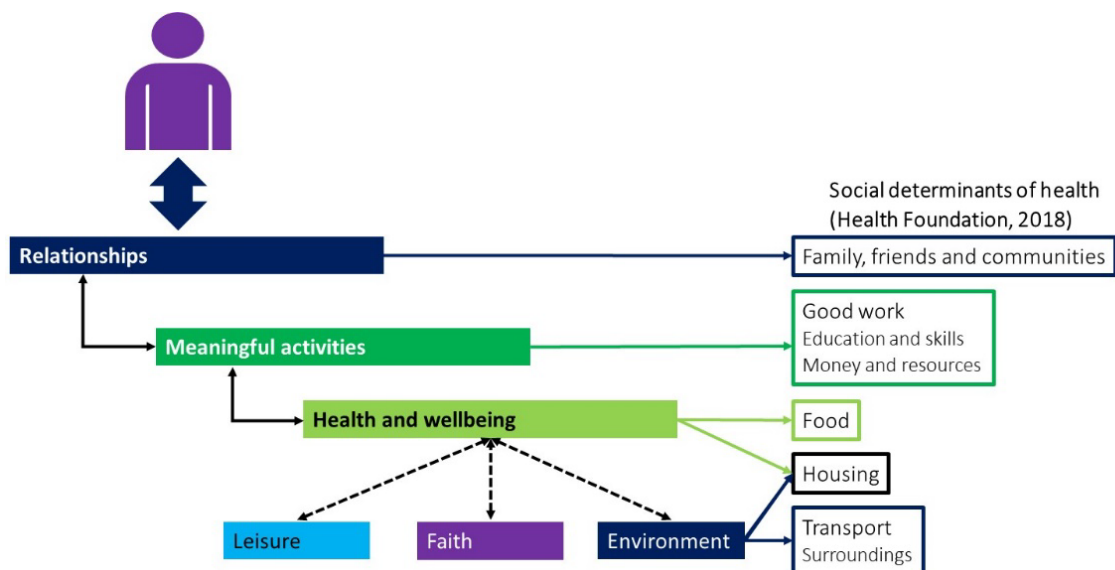


Figure 2 – Themes of a life worthwhile taken from Mackrill (2019).

The activities, processes and outcomes of STH tie closely to this through elements of social inclusion, purpose (through meaningful activities) and elements of health and well-being that stem from participating in outdoor activities. Indeed, social interaction has been reported as significantly higher after 90 days of participation in STH for people with learning disabilities (Sempik, et al., 2014). Secondary elements of the model of environment, leisure and spirituality all tie back to the STH model of Sempik, Aldridge, & Becker (2005).

With this in mind we developed a plan to embed our own model of horticultural activities in the delivery of services that we offer – Roots and Shoots.

Roots and Shoots

We began the journey to improve outdoor space for the people we support in 2021 through delivering the Green Team, a youth employment programme benefiting young people not in education, employment or training. The young people have improved our garden space which has opened up opportunities for further outdoor activities. Ensuring gardens are fit for purpose is paramount and thanks to the Green Team we now have the foundations to develop these.

Roots and Shoots is a horticultural project that embeds horticultural activities into the daily living frameworks and care plans of those we support; Positive Behavioural Support Framework and SPELL (Structure, Positive approaches and expectations, Empathy, Low arousal, Links) as well as other complementary approaches and other methods of positive intervention (figure 3).

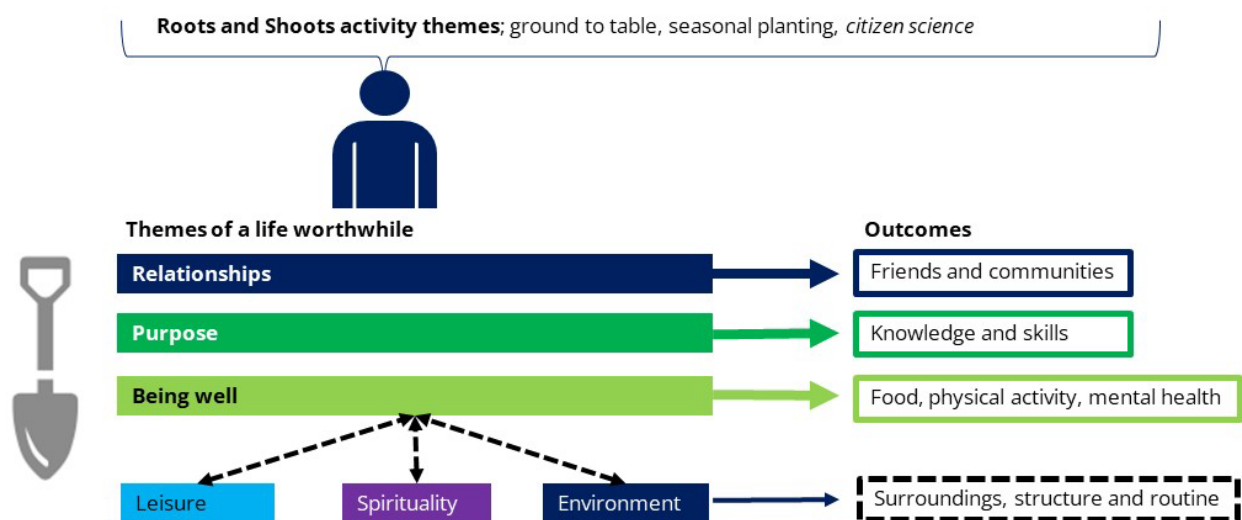


Figure 3 – Roots and Shoots horticulture project model linked to a life worthwhile and broader outcomes.

Using 'Active Support' techniques through horticulture enables colleagues to create suitable learning activities for people with complex needs to develop new skills, learning, and access a wider range of activities

These positive interventions reduce negative, challenging or harmful behaviour and create a sense of purpose and belonging. This has a profound impact on each person supported through allowing them to engage in positive activities to manage behaviour aiming to result in a reduction in behaviours that challenge, and support colleagues to rely less on restrictive techniques.

The Old Vicarage, which provides 24-hour support to five people with autism and associated conditions is our first service to deliver the model. Roots and Shoots is embedded into the operational delivery and support framework and we will use this to evidence the benefit of the approach. Core themes of ground to table and seasonal planting underpin Roots and Shoots, with these described below.

Ground to Table

Diamant and Waterhouse (2010) showed that STH which involves growing food, contributes to the quality of life of people with learning disabilities through allowing the consumption of produce from their activities – a sense of purpose, ownership and self-confidence.

Delivery of the ground to table theme will include growing, harvesting and eating edibles, seasonal planting and our very own natural eco-system that will eliminate need for chemical use whilst creating opportunities to learn about the importance the weather and nature play in food production. The National Geographic describes an ecosystem as a 'geographic area where plants, animals, and other organisms, as well as weather and landscapes, work together to form a bubble of life' - a philosophy we will take to ground to table.

Colleagues and the people we support will design and develop the Old Vicarage's very own growing space to include edibles. There are numerous benefits to growing our own edibles:

- Fresh food, less waste (including plastic)
- Learning opportunities
- Skills development
- Seasonal and timely activities
- Choice of what and how much to grow
- Garden space will be a productive, well-used, maintained and engaging.

Sowing and growing our very own edibles will be an on-going and ever changing landscape, responding to the wishes of the people we support, and the successes and failures of growing.

Seasonal Planting

With the emergence of phenomenally quick harvesting procedures and scheduled transport systems around the world, understanding of seasonal produce is lost. Our ground to table theme is structured to ensure learning about the weather, light, nature, plant pests and diseases as they all impact on what will and will not grow well.

The Old Vicarage has a fabulous walled garden with a greenhouse which will amplify the opportunities to sow from seed right through to over-wintering tender crops.

Seasonal planting will develop the edible garden to grow a selection of herbs and spices, seasonal crops of both fruit and vegetables. Some are annuals and some are perennials, some will be hardy and others will be tender crops. As much as possible, the daily activities will incorporate outside learning across the four seasons of the year.

STH projects have evidenced the value 'to be outside', and different individuals supported have assigned different meanings and importance to specific aspects of being outside (Diamant and Waterhouse, 2010). There was not only a sense of escape from the 'inside' and its associated restrictions, but a desire to be in the natural environment.

The wider garden space at the Old Vicarage will be used to broaden the range of activities for Roots and Shoots. Maintaining the existing space and planting a range of flora and fauna will attract pollinating and predator insects to the site at different times of the year, enabling pollination of a variety of crops. Encouraging diversity of planting will promote a bug eco-system that will help us to create a healthy, vibrant eco-friendly edible garden. Companion planting schemes which encourage predator insects to eat pests, will eliminate the need to use chemicals to ward off pests and diseases will be used.

Citizen science engagement

This diversity over time will create an attractive and productive environment which will enable a variety of visitors to thrive in our gardens. Over time we will join citizen science events covering bees and butterflies, bird and insect counts. National surveys play a huge part in supporting various charities and organisations to lobby government for environmental changes. These vary the activities that each person is supported to engage in and make use of the environment that the Old Vicarage creates.

Delivery of Roots and Shoots

Roots and Shoots is to be lived out at the Old Vicarage and will form a unique part of the service. The initial start of the project is to be delivered over 12 months supported by a trained horticulturalist to allow for all seasonal activities and opportunities to be explored, incorporated and experienced first-hand. After this our tutor will step away and allow colleagues to lead on sustaining daily activities as these are embedded within support plans.

In order to deliver the Roots and Shoots project, four areas are core to delivery to ensure sustained engagement (table 1).

Table 1 – Roots and Shoots delivery profile

Area	Delivery details
1. To upskill and train our colleagues, diversifying the support provided to each person living at the Old Vicarage.	Colleagues will be upskilled through training offered by a horticulture expert. Knowledge learned will be used to create bespoke learning plans, support the needs of individuals by making best use of the outside spaces we have and staff will be able to plan activities that fit with the quality-of life frameworks used throughout services.
2. To create and broaden the scope for shared learning experiences between and within the community living at the Old Vicarage – both the people supported and our colleagues.	The Old Vicarage has a unique garden space, with open areas, planting, along with vegetable patch and green house. This provides the setting for having a variety of ‘real life grounds’, face to face learning sessions and both in person and online support sessions.
3. Colleagues will be able to better use outside spaces to identify and maximise participation and learning opportunities for the people supported.	Colleagues developed knowledge, participation and local knowledge of the needs of the people supported, their triggers and frameworks will all contribute to the creation of a suite of bespoke learning resources that can be accessed and shared by colleagues across SJOG. These will guide use of outdoor space whilst incorporating the wishes of the people supported to create their own garden.
4. Create a suite of bespoke learning resources.	Skills learned for both colleagues and the people supported during the course of Roots and Shoots will be for life, transferrable and the interests generated will cover horticulture, wildlife, weather and the environment. This learning will be packaged by our research team and made available across SJOG. This will be shared across the sector once the project is established.

Our Roots and Shoots tutor will be responsible for writing and delivering the course, creating and delivering activity packs and supporting during delivery and learning. The tutor will also be responsible for the content creation of the suite of learning resources.

Final thoughts

Being outside and being connected to nature has many benefits. STH harnesses this and allows the development of programmes of activities that suit the individual needs of different people. By using this as a basis, it has allowed us to develop Roots and Shoots which forms an important part in the daily living activities of the people we support with autism. Through evidencing the benefit of the programme we will be able to iterate the model of support and broaden the reach to other services, focusing on how it helps form and develop skills around, relationships, purpose and being well.

References

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