

The wellbeing benefits of visiting National Garden Scheme gardens in winter

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Cover and back page images: The Dower House, Melbourne, Derbyshire

Key findings

Research shows that visiting gardens can improve wellbeing. But most research looks at the benefits of gardens during summer, when foliage and flowers are generally considered to be at their best. Little is known about the effects of visiting a garden in winter. A sample of 416 visitors were asked to complete a survey examining the wellbeing benefits of visiting gardens open for the National Garden Scheme. 267 visitors completed the survey in winter (February 2023) and 149 in summer (June 2023). Their wellbeing was measured before and after visiting a garden, and the wellbeing of winter and summer visitors compared.

Key findings include:

Wellbeing significantly improved after visiting the gardens in winter. Visitors felt more relaxed, happy and excited in the gardens, and less stressed, sad and bored.

The more time visitors spent in the winter gardens, the higher their wellbeing.

The level of wellbeing was similarly high for visitors in winter and summer, suggesting that

visiting gardens during either season is likely to carry benefits. But the average level of wellbeing before entering the gardens in winter was lower than in summer, meaning that those visiting in winter showed the greatest increase in wellbeing.

The more nature visitors observed in the gardens, the higher their wellbeing.

Visitors described, in their own words, a number of positive feelings while visiting the winter gardens. They felt relaxed and calm, happy and uplifted, interested and inspired, appreciative of the gardens, immersed and at one with nature, and hopeful for spring.

Visitors particularly liked the plants and flowers that could be found in the gardens during the winter, as mentioned by 89.1% of the sample. Almost half of all visitors (47.6%) mentioned liking the snowdrops, 29.2% appreciated the emergence of spring growth, and 28.2% the scent of flowers like Daphne. A third of respondents (33.3%) also appreciated being able to see the structure, design and views of and from the garden, given the lower amount of foliage at that time of year.



Visitors at the National Garden Scheme snowdrop open day at Welford Park

Background

The wellbeing benefits of gardens

Data collected by the Office for National Statistics¹ showed that in 2023,22.5% of UK adults rated their anxiety as being high, 8.2% rated their happiness as low, and 5.1% rated their life satisfaction as low. Promoting wellbeing is therefore considered to be of importance to the UK Government².

There is mounting evidence to support the idea that spending time in gardens can help improve wellbeing. Research in England³ has shown that wellbeing is higher for those who have access to a private garden. A meta-analysis⁴, in which researchers review and synthesise evidence from several studies, found that gardening was associated with a range of positive health outcomes, including improved life satisfaction and reduced anxiety. And a review by The King's Fund, commissioned by the National Garden Scheme⁵, identifies numerous wellbeing benefits from gardens and gardening, such as reduced depression.

A gap in our understanding: visiting gardens in winter

Most of the research looking at the psychological benefits of visiting gardens tends to focus on the summer period, with very little looking at the benefits of visiting gardens during the winter. Yet people do visit gardens during this time. They may look at or spend time in their garden at home or visit a commercial garden. And indeed, many

gardens are open under the National Garden Scheme during the winter months.

The main aim of this report is to address this gap in the current research by looking at the wellbeing benefits to people visiting National Garden Scheme gardens in the UK winter. We will also compare the benefits experienced by visitors during winter, to those visiting in summer, to see if there are any differences.

Nature and wellbeing

Being in nature is also positively associated with improved health and wellbeing⁶. Many gardens may be considered semi-natural spaces, in which you can find plants, trees, birdsong or water. One study⁷ found that the more nature people had in their home gardens, the happier they felt during the first Covid-19 lockdown in the UK. In particular, natural sounds, smells, and the presence of animals, birds and insects were associated with increased happiness levels.

This is very useful information, as it can help guide the design of gardens to maximise the wellbeing of the people visiting them, as well as supporting biodiversity. But there is little research to date looking at the benefits of nature presence in gardens during winter. In this report, we will therefore also examine the effect of nature on wellbeing for visitors of National Garden Scheme gardens during winter.

The Surveys

Background to the surveys

A paper survey was handed out to visitors at five gardens open for the National Garden Scheme during February and again in June 2023. These months were chosen in accordance with the meteorological calendar for the UK⁸, as representing winter and summer.

Aims of the surveys

The main aim was to look at whether visiting National Garden Scheme gardens during winter could improve wellbeing, given the lack of research into the benefits of visiting gardens at this time of year. We also wanted to compare the wellbeing benefits of visiting during winter with summer.

Using people's responses to the surveys, we aimed to answer the following questions:

Did the wellbeing of visitors to the National Garden Scheme gardens in winter improve during their visit?

Were there differences in wellbeing between those who visited a garden during winter and during summer?

Was the level of nature in the garden associated with wellbeing?

How did visitors describe their wellbeing experiences?

What features of the gardens did visitors particularly like?

Methods

We used a paper survey to measure the wellbeing of garden visitors before and after visiting a National Garden Scheme garden. We chose to use a paper survey (printed onto paper and filled out with a pen) rather than an online survey, so that we didn't exclude those who might not have access to a smartphone during their visit to the garden.

Visitors were recruited from five gardens across the UK which were open under the National Garden Scheme in February and again in June 2023. Surveys were handed out at both time points, although please note that different people filled out the surveys at each time point.

The paper survey was handed to visitors by National Garden Scheme volunteers as they entered the garden, and visitors were asked to complete the first section before entering the garden. In this first section, they were asked to recall and rate their wellbeing in the hours before arriving at the garden.

The visitors then filled out the second section of the survey as they concluded their visit to the garden and were about to leave. In this section, they were asked to rate their wellbeing while in the garden (they completed the same two measures of wellbeing that they completed in section one, so that any changes in wellbeing could be quantified). They were also asked to rate the amount of naturalness that they perceived in the garden (e.g. the amount of birds, animals and insects they observed), and to write, in their own words, how they felt while they were in the garden. They were also asked to list three things that they liked about the gardens. All responses were anonymous, although respondents provided some basic demographic information.

Respondents were offered the opportunity to enter a draw to win a prize bundle, each consisting of a National Garden Scheme tea towel, apron, and tote bag. Five prizes were awarded to respondents at each time period (10 prizes in total).

The Gardens

The surveys were filled out by visitors to five gardens across the UK. Below we detail each of these gardens, and the dates on which surveys were handed out.

Billy Old Rectory Peace Garden, Northern Ireland

Winter open dates: 11 & 12 Feb Summer open dates: 24 & 25 June

About: A mature three acre garden on an historic site. Front of the Georgian rectory is a large lawn with mature trees, an ancient well and a developing woodland garden with a small fernery. The rear has another large lawn with contrasting borders of roses, herbaceous, shrubs and pond area. Also kitchen, greenhouse, herb, vegetable and fruit gardens - a large old orchard and area with wildflowers and annuals.

What our survey respondents said about the garden:

"Enjoyed Old Rectory garden very much. Can't wait to enjoy the seasons here!"

"Helpers were excellent, very courteous and gave good assistance."

"A beautiful garden, full of interest!"

The Dower House, Melbourne, Derbyshire

Winter open dates: II & I2 Feb Summer open dates: I0 & II June

About: Beautiful view of Melbourne Pool from balustraded terrace running length of 1829 house. Garden drops steeply by paths or steps to lawn with herbaceous borders and bank of some 60 shrubs. Numerous paths lead to different areas of the garden, providing varied planting opportunities including a bog garden, glade, shrubbery, grasses, herb and kitchen garden, rose tunnel, arbour, orchard and small woodland.

What our survey respondents said about the garden:

"Beautiful house and gardens. Wonderful place to live. Very pleased to share it for a short time."

"Lovely people hosting the event. The Dower House has one of the loveliest views in the area. Thank you to the hosts today and the National Garden Scheme for giving people so much joy in beautiful gardens."

"Happy that the owners are prepared to share their garden and their obvious pleasure in gardening"

Great Thurlow Hall, Suffolk

Winter open date: I2 Feb Summer open date: I1 June

About: 13 acres of beautiful gardens set around the River Stour. Masses of snowdrops in late winter are followed by daffodils and blossom around the riverside walk in spring. Herbaceous borders, rose garden and extensive shrub borders come alive with colour from late spring onwards, there is also a large walled kitchen garden and arboretum. Also open is the Curwen Print Study Centre, Art Studios and Gallery, located adjacent to Great Thurlow Hall.

What our survey respondents said about the garden:

"Lovely garden landscape and colour schemes. Beautiful place."

"Thurlow Hall has a lovely garden all year round"

"Peace and tranquility - lovely"

Sandhill Farm House, West Sussex

Winter open date: I2 Feb Summer open dates: I7 & I8 June

About: Front and rear gardens broken up into garden rooms including small kitchen garden. Front garden with small woodland area, planted with early spring flowering shrubs, ferns and bulbs. White and green garden, large leaf border and terraced area. Rear garden has rose borders, small decorative vegetable garden, red border and grasses border.



Great Thurlow Hall, Suffolk - photo credit Stephen Moore

What our survey respondents said about the garden:

"Fantastic, calm, beautiful, peaceful garden."

"Thanks for opening your garden for everyone to enjoy."

"A beautiful place, so glad I came."

Trench Hill, Gloucestershire

Winter open dates: 12 & 19 Feb Summer open dates: 7, 14, 21, 28 June

About: Approximately three acres set in a small woodland with panoramic views. Variety of herbaceous and mixed borders, rose garden, extensive vegetable plots, wildflower areas,

plantings of spring bulbs with thousands of snowdrops and hellebores, woodland walk, two small ponds, waterfall and larger conservation pond. Interesting wooden sculptures, many within the garden. Cultivated using organic principles. Children's play area.

What our survey respondents said about the garden:

"We were made to feel extremely welcome by the knowledgeable and dedicated owners."

"It was such a lovely garden, people so friendly. Main impression is the silence and peace, and the views."

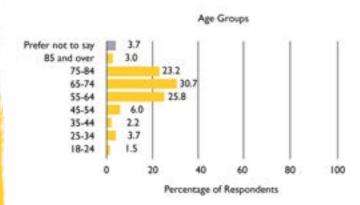
"Liked the memorial spot very much!"

Respondents

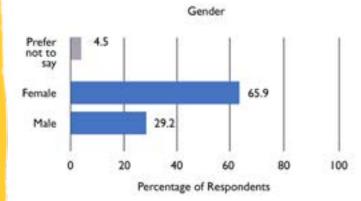
Winter survey

267 visitors completed the survey during the winter period, across the five gardens described in the previous section of this report.

Respondents were asked which age group they fell into. They ranged in age from 18-24 to 85 and over. Most respondents (79.7%) fell into age groups ranging between 55 and 84 years old, with 65-74 year olds representing the largest age group.



65.9% of the respondents were female and the majority (91.8%) identified their ethnicity as white. Almost all respondents (96.5%) had a garden (private, shared or allotment).

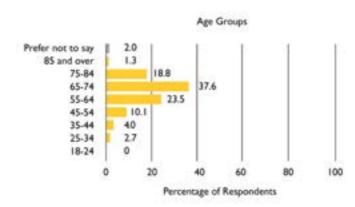




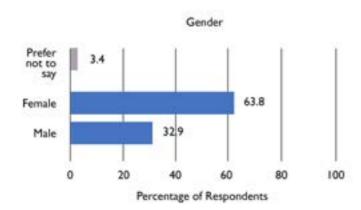
Summer survey

149 respondents completed the survey during the summer period. The summer survey was identical to the winter survey, to enable us to compare how people viewed the gardens in winter and in summer. The summer surveys were filled out at four of the gardens used for the winter survey: The Dower House, Great Thurlow Hall, Sandhill Farm, and Trench Hill. Note that different respondents completed the summer and winter surveys.

The demographics of the summer respondents were very similar to those of the winter respondents. Most respondents (79.9%) fell into age groups between 55 and 84 years, with the age group 65-74 years being the largest. Unlike the winter sample, there were no 18-24 year olds.



63.8% of respondents were female and 96.6% white, and 94% had a garden (private, shared or allotment).



Wellbeing and garden visits during winter

Respondents were asked to rate their wellbeing before and after visiting the garden, so that we could objectively measure any changes in wellbeing during the time they visited the garden.

Measures of wellbeing

We measured wellbeing in two different ways. The first was using a slightly modified version of the World Health Organisation Wellbeing Index (WHO-5)⁹, which is well validated and considered to be a reliable way to measure wellbeing¹⁰. The type of wellbeing this measure examines is called 'hedonic wellbeing'. Hedonic wellbeing relates "to the subjective experiences of pleasure and enjoyment" The measure provides an overall percentage score of wellbeing (from 0 to 100) for each respondent. This measure will be referred to as 'wellbeing' in this report.

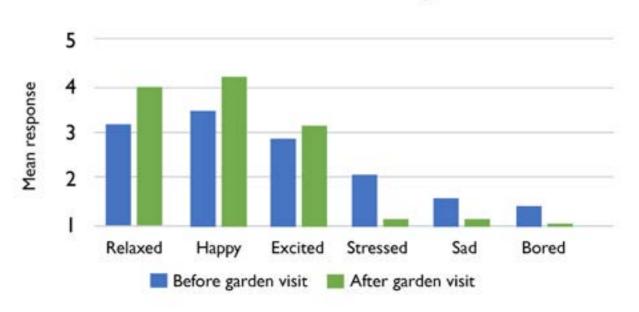
We used a second measure of hedonic wellbeing, in which we asked respondents to rate the extent to which they felt relaxed, stressed, bored, excited,

happy, and sad on a scale of I (very slightly or not at all) to 5 (extremely). This measure was based on items from the circumplex model of affect (affect refers to the mood or emotions people feel) by Russell and Lanius¹². An average score of wellbeing was calculated based on this measure, and used in our analyses. But we also looked at responses to each of the individual items in this measure (e.g. "relaxed") to help us unpick the mood of respondents. This measure will be referred to as 'mood' in this report.

Improved wellbeing

Statistical analyses were used to compare wellbeing levels before entering the garden and after visiting the garden. For both measures of wellbeing described above, wellbeing significantly improved after visiting the garden. This improvement is illustrated in the chart below, which shows the mean levels of wellbeing for each item in the mood measure, both before and after visiting the gardens. It shows that people were more relaxed, happy and excited after visiting the gardens, and less stressed, sad and bored.

Mood before and after garden visit





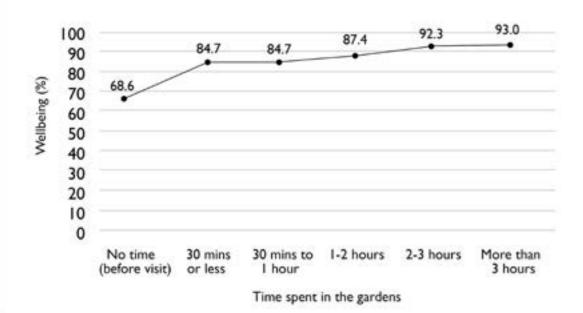
Time spent in the winter gardens

Analyses revealed that there was a small but statistically significant association between the time respondents spent in the gardens and wellbeing.

The graph shows that even a visit of 30 minutes or less was associated with an increase in wellbeing, compared with the average level of wellbeing observed as respondents first entered the garden.

But the graph also shows that the longer respondents spent in the gardens, the greater their wellbeing levels, with a gradual improvement in average wellbeing at most time points. Those respondents who spent 3 hours or more in the gardens showed the highest level of wellbeing.

Wellbeing by time spent in garden



Comparing wellbeing in winter and summer

In this section, we compare the wellbeing of respondents who filled out the winter and summer surveys, to see whether people received similar wellbeing benefits from visiting the gardens in the two different seasons.

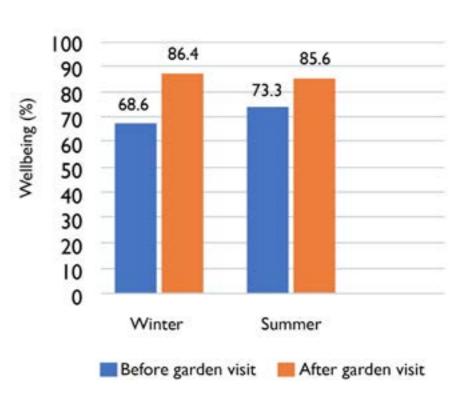
We started by looking at average wellbeing levels (according to the WHO-5 wellbeing measure) for the winter and summer groups of respondents before they visited the gardens. Statistical analyses showed that wellbeing before visiting the gardens was significantly lower in the winter compared with the summer.

We next compared the level of wellbeing after visiting the gardens for the winter and summer

surveys. This showed that there was no significant difference in the wellbeing of respondents after their visit to the garden based on season: wellbeing was similarly high for those visiting in either winter or summer.

These two findings combined are very interesting, as it tells us that although people who visited in the winter initially had lower levels of wellbeing when they arrived at a garden, by the time they left the garden, their wellbeing levels were no different to those who visited in the summer. In fact, those who visited the gardens in winter seemed to experience a greater overall increase in their wellbeing compared to those who visited in summer, with a mean wellbeing increase of 17.8% for winter visitors compared with 12.3% for summer visitors. These findings are represented in the chart below.

Wellbeing before and after visit by season



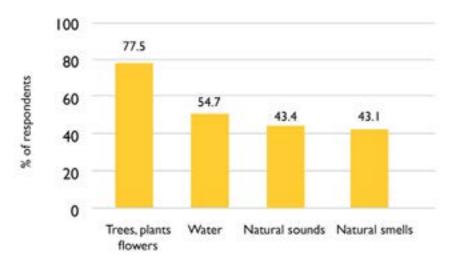
Nature in the winter gardens

Level of nature in the gardens

Respondents filling out the winter survey were asked to rate the amount of nature (such as natural sounds and smells, greenery and water) that they perceived in the gardens. The level of nature perceived by respondents in the gardens was generally high. 56.9% of respondents perceived either "a lot" or "quite a lot" of nature in the

gardens. Trees, plants and flowers were, perhaps unsurprisingly, the most highly observed aspects of nature in the gardens, with 77.5% of respondents observing "a lot" of greenery. But as the graph shows, water, natural sounds and natural smells were also commonly observed.

% Reporting 'A Lot' of each aspect of nature



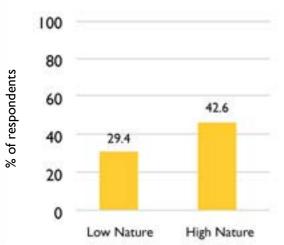
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Nature and Wellbeing

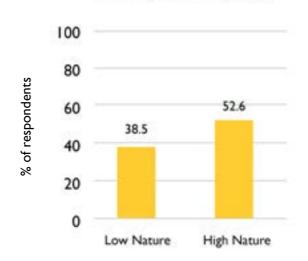
Analyses showed that the more nature respondents perceived in the gardens during winter, the higher their wellbeing levels. Those who perceived a high

level of nature in the gardens were more likely to report feeling extremely relaxed and extremely happy.

% Feeling extremely relaxed



% Feeling extremely happy



How visitors felt in the gardens during winter

We asked the survey respondents to write down, in their own words, how they felt while they were in the gardens. Some wrote down short answers, such as "calm and relaxed", others wrote longer responses, such as: "happy and relaxed. Interested in all the plants - all emerging after the winter".

The word map below shows the words most frequently used by respondents to describe how they felt while in the gardens. This shows that people most often used words such as "happy", "relaxing", "interested", "peaceful", and "calm" to describe how they felt.

engaged appreciative alive pleasant alive pleasant wonderful impressed happy inspired excited enjoying enjoying delighted envious interested peaceful pleased lovely curious hopeful lifted great optimistic

We also grouped the responses to this question (through content analysis) into eight themes, to enable us to summarise and describe in more detail how respondents felt in the gardens. Note that many people wrote of multiple feelings and so their comments were categorised into multiple themes. For example, one wrote that they "felt alive, the birdsong, the beauty of plants. Yet it is a very peaceful garden, calm, relaxing". The stated percentages therefore reflect the number of people whose comments could be categorised into each of the themes, out of all those who filled in the winter survey (n = 267).

The themes are presented in order, from the most frequently occurring to the least frequent.

Relaxed and calm

Over a third of the respondents who filled out the survey (35.2%) said that they felt relaxed, calm, tranquil, at peace, and less stressed while

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they were in the gardens. One respondent wrote that they felt "very relaxed and at peace with the world", and another that they felt "very relaxed and free of any troubles/concerns. Time stopped still and was so tranquil".

Some wrote of the healing qualities of being in the gardens. One said that "it is very therapeutic!", another suggested that "everyone should have access to these type of surroundings maybe once a week".

Happy and uplifted

29.6% of the respondents said that they felt happy, delighted, content or good while they were in the garden, that they were enjoying the place or that their spirits had been lifted whilst there. One, for example, wrote that they "felt very happy while in the garden", another that they "thoroughly enjoyed the whole garden".

Interested, inspired and enthusiastic

Just over a quarter of the respondents (25.8%) reported feeling interested and inspired by the gardens. Respondents used terms such as "engaged", "enthusiastic", "excited", "curious", "absorbed", "alert", and "impressed". These people seemed to relish the opportunity to experience and learn from the gardens, and take inspiration back to their own gardens. One described how they "felt engaged and interested. I love it when plants have labels so I can check what they are".

Appreciating and admiring the gardens

17.6% of respondents wrote of their appreciation and admiration for the gardens, their settings, the views of or from the gardens, and their beauty. For example, one wrote of how they were "impressed by the setting and wonderful view", another that they were "appreciative of being in a wonderful place". In relation to the beauty of the garden, one said that they were "glad to be in a beautiful garden" and another that they were "impressed by the evident love and care taken to make it so beautiful". Other respondents were amazed and awestruck by the gardens, which inspired feelings

of wonder in them. One said that they were "awestruck even at times", another that they "were overawed by the amount of work it must need".

Immersed and at one with nature

15.0% of respondents described feeling at one with or appreciative of nature, or feeling immersed, interested and impressed by natural aspects such as plants, flowers, fresh air, sunshine, birds, and birdsong.

For example, one respondent said that they felt "at one with nature", another "in harmony with nature", and a sense of "being immersed in nature". Others wrote of feeling "pleased to be in nature" and enjoying "a relaxing, quiet stroll in the fresh air, amongst nature. Loved the trees".

Hopeful and optimistic at spring and the year to come

A few respondents (4.9%) wrote of feeling hopeful and optimistic at spring, seeing the firsts of the gardening year, and looking forward to things to come.

Some respondents simply said that they were "hopeful" or "optimistic", others wrote that "seeing all the flowers poking through the soil gave me a sense of hope - spring is coming!". This optimism seemed to come from the appearance of early vegetation and spring flowers, which heralded not only "that spring and garden season is ahead!", but also warmer weather: "looking forward to better weather. Signs of spring very hopeful".

Thoughtful, reflective and meditative

4.1% of respondents also wrote of feeling thoughtful and reflective, grounded and mindful, meditative and spiritual whilst in the gardens. These respondents, for example, wrote that they felt "in the moment", "close to God", and "grounded". One wrote that they felt "mindful - I felt very present".

Negative experiences

A few respondents (4.1%) described some more negative experiences in the gardens; feeling cold in the winter weather, bored, worried about falling, sad, or overwhelmed. It is important to consider that people may not always feel entirely comfortable in gardens or natural spaces, whether that is due to their individual preferences, experiences, current circumstances, or simply because it is cold and rainy on the day that they visited.

For example, one said that the weather was "chilly", another that they were "cold and a bit bored". Some respondents reported feeling saddened by their recent circumstances, or having a difficult day due to outside factors.

But it is also important to place these experiences in context, and to remember that almost 96% of the sample wrote of positive feelings while in the gardens; demonstrating the overwhelming benefits that respondents felt from visiting these gardens.

What people liked about the gardens during winter

We asked respondents to write down three things that they particularly liked about visiting the garden in winter. We analysed their written comments and grouped them (using content analysis), so that we could summarise the things that respondents liked.

Comments were grouped into four main themes, with subthemes used to further unpick the specifics of what people liked. These are presented below, with percentages representing the number of respondents who mentioned each theme/subtheme, out of the sample of 267 winter respondents. Note that, as with the previous analyses, people generally mentioned more than one liked thing. We will discuss the themes in order from the most frequently mentioned, to the least mentioned.

Theme I - Plants and flowers

Almost 9 out of 10 of the respondents (89.1%) mentioned plants and flowers in some form as being one of the things they liked most about the gardens during winter. We further categorised their comments into several subthemes, to show exactly what it was about the plants and flowers that they particularly liked. These subthemes can be grouped into those that mention a specific type or genus of plant, and plants and flowers in general.

Specific plants and flowers

Approximately half of the respondents (49.1%) mentioned a specific genus of flowering plant as one of the things they liked most about the gardens in winter. These flowers were generally unique to this time of year, and therefore seemed to hold special significance for respondents.

Snowdrops (Galanthus) accounted for the most mentioned subtheme in the whole analysis, being mentioned by 47.6% of the respondents. These bulbous plants were clearly therefore a favourite of the winter garden. Respondents described "big

fat snowdrops", "beautiful snowdrops – glowing in rather dull light" and a "sweep of snowdrops".

Other specific flowering plants mentioned by respondents included hellebores (*Helleborus*; 7.9%), aconites (*Eranthis*; 5.2%), iris (*Iris reticulata*; 3.4%) and crocus (spring-flowering Crocus; 2.6%). For example, respondents wrote of "crocus and miniature iris" and "deep purple crocus".

7.5% of respondents also wrote of the presence of trees as being liked. Many particularly appreciated seeing the structure and form of the trees, something which was more evident for the deciduous trees, in the absence of leaves. One respondent wrote of "the beautiful winter structure of the trees", one of "seeing the skeletal tree forms", and another of "seeing the structure of trees without their leaves".

Plants and flowers in general, and their attributes

Almost a third of the sample (29.2%) wrote of emerging plants and flowers in the garden as one of the things they liked most about the gardens in winter. Respondents wrote of plants emerging from the soil, of buds and shoots, and winter and early spring flowers in general. One respondent wrote of "new growth just poking through the earth", another of the "amount of plants bursting forth". Many seemed to relish these things as a sign of hope of things to come, which relates back to respondents' feelings of optimism and hope, discussed in the previous section of this report. One wrote of "the promise of things to come, with shoots and buds coming", another that "the flowers herald spring". One respondent noted that it was a "different experience to summer".

A similarly large number of respondents (28.2%) mentioned the scent of flowers in the winter garden. One respondent wrote of "smelling flowers", another of "the perfumes". Many identified the fragrance as belonging to "winter-flowering shrubs" and "scented bushes". Some wrote specifically of the scent of *Daphne*, *Sarcococca* (sweet box), and *Hamamelis* (witch hazel)."

15.7% of the respondents wrote generally of the presence, abundance and variety of flowers in the gardens. They wrote, for instance, of "the amount of plants in flower" and being "surprised by how much flowering there was".

Similarly, 10.5% wrote of the presence, abundance and variety of plants and foliage. One wrote of "being surrounded by plants", another of "plants, plants, plants!".

A smaller number of respondents (6.7%) mentioned colour in the garden. One wrote of "the colour for February", another said: "I hate the dark winter and seeing signs of spring and colour lifts my spirits".

Theme 2 - Design, maintenance and amenities 40.1%

More than a third of respondents (40.1%) said that they liked aspects relating to the design, maintenance and amenities available in the garden. This theme can be represented by three subthemes.

A third of all respondents (33.3%) wrote about the structure, design, and setting of the garden. This includes the hard landscaping of the garden (such as walls and paths), seating, and sculptures displayed in the garden. Respondents liked the "lack of straight edges", "design of the gardens" and "form and structure of the design". Respondents particularly enjoyed the fact that in visiting the gardens during winter, when there was less foliage, they could clearly see the structure of the gardens and the views both within and beyond the garden. One described this as the "winter aspect" and another said that it was a "good time to see garden structure". One wrote of "trees still bare to reveal stunning views".

Respondents (6.7%) also appreciated signs that the garden was well cared for, evident through rich soil, mulching, and other preparations for the gardening year ahead. One wrote that they appreciated "how well kept the garden is", another that there were "no weeds and masses of mulch". "Neatness" and "tidiness" was also appreciated, as was the "conditioning of the soil".

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A small but distinct number of respondents (3.7%) also appreciated the tea, coffee and cakes on offer during the open day on which they visited. They wrote of having a "warming tea and home-made cake", as well as "coffee and cake in beautiful setting!".

Theme 3 - Nature

In addition to the plants and flowers of the garden, a third of the respondents (33.3%) mentioned other natural aspects within the winter gardens. This theme can be represented by five subthemes.

The largest of these subthemes was water, mentioned by 10.9% of the sample, and encompassing different forms such as lakes, pools, ponds, rivers and smaller water features. Respondents wrote of "the beautiful setting overlooking the pool" and "the water and small waterfall".

Almost one in ten (9.4%) mentioned natural sounds, including birdsong, describing "listening to nature", "the sound of the geese" and "spring birdsong".

A similar number (9.0%) wrote of nature in general, of appreciating the fresh air and being outside. They wrote of "being out and enjoying nature", of the "freshness of the air" and "bathing in nature".

Other respondents (6.4%) liked the birds, wildlife, and insects, writing of "herons on the lake", "a beautiful day alive with bees" and "birds enjoying the water after cold, frosty week iced over".

Respondents (6.4%) also mentioned the weather, which can be considered a natural aspect of the outdoors. They mentioned the "winter sunshine", "the lowish sun on the garden and to hills opposite" and how it "wasn't too warm!".

Theme 4 - People 14.2%

This theme, mentioned by 14.2% of the sample, was one of contrasts. Almost one in 10 respondents (9.4%) mentioned the peace, tranquillity and quiet of the gardens during winter, with some attributing this to the absence or small numbers of other people, others to the lack of (human) noise pollution. One respondent, for example, wrote that there were "not many people, not so crowded", another that it was "away from the madding crowd".

Other respondents (5.6%) appreciated the presence of other people, especially the kindness and chattiness of other visitors, the garden owners and the National Garden Scheme volunteers. Some respondents described "friendly, welcoming people" and "people smiling at each other", others the "friendly stewards" and "warm welcome".



Acknowledgements

This research was made possible by the owners of the five gardens who kindly gave permission to the National Garden Scheme to distribute the surveys. We are also very thankful for the time and dedication of all our wonderful National Garden Scheme volunteers, who coordinated and handed out the surveys.

Thank you also to all the garden visitors who filled out our survey – we are so grateful for your help in increasing our understanding of the benefits of gardens. We hope this research may contribute to your continued enjoyment of gardens into the future.

What the respondents said about our survey:

"A great idea to consider mental health and wellbeing."

"It's a valid questionnaire, as environment is key to relaxation and mindfulness."

"Good idea. It would be a good idea to bring people from the care home here to enjoy the beautiful garden."



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