

Tackling Loneliness in the Community through Nature-based Activities



*A service evaluation of the Flourish ecotherapy group at Livability Holton Lee
and an assessment of GPs' awareness of nature-based activities.*

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**“In every walk with nature, one receives far more than he seeks.”
John Muir**

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Abstract

Background: Loneliness is a comparable risk factor for early death as smoking 15 cigarettes a day. It is estimated that at least 1 in 20 adults in England are lonely. Applying this to the Dorset population, this means that approximately 32,191 adults could be suffering with loneliness. In light of the significant number of people affected by loneliness, more emphasis needs to be placed on how health professionals can help tackle the detrimental effect it is having on health. Research has found strong links between nature and the improvement of mental health and wellbeing.

Aims: The aim of this project was to look at whether nature-based activities could be used a community resource, by General Practitioners (GPs), to tackle loneliness in Dorset. The end objective was to look at how we could increase the number GPs prescribing nature activities in the area to improve their patients' health and wellbeing.

Method: The project was carried out in collaboration with Natural Choices (a programme for referring patients to nature-based activities in Dorset) and a service evaluation of the ecotherapy group, Flourish, at Livability Holton Lee was carried out. This involved an activity survey being distributed to the Flourish participants. In addition to this a GP survey was given to the GP registrars in Dorset to assess GPs' knowledge of and attitudes towards prescribing/referring patients to nature-based activities.

Results: In total 11 out of the 30 clients at Flourish responded to the survey. None of the participants had been referred to the activity by their GP or Natural Choices. 91% of participants either agreed or strongly agreed they felt sociable and enjoyed life overall since joining the activity. Of the 34 GPs surveyed none had heard of Natural Choices or referred a patient to nature-based activities, but 91% agreed it would be something they would consider in the future.

Conclusions: There is a clear benefit to health and wellbeing by being involved in nature activities and it can help with tackling loneliness. However more needs to be done to raise awareness amongst GPs of the nature activities in the local area and the benefits. This can be done through educating GPs about the benefits of nature at GP meetings/events, more publicity of the nature-activities, and service providers in the local area and creating an easier referral process.

Introduction

The late Mother Teresa once stated that loneliness is the most terrible poverty.¹ In recent times, the current UK Prime Minister, Theresa May, has described loneliness as one of the greatest public health challenges of our time.² Now more than ever there seems to be a rising awareness that loneliness and social isolation can be harmful to our health and wellbeing.

Research has shown that loneliness can be linked to the development of major health conditions such as heart disease, stroke, dementia and depression.^{3,4,5} In fact, one study has shown that loneliness is a comparable risk factor for early death as smoking 15 cigarettes a day.⁶

In today's society people are spending more time indoors than outdoors.⁷ This can mean that for those living in social isolation, some can go without seeing or speaking to someone for days. Furthermore, advancing technology has meant that it has become common place to use electronic devices and social media to communicate, therefore, our interactions with others are often lacking that intimacy you get from face-to-face contact. Consequently, it comes as no surprise that so many people are suffering from loneliness.

The Office of National Statistics estimates that at least 1 in 20 adults are lonely often or always.⁸ Applying this to the Dorset population, this means that approximately 32,191 adults could be suffering with loneliness.⁹ Often, we associate loneliness with affecting only the elderly, but recent statistics have also shown that younger adults aged between 16-24 years report higher rates of loneliness than the older age groups.⁸ The truth is loneliness can affect anyone at any age. The Dorset Country Council identified in 2018 that 1 in 5 households are vulnerable to social isolation and loneliness in Dorset.¹⁰

With growing numbers of people experiencing loneliness this is starting to have a burden on the National Health Service (NHS). A survey carried out for the Campaign to End Loneliness, found that three-quarters of General Practitioners (GPs) in the UK see between 1 to 5 patients each day who attend their surgery primarily because they are lonely.¹¹

Additionally, research has shown that lonely people tend to consult their GP more often.¹² Professor Helen Stokes-Lampard, Chair of the Royal College of GPs, said that, “If nothing is done, loneliness will, inevitably, take its toll on the entire healthcare system”.¹³

In light of the significant number of people affected by loneliness and the impact this is having on our health service, more emphasis needs to be placed on how health professionals can tackle the detrimental effect it is having on health.

Interestingly, nature has been shown to be strongly linked with the improvement in mental health and wellbeing.¹⁴ Therefore, this project will be looking into how nature can be used as a community resource to tackle loneliness.

Background

What is loneliness?

Loneliness is subjective and therefore difficult to define. It can be described as an unpleasant experience or feeling associated with social isolation or lack of companionship. However, it is also important to understand that being socially isolated does not necessarily mean a person may be lonely, but the two are often closely linked.¹⁵

How can nature help those experiencing loneliness?

There is increasing evidence to show that nature benefits mental health and wellbeing. For example, a recent independent study by the University of Essex found that attendance of Wildlife Trust volunteering programmes was associated with health and wellbeing improvements particularly for people with low levels of wellbeing. The study that involved 139 participants, found that 95% of participants with low wellbeing who volunteered outdoors once a week reported an improvement in their mental health in just 6 weeks.¹⁶

Another study by Cartwright et al 2018, looked at the relationship between nearby nature, social connectedness and nature visit frequency with subjective wellbeing within a 7-day period. After surveying 398 UK participants, their results showed that those who reported poor social connectedness still had high levels of wellbeing and lower likelihood of depression if they reported high levels of nearby nature.¹⁷ This again demonstrates a connection between nature and improved wellbeing.

Further studies have shown that nature can reduce stress, fatigue, anxiety and depression. An example of this was shown in the cross-sectional study by Marselle et 2014, which compared levels of mental, emotional, and social wellbeing in those who attended nature group walks with those who attended group walks in urban environments. Their findings showed that group walks in nature were associated with significantly lower levels of depression, perceived stress and greater mental wellbeing.¹⁸

Research has also found many other associated benefits of nature including a greater likelihood of being physically active, reduction in hypertension and improving our immune system.^{19,20,21}

How can health professionals use nature to improve their patients' health and wellbeing?

Prescribing nature activities to promote the improvement health and wellbeing is becoming increasingly popular amongst health professionals around the world. It also seems that GPs could have a crucial role in making this the new normal. *The Guardian* recently wrote a report on GPs in the Shetland who have taken on this concept into full force, unlike any other in the UK. Shetland GPs are now starting to prescribe nature activities such as birdwatching, rambling and beach walks to help with treating chronic illnesses. Patients at their surgeries will be given information leaflets with, for example, a timetable of nature walks. Their nature prescriptions will not replace medical interventions, but instead supplement them.²²

In spite of this there is some scepticism on whether the idea of GPs prescribing nature activities could work. Van den Berg's (2017) report discussed some of the potential barriers to getting more health professionals prescribing nature-based activities. The issues raised included there being a need for a common language for describing these services, as well as more research on the biological pathways and explanatory mechanisms between nature and health.²³ Additionally, Swinburn et al, looked at GPs' attitudes and perceptions towards 'green prescriptions' (written advice for physical activity). The study's findings showed that some of the GPs' concerns about using green prescriptions were the potential time constraints, there being a need for appropriate training and patient follow-up. However, overall their study showed that GPs were open to the idea of green prescriptions and thought it to be beneficial for patients.²⁴

Taking into account of all the above evidence, it's clear that health professions in Dorset have a great opportunity to harness the benefits of nature and improve the health and wellbeing of their patients.

Natural Choices

Natural Choices is a programme that is already out there taking advantage of the benefits of nature on health.



It is a programme led by the Dorset Local Nature Partnership (LNP) and aims to encourage, and enable, people to support and improve their physical health and mental wellbeing through activities within the natural environment.

People can self-refer to the organisation or through health professions and via referral bodies such as *Live Well Dorset*. Their programme includes a range of nature activities e.g. nature walks, gardening, Park Yoga. All of their activities are set within a group session, which has the benefit of helping to support loneliness, allow people to meet new people, build their confidence and improve low level anxiety and mood.²⁵

Aims and Objectives

This evaluation was done in collaboration with Natural Choices and the aim of the project was to assess whether nature-based activities could be used a community resource, by GPs, to tackle loneliness in Dorset.

The objectives were to:

1. *Provide evidence for health professionals of the benefits of nature activities on health and wellbeing.*
2. *Explore GPs' knowledge of and attitudes towards referring patients to nature-based activities.*
3. *Make recommendations on how to encourage more GPs to make use of nature-based activities.*

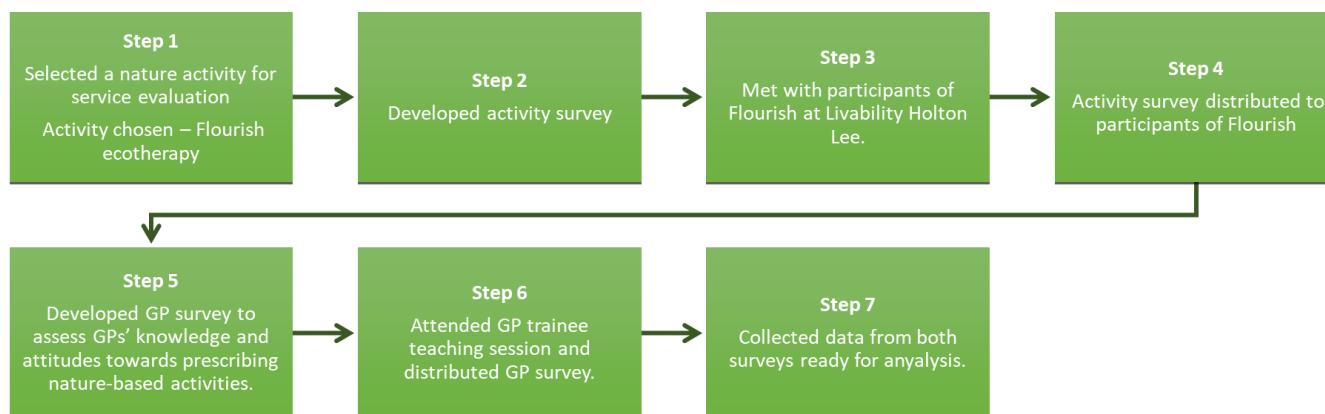
Methods

There were two parts to executing the project:

1. A service evaluation of one the nature-based activities on the Natural Choices programme to find out how the activity had benefited individuals attending.
2. A GP survey to assess GPs' attitudes towards loneliness and prescribing nature-based activities.

For a summary of the method see figure 1 (below):

Figure 1: Summary of the method



Service Evaluation

After examining the Natural Choices programme Flourish ecotherapy was selected for the service evaluation because of its uniqueness, location and regular running of its activities. Flourish is an ecotherapy-based wellbeing project that aims to support individuals to develop new life skills, make friendships, build confidence, increase resilience and improve wellbeing.

Set in the beautiful Dorset countryside, the project is based at Holton Lee which boasts 350 acres of land. Participants usually attend once a week any day they wish and get involved with group activities such as gardening, conservation work and arts and crafts.

Though part of the Natural Choices programme, the project is run by Livability Holton Lee, which is part of wider family of services run by Livability (a disability charity that aims to connect people to their communities).²⁶



Image created by: Emma Browning,
Manager of Flourish, Livability Holton Lee

The Flourish garden at Holton Lee.

An activity surveyⁱ was developed using questions from *the Stepping Into Nature, 'Evaluation Framework' 2018*. The questions included in the activity survey were largely kept the same as those in original *Evaluation Framework* with some of the questions excluded in this project.

The survey was designed to collect both quantitative and qualitative data from participants.

The areas being evaluated included:

- **Demographics**
- **Accessibility and activity reach**
- **Source of referrals**
- **Participant satisfaction**
- **Participant outcomes** – skills development, social connectedness, connection to nature

Measuring impact on health and wellbeing

To look further into the impact on health and wellbeing questions (Q) 15-17 were added to the survey and particularly looked at whether the participants felt more physically active, sociable and enjoyed life overall since joining the activity. Participants were then also asked to report how much physical activity they had been doing since joining the activity (Q18).

Measuring loneliness and social connectedness

The widely used UCLA3 item loneliness scale (Hughes et al 2004)²⁷ was included the survey to measure the impact of the activity on loneliness (Q 19-21). As well as this an adapted version of the Social Connectedness Scale (Lee and Robbins 1995)²⁸ was used (Q22). The scale measured participants sense of belonging and how connected they felt to the social world. The questions were changed so that they were phrased in positive way to avoid participants who may already be vulnerable being adversely affected.

The survey was distributed to the clients of Flourish via the management at Livability Holton Lee. A letter explaining the project to participants was attached to the survey and left in a box for participants to voluntarily collect and complete.

ⁱ See appendix 2 for full activity survey

The surveys were collected over a one-month period. Out of the 30 clients that were part of the Flourish group at the time, a total of 11 completed the activity survey. This report also features a case study from one of the participants of Flourishⁱⁱ.

GP Survey

The second part of the project was a GP surveyⁱⁱⁱ. Questions 1-2 in the survey were taken from a poll by ComRes for the Campaign to End Loneliness¹¹, to look at how loneliness was affecting GPs in the local area and whether they had the tools to manage it. Questions 3-8 were focused at looking at GPs' knowledge of the natural choices programme and attitudes towards prescribing nature-based activities. The survey was carried out during a teaching day for the Dorset GP registrars who were in year 3 of training (GP ST3s).

The reason for choosing to survey the GP ST3s is because they are based all over Dorset and they were also an easier group to access within the time limits of the project. A total of 34 GP ST3s completed the survey.

All the data was then collected and entered onto an Excel spreadsheet ready for analysis.

ⁱⁱ See appendix 1 for case study

ⁱⁱⁱ See appendix 3 for full GP survey

Results

Activity survey results

Below are the results from the 11 participants^{iv} attending Flourish, who completed the activity survey.

Demographics:

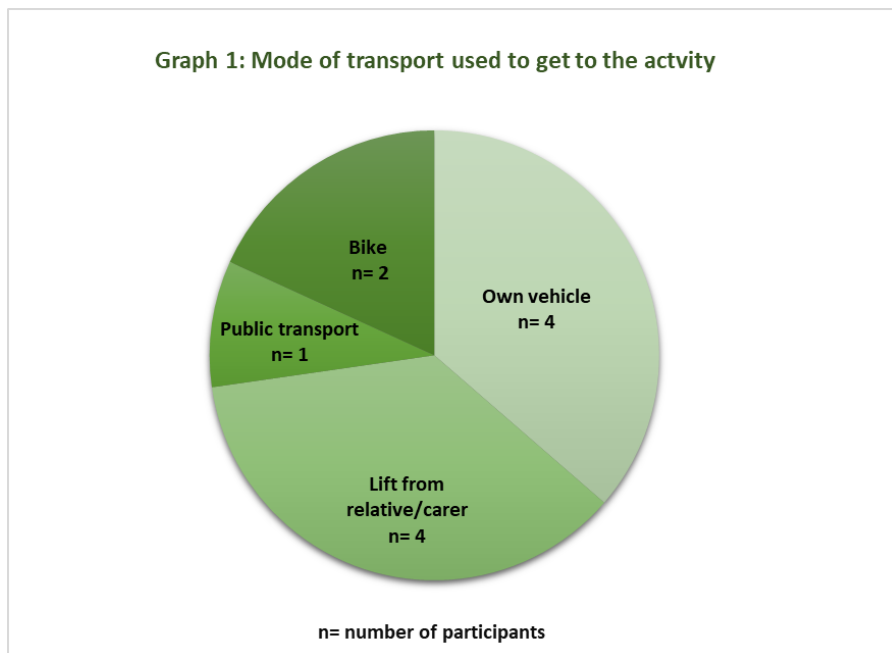
Table 1: Summary of Demographics	
Age	Participants age ranged from 18-69, with most common age being 18-29 (36%)
Gender	Male: Females 9: 2 (82% Male)
Sexual orientation	Heterosexual/straight (73%)
Religion	Christian (45%)
Occupation	Unemployed (55%)
Marital status	Single (73%)
Living situation	Spouse, partner or family (82%)
Health	Limited a little (36%) Limited a lot (27%) - Total who said health was limited in some way - 63%.

The age range of participants ranged from 18-69 years, showing that a wide age range of participants were attending the Flourish ecotherapy group. The majority were young and male. Interestingly 63% of the group said their health was limited in some way, suggesting that having a health problem did not stop them from joining the nature-based activity (Table 1).

Accessibility and reach:

How long the participants had been attending the Flourish ranged from 7 weeks to 6 and a half years. 8 out of the 11 participants had been attending once a week, 2 participants attended 2 -3 times a week and 1 participant attended daily. As participants of Flourish are expected to attend the project at least once a week, this shows that the overall attendance rate to the activity was very good. Most participants attended on their own (8 participants) with only 3 participants attending with a carer.

^{iv} From this point forward in the report the word 'participants' refers to the clients of Flourish that took part in the activity survey.



Regarding transport, Graph 1 shows that most participants were getting to the activity with their own vehicle or via a lift from a relative or carer. Assuming that those coming in their own vehicle or getting a lift were coming by car, this suggests that driving by car was most common mode of transport to the activity. The average travel time to the activity was 26 minutes, with the shortest commute being 15 minutes and longest 1 hour. This raises the issue that those unable to drive or get a lift by car to the site may struggle to get to this activity. Livability at Holton Lee does not currently provide transport for participants to the site and there are also no direct public transport links. If this were to become a wider used service in local area improving the accessibility would need to be seriously considered.

Source of referrals:

Most of the participants were referred to the Flourish ecotherapy group through a service provider (Graph 2). Remarkably, none of the participant had been referred to the activity by their GP or through Natural Choices. This raises concern that more needs to be done to raise the profile of Natural Choices programme in the local area to get more people connected to these nature-based activities. The result also suggests that GPs weren't aware of this activity in the local area and supports the idea that more can be done to raise awareness amongst GPs about the benefit of nature-based activities.

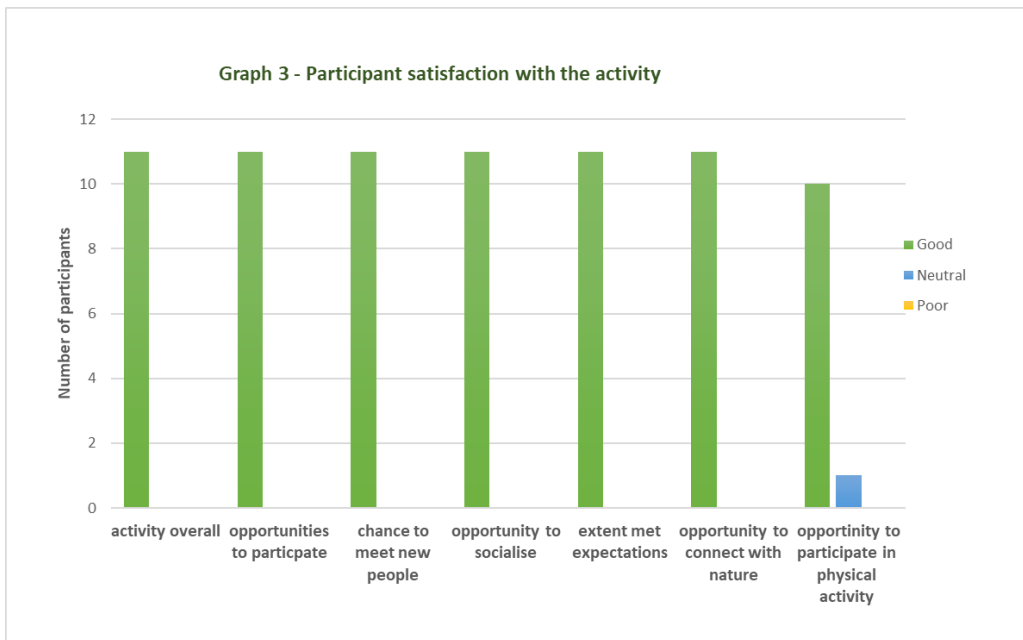


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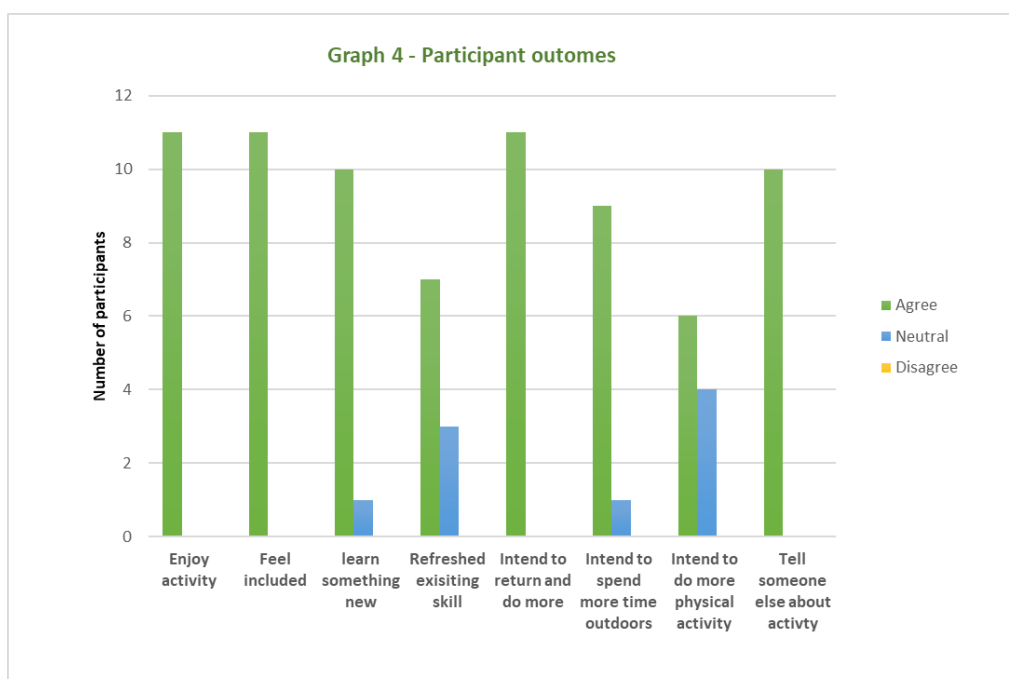
1. **Service providers** include: 2 participants who were referred by social workers, 2 participants were referred by the Job centre and 1 participant by careers advisor – Face forward, 1 participant by COAST
2. **Other** includes: 1 participant who was referred by their college, 1 participant by their family, 1 participant referred by Livability as worked on site for RSBP

Participant satisfaction and outcomes

The survey asked the participants to rate how they felt about certain aspects of the activity. The outcomes that were being evaluated in this part of the survey included whether participants enjoyed the activity and whether it allowed for social connectedness, skills development, connection to nature and being physically active. Participants were asked to rate either good, neutral or poor in each of the categories. Overall 100% participants rated good in all categories apart from the opportunity to participate in physical activity which one participant rated neutral (Graph 3).

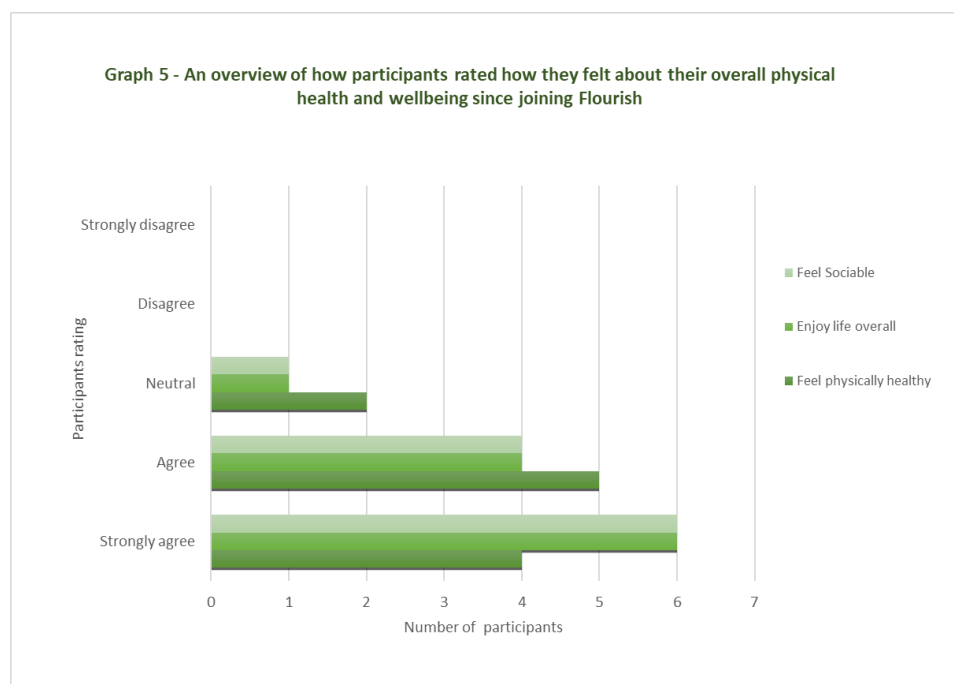


Participants were asked to rate if they agreed, were neutral or disagreed with various statements regarding the activity (Graph 4). The results illustrate that 100% of participants agreed that they enjoyed the activity, felt included and intended to return and do more. None of the participants disagreed in any of the categories. The categories that received some neutral responses included learning something new, refreshing a skill spending more time outdoors and doing more physical activity. The reason this may have been the case could be because some of the participants may have already been doing similar nature activities or keeping fit prior to joining Flourish.



Health and Wellbeing:

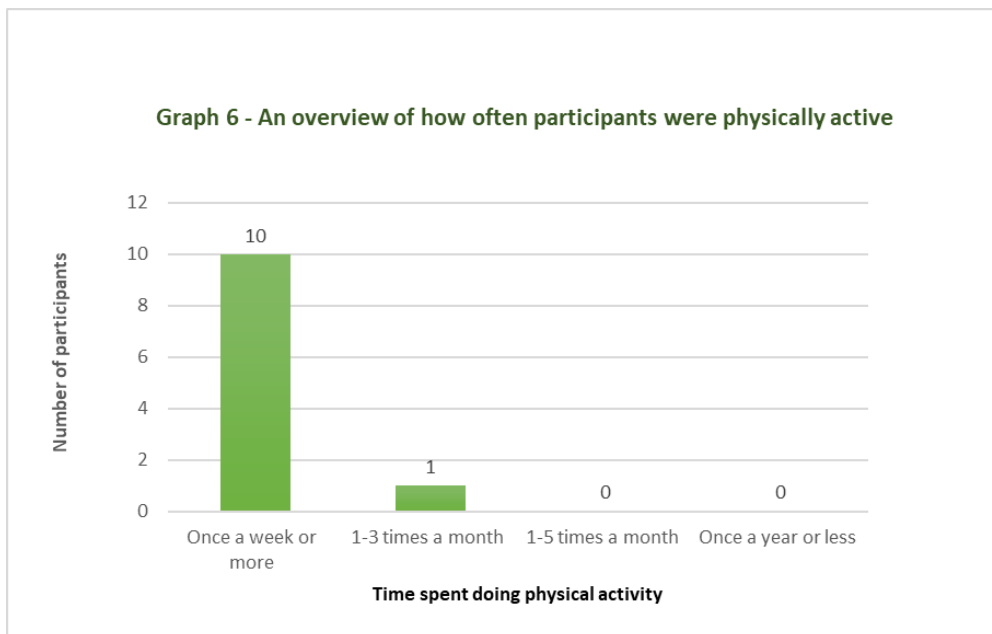
To measure the benefits of the nature activity on overall health and wellbeing participants were also asked to rate how they felt since joining the activity about three areas, these included feeling socialable, feeling physically healthy and enjoying life overall.



Results showed that 91% of participants either agreed or strongly agreed they felt sociable and enjoyed life overall since joining the activity. Additionally, 82% of participants either agreed or strongly agreed they felt physically health since joining the flourish ecotherapy group (Graph 5). Therefore, showing overall most participants felt they had improved their overall physical health and wellbeing since joining the activity.

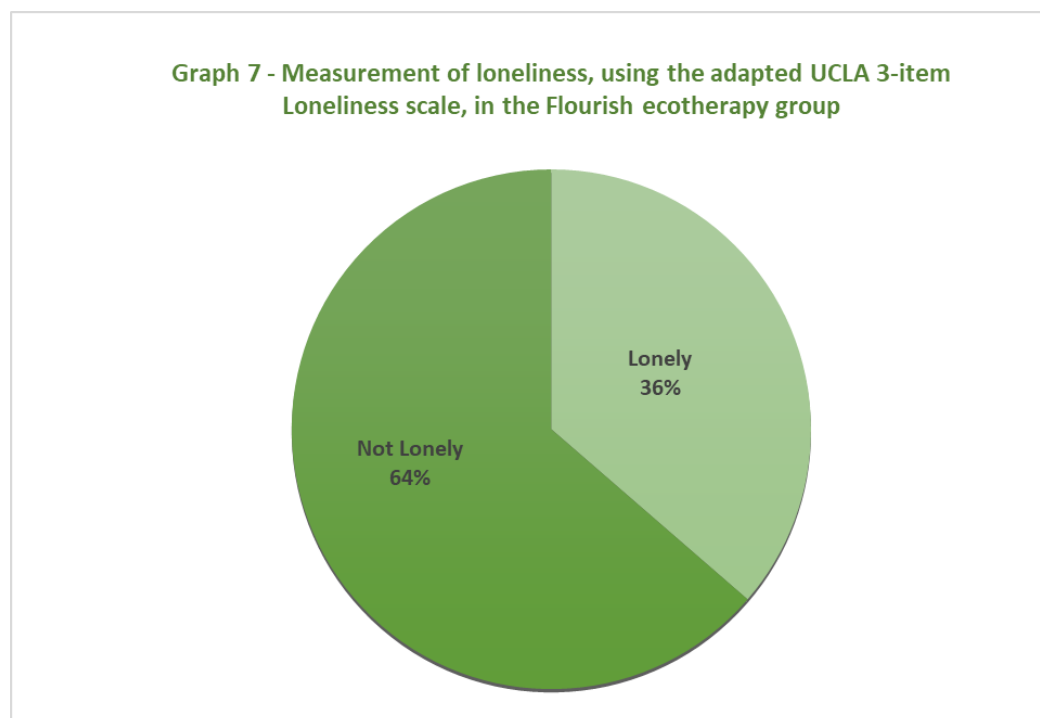
Physical Activity:

In terms of being physically active results also showed that 91% of participants were physically active at least once a week (Graph 6). This is most likely to be because they were attending the Flourish. However, without being able to ask the same question before they joined Flourish it is difficult to know if they were not already doing lots of physical activity before joining. Therefore, the result is difficult to interpret, but in keeping with the other results suggests that one of the benefits of being involved in the nature-based activities was being more physically active.



Loneliness and Social Connectedness:

Using the UCLA 3 item loneliness scale (Hughes et al 2004)²⁷, points for the participants answers were added together to give them each an overall score. The scores can be interpreted as those scoring between 3-5 being classed as not lonely and those scoring between 6-9 being classed as lonely.



The results showed that 64% of the participants were not lonely under this scoring system. These results support the ideas that that by being involved a nature-based activity on the whole participants were less likely to feel lonely. It is again difficult to interpret the results without comparing the participants scores to what they may have been like if they answered the same survey before they actually joined the group, as some may never have felt lonely. Likewise, those that did feel lonely are the very people that Flourish is trying to help so anyone who did still class themselves as lonely, means they are still reaching those in need.

To interpret the results from the adapted version of the Social Connectedness Scale (Lee and Robbins 1995)²⁸, the participants scores where added together and an average score was calculated. The lowest possible score on the scale was 8 (least socially connected) and the highest possible score 40 (most socially connected). Overall the participants mean score on the scale was 29.27 (SD 8.13) The mean score was on the higher end of the Social Connectedness Scale, suggesting that overall the Flourish participants had high levels of social connectedness. The standard deviation is 8.13 suggesting that there was some moderate spread in the range of scores. It is difficult to interpret this result on its own and would be better to compare whether participants individual scores had changed since joining the group.

Qualitative Data:

The qualitative data collected in the activity survey involved asking Flourish participants: what they liked most and least about the activity, what they would tell others who were not involved about the activity, what would help them participate in more activities like Flourish and any barriers they identified that might prevent others from participating.

There were four main themes that came up when participants were asked why they joined the activity this included: 1. Enjoyment of being outdoors/nature-based activities, 2. Learn new skills, 3. The social aspect, 4. Improvement of wellbeing. Some of the participants reasons for attending are quoted below:

“love being outdoors.”

“because of all the outdoor activities and the craft making - it is very peaceful. Growing and planting vegetables and getting to see the end product.”

“To learn many skills, make new friends and to make a voluntary career that I could work on.”

“...to help with my social skills and my boost confidence.”

“To help me be more confident in myself and to help me be able to open up more and helps with my depression.”

In addition to this, similar themes arose when participants were asked what they liked the most about the activity, including enjoying being outdoors/nature-based activities, the social aspect, learning new skills, improvement of wellbeing and also highlighted this time were the friendly staff/environment:

“Being outdoors and the social aspect of gardening.”

“The fact I'm outside and meeting people with similar issues

“Very good atmosphere, as I like learning about new skills”

“Exercise, outdoors, mixing with others, helps structure my week, feel appreciated, we are equal, happy atmosphere.”

“Calm”

“The staff are very friendly and they include everybody...”

Regarding what participants like the least about the activity 6 out of 11 participants did not have anything they disliked about Flourish. In terms the remaining 5 participants disliked they included: small common room, the rain, difficulty participating due to health problems, thinking that some of the activities were pointless and occasionally working on their own:

“The common room can be busy sometimes when everyone is trying to make a drink the kitchen area is not very big.”

“I still hurt my back (sciatica) and find it difficult to communicate with others while working because I still lip-read.”

“Occasionally, jobs turn out to be a bit pointless, e.g. preparing allotment for someone who then never turned up to work on it!”

Everyone who responded to the question about what would they tell others about the activity had something positive to say. There 10 out of the 11 participants responded again with similar themes from before appearing such as the of enjoyment outdoors/nature-based activity, improvement of wellbeing, the social aspect and staff being friendly:

"... it is the best place to come and join with a variety of jobs and crafts then go walking in the afternoon."

"helps you to relax, all are treated equal "

"Volunteers and staff very friendly, funny and helpful."

When asked what would help participants to do more activities like Flourish the issues raised included more funding, the location and having more time free to come along:

"I would like to come every day. So, more funding for Flourish to staff."

"Somewhere that was nearer to home"

Finally, participants were asked if there were any barriers, they could identify that might prevent other people from taking part. The main concerns raised were transport, fear of something new and one other participant stating physical disabilities sometimes. 8 out 11 participants did not think there were any barriers:

"Not many barriers as staff on hand to help. There are many accessible areas for wheelchair users."

"Physical disability can sometimes be a barrier."

"Getting transport."

Overall the themes highlighted in the responses from the participants of the Flourish fit nicely with the benefits thought to be gained from participating in nature-based activities; experiencing the outdoors, learning new skills, socialising and improving overall wellbeing.

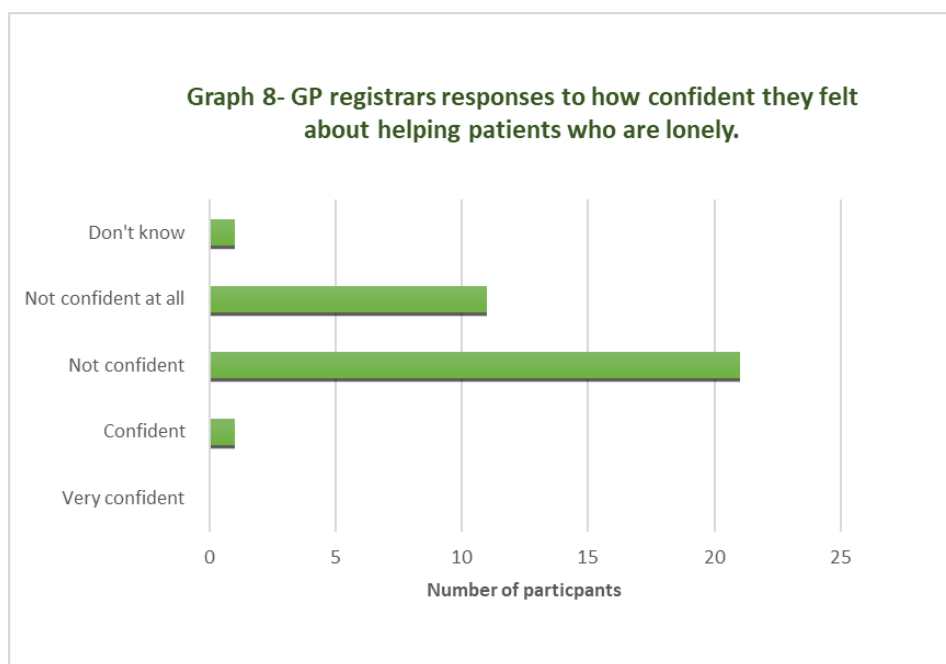
On the other hand, the participant responses have also raised some factors that might be limiting people from attending and would need to be addressed if more people were to get involved with the activity. This includes:

- *More communal space being needed at the site* - bad weather e.g. rain can sometimes make it difficult for the nature activities to continue. The manager at Livability agreed more areas are needed for participants to convene when the weather is bad, but this would require more funding which they don't have.
- *Funding to attend* - participants attending the group are funded for approximately 8 weeks then after that it costs £40 a week. Not all participants can afford this and although many also voluntarily work there, not everyone would be able to do this.
- *Transport* - as shown earlier in the results (Graph 1) the site is easiest to access by car. There will be many people who may not be able to get there by car so if there were more public transport links to the site this would make it more accessible.

GP Survey Results:

A total of 34 GP registrars (GP ST3s) completed the survey.

The survey found that 91% of the GP registrars felt they saw between one and five patients who attended the surgery each day primarily because they were lonely. This result shows a higher proportion of the GP registrars felt this way in comparison to the national poll for the Campaign to End Loneliness, which found that three-quarters of GPs (76%) report that between one and five patients a day attend their surgery primarily because they are lonely.¹¹ Overall the results suggest that in Dorset there could be many as one in ten patients arriving at GP surgeries not because they are medically unwell, but because they are lonely.



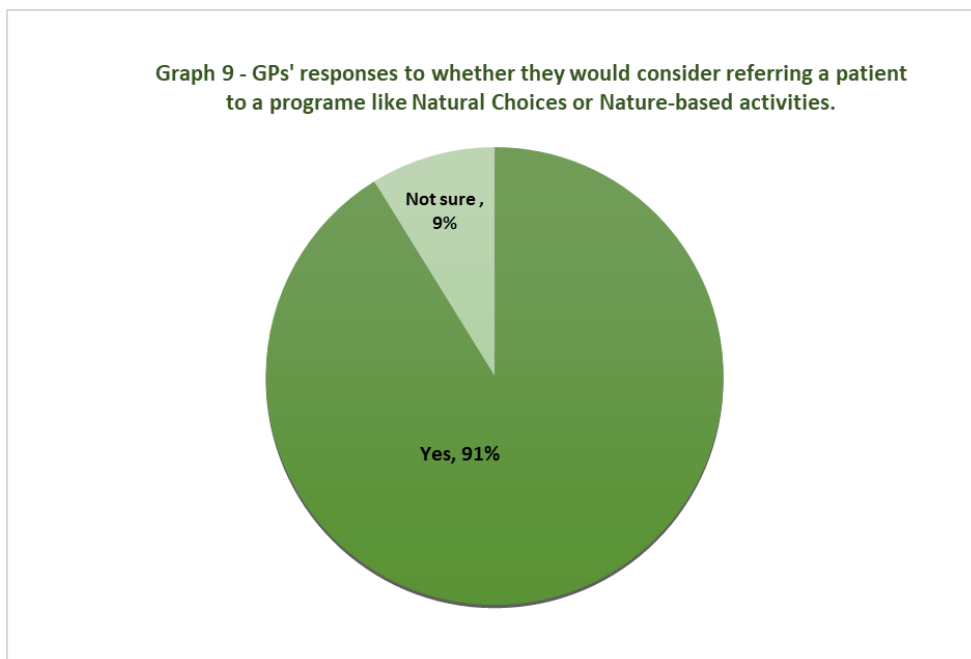
Results also showed that the majority (62%) of GP ST3s were **'not confident'** they had the tools necessary to help their lonely patients (Graph 8).

This again is a higher result than in the national poll, where 49% of UK GPs said they were not confident they could manage loneliness.¹¹ The reason for the lower levels of confidence in the GP registrars could be due to them still being in training, therefore possibly having less experience than fully qualified GPs. Nevertheless, the results do worryingly suggest that more needs to be done to help GPs manage the lonely patients attending their surgeries.

In addition to this, when asked what GPs do already for their lonely patients most of the GP registrars seemed to suggest referring patients to other local services/charities in the area. A few of the answers were quite vague and didn't specify a local service; some of suggestions that did come up included *Age UK*, *Live Well Dorset*, *Steps2Wellbeing*, *Silver Line*. One or two participants mentioned using local befriending services. Other ideas mentioned were motivational interviewing, spending time talking to the patient to work out what the problems were, showing empathy and also encouraging them to make changes like starting a hobby.

None of the GP registrars had heard of Natural Choices and 94% had never referred a patient to a nature-based activity. This again indicates that most GPs in Dorset are potentially not aware of services like Natural Choices and are not making any use of nature-based activities in the local area that could be of great benefit to their patients' overall health and wellbeing.

Encouragingly, 91% of the GP registrars agreed that they would consider referring a patient to Natural Choices or a nature-based activity in the future.



When looking at the qualitative data from the survey, GPs' opinions on what might help them make more wider use of nature-based activities included these key areas:

Box 1: Key points on how to get more GPs prescribing and referring patients to nature-based activities:

- **More awareness and knowledge about the service and activities available in the local area** - a few of the participants suggested teaching or advertisement.
- **An easier referral process** – e.g. one participant suggested, “*a short guide on how to refer and criteria need.*” others suggested providing information leaflets to give to patient or integrating the referral process into their practice computer system
- **Statistics and evidence to support the benefits**

Their suggestions are very similar to those found in the study by Swinburn et al, which looked at the opinions of GPs using green prescriptions. When asked if there any limitations to consider if there were to be widespread implementation of GPs prescribing or referring patients to nature-based activities, the GP registrars' responses raised the following issues:

Box 2: Limitations of widespread implementation of GPs prescribing or referring patients to nature-based activities:

- **Cost**– some suggested that the service would need to be free for patients
- **Time and resources** – there were worries about the potential time pressures and if there would be long referral process. Some GP registrars mentioned whether the activities would have capacity and availability to take on new patients.
- **Needs to be user friendly** – this was regarding if frail/elderly/housebound patients and those with a physical disability would be able to attend.
- **Accessibility** – there were some concerns about providing transport for the elderly and those with co-morbidities.
- **Non-compliance** – it will be up to the patients to decide whether they wish to go to a nature-based activity.
- **Knowing the outcome of the referral**
- **Interference with other local services** – there are lots of services out there already concerns by GP registrars were that there is risk of overlap.

Conclusions

All of the participants in the Flourish ecotherapy group reported some benefit to their health and wellbeing by being involved in a nature-based activity. The results provide evidence and support of the connection between nature-based activities and the improvement of health and wellbeing. Notably, the results from the GP survey show that more needs to be done to raise awareness amongst GPs of these nature activities in the local area and the benefits. Overall, the GP registrars were very positive about the idea of prescribing and referring patients to nature-based activities and therefore supports the idea that this could be something implemented on a wider scale in future to help tackle loneliness.

Recommendations

Based on all the information gathered from the evaluation these are the following recommendations for Dorset:

- **Improve GPs' knowledge of the benefits of nature activities.** – e.g. through teaching at local GP conferences/training events/meetings, presenting evidence from projects such as this. As well as this, a factsheet could be created for GPs to read as well as hand out to patients with a link to the Natural Choices website.
- **Build stronger connections between GPs and services that provide nature activities** – this could be done by additional publicising of the Natural Choices programme so more GPs know about it, e.g. talks at GP events/meetings, sending out a newsletter, creating posters to put in GP surgeries.
- **Create an easier referral process for GPs** – although the Natural Choices programme is already connected to well-known referral bodies like *Live Well Dorset* they do not focus solely on loneliness or on nature. GPs often refer patients to these services for specific needs such as losing weight, reducing alcohol intake and stopping smoking. A more direct method for GPs to refer patients who are lonely to Natural Choices could be introduced e.g. using cards or information leaflets to signpost patients.

To do all of this it will cost money and therefore require more funding. However, with all the evidence that shows the benefits nature has on overall health and wellbeing, ultimately this could outweigh any costs if it means a reduction in GP attendances and use of other NHS resources due to loneliness.

Limitations:

Response Bias – The activity surveys were handed out by the service providers (this is the management team at Livability Holton Lee). Therefore, though the survey was anonymous participants may have been more likely to give a positive response if they felt this is what the service providers wanted to hear.

Lack of generalisability – Only one nature-based activity under the Natural Choices programme was evaluated. There was also a small sample size for the evaluation so there may be different results if a different activity or larger group is surveyed.

Only surveyed GP trainees – The responses from the trainees may differ from fully qualified GPs due to experience. Furthermore, to improve the external validity of the data collected, it would be good to survey a larger sample of GPs in the local area. This will allow for a more informed response and could also be used as a way to promote Natural Choices and the use of nature-based activities.

Next steps:

- **The Dorset Local Nature partnership is hosting a 'Naturally Healthy Month' in May to publicise the Natural Choices programme and talk about benefits of nature on health.** It will be aimed at health professionals, but also the general public. In the future this may become a regular event and will provide a great opportunity to get the message out there to GPs.
- **Continue to gather evidence on the benefits of nature activities on health and wellbeing by expanding the activity survey to other nature activities in the local area.** Another project, the Stepping into Nature, 'Evaluation Framework 2018' has been evaluating a wide range of nature activities all over Dorset so it will be interesting to see if their results are similar. Hopefully, by collecting more evidence on the benefits of nature, this will help to secure funding of these services from the health sector.
- **The GP survey used in this project can be extended to a larger cohort of GPs.** This can be done by sending it out to GP practices around Dorset potentially through an online survey. The survey could then also be repeat in a year's time after implementing some of the recommendations to see if more GPs are more informed and making referrals.

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Appendices

APPENDIX 1 - Case Study

This case focuses on the story of one of the participants at Flourish who has been attending for over 2 years, some of the extracts have been taken from a case study provided by Livability at Holton Lee.

Aged 54 years old this gentleman suffered from a stroke after being diagnosed with an inoperable brain tumour. As a result of this he was left unable to walk, work and communicate with others.

He went from being a self-employed builder, to unemployed and housebound, he quotes,

“It knocks you for six because you feel useless. After I came out of hospital I was just stuck at home.”

Thankfully due to his wife and the work of Social Services he was referred to Holton Lee and started coming along. Though it took some time for him to settle in and even with the setbacks with his health, coming to Flourish has given him a new perspective on his life. He quotes,

“Being around people with different disabilities has shown me that there are people out there – thousands – getting on with life when it’s difficult.”

He has managed to rediscover some of his skills as a builder through the woodwork at Flourish. Some of his work includes building birdboxes, protective cages for the vegetables in the garden, vegetable planters that are sold to the public and even wooden reindeer for their Christmas fare. Through attending Flourish, he was able to train as a volunteer and now works as an excellent handyman there, helps out at Flourish events and is involved in teaching some of the other participants how to do woodwork.



Some of the birdboxes and bugboxes sold in the shop at Holton Lee.

Attending Flourish allowed him to get out the house again, make friends and has given him a sense of purpose. He quotes,

“At Flourish, there’s no pressure to do anything; you can try things and see what you like. But I don’t really mind what I do here. It’s a lovely place: the people are nice and the place itself is beautiful.”

APPENDIX 2 - Activity Survey

Evaluation Information Sheet – Activity Survey

Dear Participant,

I am a GP trainee doctor in Poole. As part of a Public Health Project I have teamed up with Dorset Local Nature Partnership (LNP) and we are looking at ways we can tackle social isolation and loneliness.

Dorset LNP leads the Natural Choices programme which enables people to access nature-based activities in the local community that can help towards improving and maintaining their physical health and mental wellbeing. As part of the project we are carrying out an evaluation of the activities provided by Livability at Holton Lee, as it is one of the many service providers involved with Natural Choices.

By taking part in this survey it will help us to find out more about how the activities at Holton Lee are having an impact on your overall health and wellbeing. The data that we collect in the survey will all be kept anonymous. The data will be used for the purpose of the evaluation and will be given to the Dorset LNP and will be presented to those working within the health and environment sectors. The evaluation itself may also be published in the future.

This evaluation will be used to raise awareness of Natural Choices and its activities within the community and to health professionals in order to continue and expand on the current opportunities. This will be done by improving awareness amongst healthcare professionals and the general public. Furthermore, we hope to encourage more funding and support and identify ways to get more people involved.

The survey should only take about 10 -15 minutes to complete. If you are happy to complete the survey please continue. We really appreciate your feedback.

If you would like to find out more about other Natural Choices activities, see: www.dorsetlnp.org.uk/natural_choices

Many thanks,

Dr Sarah Osafo

GP Trainee ST1 Poole

Livability Holton Lee - Activity Survey:

Consent

- Yes, I have read the Evaluation information sheet and agree to participate

Activity

The following questions are about the activity itself.

Name of activity:

1. How long have you been coming to this activity? _____

Please circle your answer to the following questions:

2. How often do you attend this activity?

1. Daily
2. 2-3 times a week
3. Once a week
4. Fortnightly
5. Once a month
6. Occasionally (less than once a month)

3. How did you hear about this activity?

1. Word of mouth

2. Internet search

3. GP

4. Newspaper, poster, flyers: Please name

5. Through a service provider: Please name

6. Webpage: Please specify _____

7. Social media (e.g. Twitter, Facebook) Please specify

8. Other: Please specify _____

4. Why did you want to join this activity? (*please write in the box below*)

5. Who do you come to the activity with?

1. On my own

2. With my carer (including relative carer)

3. As a carer for someone else (family/friend)

4. With family or friends

5. As a professional carer

6. Other – Please specify _____

6. What mode of transport did you use to get here?

1. Own vehicle
2. Public transport
3. Volunteer driver
4. Other _____

7. How long did it take you to get here (travel time)?

8. Please rate the activity that you take part in: (Please tick a box).

	Good	Neutral	Poor
The activity overall			
Opportunities to participate			
The chance to meet new people			
The opportunity to socialise			
The extent to which the activity met my expectations			
The opportunity to connect to nature			
The opportunity to participate in a physical activity			

9. Please state your agreement with the following questions about the activity you participate in: (Please tick a box).

	Agree	Neutral	Disagree
Enjoy the activity			
I feel included			
I learn something new			
I refreshed an existing skill			
I intend to return and do more			
I intend to spend more time in the outdoors			
I intend to do more physical activity			
I will tell someone else about this activity			

10. What do you like most about the activity? (please write in the box below)

11. What do you like least about the activity? (please write in the box below)

12. What else would help you participate in more activities like this? *(please write in the box below)*

13. What will you tell others about the activity? *(please write in the box below)*

14. Are there any barriers you think might prevent people from participating in this activity? *(please write in the box below)*

Health and Wellbeing:

The following questions are focused on the impact of the activity on your overall health and wellbeing.

Since joining this activity please rate how true each statement is. *Please circle your answers:*

15. I feel physically healthy:

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

16. I enjoy life overall:

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

17. I feel sociable:

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

Physical health:

18. How often do you participate in outdoor activities (not including home-based activities such as gardening)?

Once a week or more

1-3 times a month

1-5 times in 6 months

Once a year or less

Never

Loneliness:

Please answer the following questions keeping in mind how you have felt over the last few months.

19. How often do you feel that you lack companionship?

1. Hardly ever

2. Some of the time

3. Often

20. How often do you feel left out?

1. Hardly ever

2. Some of the time

3. Often

21. How often do you feel isolated from others?

1. Hardly ever

2. Some of the time

3. Often

Social:

22. Please rate how true each statement is: (Please tick a box)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I feel comfortable in the presence of strangers					
I am in tune with the world					
I fit in well in new situations					
I have ample opportunities to meet other people					
I feel close to people					
I see people as friendly and approachable					
I feel understood by people I know					
I am able to connect with other people					

Demographics:

We request that you fill in the information regarding personal details, but you are not obliged to fill in all the boxes in this section. The information given to us in this section helps us assess whether Natural Choices providers are making these opportunities available to everyone and to monitor the effectiveness of the provider's Equal Opportunities policies.

Please circle your answer to the following questions:

Gender

1. Male 2. Female 3. Other _____ 4. Prefer not to say

What is your age? (years)

1. 18-29
2. 30-39
3. 40-49
4. 50-59
5. 60-69
6. 70-79
7. 80 and above

Sexual orientation:

1. Heterosexual/straight
2. Gay / lesbian
3. Bisexual
4. Prefer not to say
5. Other:

Religion:

1. Christian
2. Buddhist
3. Hindu
4. Jewish
5. Muslim
6. Sikh
7. No religion
8. Prefer not to say
9. Other:

Occupation:

1. Employed
2. Unemployed
3. In education/training
4. Retired

Marital Status:

1. Married
2. Single
3. Civil Partnership
4. Separated
5. Widowed
6. Divorced

Living:

Please circle all that apply about your living situation:

1. I live on my own independently
2. I live with my carer (including relative carer)
3. I live with a spouse, partner or family
4. I live in a residential/care home
5. I live with an adult I am the carer for
6. Other _____

Health:

Are your day-to-day activities limited because of a long-term health problem or disability?

- 1 Yes- limited a lot
- 2 Yes – limited a little
- 3 No
- 4 Prefer not to say

APPENDIX 3 - GP Survey

GPs' knowledge and attitudes towards referring patients to nature-based activities to tackle loneliness and improve physical health and mental wellbeing.

If you would like to take part in this evaluation, please complete the survey below.

*If you would like to find out more about Natural Choices please see:
www.dorsetlnp.org.uk/Natural_Choices*

Many thanks.

1. Thinking about the patients you see in your surgery on an average day, how many of them do you think are really attending your surgery because they are lonely? *(Please circle your answer)*

Between 1-5 Between 6-10 More than 10 Don't know

2. Peer reviewed research shows that loneliness is a contributing factor in a number of physical and mental health issues. As a general practitioner, to what extent do you feel confident that you have the tools necessary to help patients who are lonely? *(Please circle your answer)*

Very confident Confident Not confident Not confident at all Don't know

3. In your current surgery, if you identified a patient who was lonely what would you normally do to help tackle this? *(Please write in the box below)*

4. Prior to this talk had you heard of the programme Natural Choices? *(Please circle your answer)*

YES

NO

5. Have you ever referred a patient to nature-based activities, or a programme like Natural Choices, that connects people to nature for the purpose improving their physical health and mental wellbeing? *(Please circle your answer)*

YES

NO

If your answer is YES please state who/what you referred them to and any feedback you had on this. *(Please write in the box below)*

6. Would you consider referring a patient to a programme like Natural Choices or nature-based activities in the future, for the purpose improving their overall physical health and mental wellbeing? *(Please circle your answer)*

YES

NO

NOT SURE

7. What do you think might help GPs make wider use of services like Natural Choices and referring patients to nature-based activities? *(Please write in the box below)*

8. Are there any limitations to consider if there were to be widespread implementation of GPs prescribing/referring patients to nature-based activities?
(Please write in the box below)

APPENDIX 4 – Useful Websites

1. Dorset Local Nature Partnership

<https://dorsetlnp.org.uk/>

2. Livability at Holton Lee

<https://holtonlee.org/>

3. The Wild Life Trusts

<https://www.wildlifetrusts.org/>

4. Campaign to End Loneliness

<https://www.campaigntoendloneliness.org/>