



Research Note

Forests as places of mental well-being for people with dementia

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This Research Note is based on a PhD research study 'Forests as places of mental well-being: the meaning and use of urban forests by people with early-stage dementia'. The study examines and develops ways for people with dementia (especially those in the early stages) to engage with nature, and with other people, in the context of trees, woodlands and forests. Initial results from the study found that a pilot programme of activities, led by Forestry Commission Scotland rangers in an urban woodland setting, provided an overwhelmingly positive experience for people with early-stage dementia, by offering meaningful experiences that contributed to well-being and feelings of self-worth. The woodland environment also provided a 'library' of resources and stimulation. The programme helped people with early-stage dementia remain active and connected within the community, enabling them to maintain their independence for as long as possible, and provided support for carers. Such programmes can be seen as a new and innovative way of engaging with people with early-stage dementia, which could complement traditional therapeutic interventions. As the Note stresses, an 'end of the road' approach to people with dementia is no longer acceptable. We need to explore more ways of providing care with an emphasis on empowerment and maintaining the best possible quality of life. It is hoped that this Note will provide a valuable resource, not only for people who manage woodlands and other green spaces, but also for health-care professionals.

Introduction

Evidence has emerged regarding the beneficial effects of being within green spaces, including trees, woodlands and forests, for people with a range of mental health conditions. However, the majority of these studies have focused on physical exercise in promoting mental well-being. The perceived role and significance of particular environments, their design and assisted or supported use, and people's interaction with them, have been less investigated.

There exists an assumption that nature can have a profound effect on people's health, well-being and quality of life (Bossen, 2010). In recent years, there has been a growing awareness that people with dementia should have the necessary environmental support and freedom to access the outdoors. However, even with wide-scale endorsement of this concept, relatively little is known about how persons with dementia respond to specific environmental features, and how planned activities and environmental conditions can encourage usage by – and/or benefit – people with dementia (Rodiek and Schwarz, 2007).

This Research Note is based on a PhD research study 'Forests as places of mental well-being: the meaning and use of urban forests by people with early-stage dementia'. This study meets a research need by moving away from assumptions about positive impacts of nature and green space by providing a more detailed and critical insight into the meaning and use of the specific setting of woodlands and forests and how these spaces can contribute to positive mental well-being (and broader community belonging). It also fills a research gap by focusing on people with early-stage dementia living at home.

After briefly describing evidence from a literature review and preliminary research/interviews, the Note discusses the initial results of a pilot programme of activities based in an urban woodland setting for people with early-stage dementia. This research engages with, and seeks to inform, forest management approaches that are key to achieving Forestry Commission Scotland's and the Scottish Government's agenda of improved mental well-being and social inclusion.

What is dementia?

Dementia is an umbrella term for a range of illnesses and disease symptoms affecting the brain. These affect memory, thinking, behaviour and the ability to perform everyday activities. Dementia progresses in stages that bring about many changes. It cannot be reversed, although medications can improve or maintain functioning in some people diagnosed with memory loss for a while. However, each person living with dementia is unique and the duration and symptoms of each stage can vary (Olsson *et al.*, 2013).

The aging process can be associated with stigma and negative stereotypes, so when an older adult is diagnosed with dementia, he or she is faced with the double stigma of being older and having memory problems. He or she may experience the loss of valued roles and identities as society enforces negative misunderstandings and expectations on persons living with dementia (Olsson *et al.*, 2013). Dementia can also affect younger people (usually between 30 and 65 years of age). Alzheimer's disease is the most common form in younger people. Although younger people experience similar symptoms to older people

Using clay and natural materials to create a green man on the tree trunks.



Learning how to craft a woodland whistle.



with dementia, the impact on their lives is significantly different. Younger people are more likely to still be working when they are diagnosed, their lives tend to be more active and they have hopes, dreams and ambitions to fulfil, up to and beyond their retirement (YoungDementia UK, see www.youngdementiauk.org).

'It's important for people with dementia to realise they're an ordinary person with an illness. They look out of the window and they see people with diabetes and arthritis and asthma and epilepsy, they're human beings with an illness and it doesn't stop them going out, so why should it stop you from going out? After people with dementia get a diagnosis, sometimes people treat you differently and they act towards you differently and so you can feel the stigma and you feel ashamed, but you've developed an illness for goodness sake, you've not caught some awful disease through misbehaviour, and the thing to do is make the best of it!' (person with dementia).

Changing views on dementia support

In 2012, the World Health Organization and Alzheimer's Disease International published the report *Dementia: a public health priority*. The purpose of this report was to raise awareness of dementia as a public health priority, to articulate a public health approach and to advocate for action at international and national levels. According to the report, the number of people living with dementia worldwide is currently estimated at 35.6 million. This number is expected to double by 2030 and

more than triple by 2050. For 2015, Alzheimer Scotland reports that there are approximately 90 000 people living with dementia in Scotland, with around 3200 of these people under the age of 65 (www.alzscot.org/campaigning/statistics), but this number is expected to rise to 164 000 by 2036 (www.wellscotland.info/priorities/dementia).

There is now great pressure to find solutions for people who have dementia and their families and carers. Traditionally, solutions were not sought after or expected; dementia was accepted as an 'end-of-life' stage during which only physical care could be provided. Today, however, this approach is no longer acceptable (Perrin and May, 2000). The NHS states that there are probably many years, and possibly decades, of work ahead before it can start talking realistically about the prospect of a cure (www.nhs.uk/conditions/dementia-guide/pages/dementia-cure.aspx). Service providers, therefore, need to push beyond the limitations inherent in the traditional medical approach to explore alternative ways of providing comprehensive dementia care, with an emphasis on empowerment, rights and the lived experiences of people with dementia. A continuous improvement in the standards of dementia care has now become a priority, with emphasis on slowing down the deterioration of the disease and maintaining the best possible quality of life.

Despite the losses that are associated with dementia, research on the subjective experience of dementia has demonstrated that older adults living with it continue to have many abilities and wish to stay engaged in the world (Genoe, 2010). There is much that can be done, right now, to enable the 90 000 people with dementia in Scotland to live healthy, active and enjoyable lives. Being able to access the outdoors and sharing outdoor activity in green space is something which can be seen to bring immediate benefits to people living with dementia.

About crossing the street: 'Have you ever been so frightened it's jumping out of your fingers – it's terror, absolute terror – but you still walk on, despite your body screaming at you "danger, danger, danger" because you want to, you need to get out and about and not stay in the house all the time' (person with dementia during a walk-along interview).

Policy drivers in Scotland

Dementia is a national priority for the Scottish Government. In June 2013, the Scottish Government published Scotland's second *National Dementia Strategy*, which builds upon the progress to date of the first dementia strategy published in 2010 and highlights continuing challenges. One of the main challenges is the need to offer care and support to people with

dementia and their families and carers in a way which promotes well-being and quality of life, protects their rights and respects their humanity. The overarching question is, what are the means by which people with dementia can live life to the fullest and have the space to experience and celebrate life regardless of dementia?

Scotland's National Dementia Strategy 2013–2016 is piloting the '8 Pillars Model of Community Support' (Kinnaird, 2012), developed by Alzheimer Scotland. The 8 Pillars Model is building on the resilience of people with dementia and their carers to enable them to live in the community for as long as possible. Supporting quality of life and independence and building the resilience of the whole family requires the combination of all eight pillars of community support, as shown in Figure 1.

In 2009, the Scottish Parliament's Cross-Party Group on Alzheimer's published its *Charter of rights for people with dementia and their carers in Scotland*. Following the work of Alzheimer Scotland and others over many years, it was widely recognised that

although people with dementia and their carers have the same human rights as everyone else, in addition to the impact of the illness they also face cultural, social and economic barriers to fulfilling these rights. This charter aims to empower people with dementia, those who support them and the community as a whole, to ensure their rights are recognised and respected.

Forestry Commission Scotland recognises the important role that trees, woods and forests can potentially play in the enhancement of the population's health and well-being and this has been a central theme in recent forestry policies and strategies. 'Improved health and well-being of people and their communities' is one of three outcomes set out in the *Scottish Forestry Strategy* (Scottish Executive, 2006), while 'Make access to woodlands easier for all sectors of society' and 'Use woodland access to help improve physical and mental health in Scotland' are two of the purposes listed under 'Access and health', one of the strategy's seven key themes. The *Woods for Health Strategy* (Forestry Commission Scotland, 2009) focuses on the potential health and well-being benefits offered by

Figure 1 The 8 Pillars Model of Community Support (adapted from Kinnaird, 2012).



The Forestry Commission Scotland 'Woods for Health Strategy', published in 2009.



Scotland's forests, which ties into the Scottish Government's National Outcome to secure longer, healthier lives for the people of Scotland. However, dementia has yet to be specifically addressed in forestry policies and strategies.

'Dementia isn't someone old, walking about in their pyjamas, not knowing anyone and not knowing their family members, there's a long bit before you get to that stage and some people never get to that stage, but it's at that [later] stage that people with dementia are portrayed' (person with dementia during a walk-along interview).

Evidence from the literature

The following research review questions were identified:

- What approaches have been used to engage people with dementia, their families and carers in use of green space and specifically trees, woodlands and forests?
- What have been the outcomes of these approaches?

In undertaking this review a number of methods associated with systematic reviewing were applied. The review located the literature search worldwide in order to produce a comprehensive analysis which puts into context the international literature on dementia and green space. Complex search strategies were developed and a set of inclusion and exclusion criteria were applied to the studies identified.

Examples of the case studies on trees, woodlands and forests found in the literature review can be found online at <http://scotland.forestry.gov.uk/supporting/strategy-policy-guidance/health-strategy>. The studies include a woodland day centre in Denmark and a number of projects in Scotland. Clark *et al.* (2013) was found to provide a valuable and detailed review of the benefits and barriers facing individuals living with dementia in accessing the natural environment and local green space.

Researchers who have focused specifically on dementia and use of green space, such as De Bruin *et al.* (2010), recognise that, traditionally, care for older people with dementia had a strong medical and care orientation, with the primary goal being the treatment of reversible impairments. De Bruin *et al.* refer to research by Droes (1997), which states that 'gradually a transition is taking place from functional thinking to the subjective experiences of people with dementia and the individual way they cope with the consequences of their illness'. 'As dementia cannot be cured yet, the emphasis is now on improving quality of life, with equal attention for care, living and welfare aspects' (De Bruin *et al.*, 2010).

Despite this emerging 'challenge of the social sciences to the medical model as the prevailing paradigm for understanding dementia' (Perrin and May, 2000), existing studies focusing on dementia, nature and the natural environment still tend to draw upon a biomedical model with a focus on the management of symptoms and behaviour.

Although a number of approaches to use of green space were discussed in the literature, the evidence base is as yet insufficient to address more detailed questions on whether different types of green space have different effects for people with dementia. Strong empirical evidence examining the potential of nature and the natural environment to enhance, specifically, the mental well-being of older people with dementia, is limited. The majority of existing studies focus on institutionalised people with (severe/end-stage) dementia, not community-dwelling older people.

There are only a limited number of studies focusing specifically on use of forests and people with dementia and these are not robust. In view of the limited and fragmented research currently available that examines the potential of nature and the natural environment to enhance the well-being of people with dementia, this study, which adds evidence from interviews and a pilot woodland activity programme, is of particular importance.

Evidence from preliminary research and interviews

Preliminary research was undertaken to inform the development and delivery of a pilot woodland activity programme for people with early-stage dementia (see the next section for more details on the pilot itself). The results of the preliminary research are grouped and listed below, and supporting quotations are given for some of the points made. A total of 30 people were interviewed, including rangers, artists and Alzheimer Scotland staff involved in the delivery of outdoor activity programmes and local dementia walking groups across Scotland. People with dementia and carers included participants of organised outdoor activity programmes and members of local dementia walking groups, as well as those who enjoyed participating in outdoor activities independently. Walk-along interviews (i.e. interviews conducted on the move) were used to capture and distil experiences in a woodland setting.

Barriers

- There is a tendency to overemphasise deficits associated with dementia, and carers and health professionals neglect to recognise and promote residual strengths and abilities (MacPherson *et al.*, 2009).
- It is important to provide interventions that promote 'normal' high level activities for people with dementia, which allow them to reach their full potential (MacPherson *et al.*, 2009).

Sourcing materials from the forest to make a woodland whistle.



- A risk-averse culture needs to be challenged to allow people with dementia to benefit from taking part in a woodland activity programme.

Health

- Woodland activities give people with dementia 'freedom' and a chance to explore their surroundings without restrictions.
- People with dementia are very capable of developing coping strategies to overcome issues, such as orientation: *'I get lost in familiar places, so I tend now to stick to the bus route [in Glasgow], so if I feel tired then I can jump on a bus and go home'* (person with dementia).
- Dementia is often accompanied by other physical health problems: *'We're all aging and we've all got other physical health problems and it's just we're getting old'* (person with dementia).

'I came with trepidation, but went away with a spring in my step' (person with early-stage dementia who participated in a woodland activity programme in the Borders).

Meaning and identity

- Woodland activities showed participants that they still had the capacity to do things despite dementia.
- Participants in woodland activities reported that they were treated as normal, rather than as 'people with dementia'.
- People with dementia had a wealth of knowledge and experience they could bring to a woodland activity and this needs to be built into the programme (e.g. sharing local knowledge and past experiences of the woodland).

Nature connectedness

- The woodland setting allowed people with dementia to reminisce about past experiences.

Social connectedness

- The benefits of social contact, social inclusion and discussion is an important theme. Participants of woodland activities enjoyed being with other people with dementia and their carers who were 'like them' and 'understood'.
- Peer support is an important theme.
- Friendships were formed during woodland activities.

Evidence from a pilot woodland activity programme

A pilot woodland activity programme for people with early-stage dementia was delivered by Forestry Commission Scotland rangers at Callendar Wood in Falkirk in the autumn of 2014. The woodland activities were based on the existing programmes currently being delivered through the Forestry Commission Scotland led 'Branching Out' project (see <http://scotland.forestry.gov.uk/supporting/strategy-policy-guidance/health-strategy/branching-out>, and Wilson *et al.*, 2010) and were adapted for people with early-stage dementia using the preliminary research findings (see above). Activities included woodland walks, bird box building, photography, willow weaving, bird and tree identification, fire lighting and woodland cooking. People with early-stage dementia attended unaccompanied, but were also welcome to bring along a family member, friend or carer with them to take part in the activities.

'Rangers need to understand that they're almost like custodians of this wonderful resource [the woodland] and they need to see that: "Do you know, we have all of this, we could offer this to somebody, we could make a real difference to somebody's life by including them in our world". What a wonderful thing to be able to do, just to be able to contribute what they know and make a real difference to somebody's life is massive' (Allied Health Professional (AHP) Dementia Consultant).

Initial findings from the pilot woodland activity programme

Methods used to collect data from the pilot woodland activity programme included observations during the activities, and formal interviews with participants (people with early-stage dementia and their carers) as well as facilitating staff (including rangers and health professionals), at the end of the 10-week programme. The findings from the pilot woodland activity programme correlated with many of the well-being categories and types (used below) identified in wider research on well-being benefits gained from trees, woods and forests and associated activities (O'Brien and Morris, 2014). Some of the comments made and points noted are listed below.

About other organised activity programmes: *'I'd rather do the woodland activities, with different people all speaking about different things. You didn't need to do what they were doing. You could stand at the back and listen. If you wanted to speak about something you could speak about it freely and nobody ties you to anything. Nobody tells you what to do or nothing'* (person with early-stage dementia involved in the pilot woodland activity programme).

Health

'From my point of view, when I've come to pick him up, it's one of the few occasions in the week that I hear him laughing, smiling and I can see him interacting. You might think he's fairly quiet, but from my point of view I see an improvement and that has been a huge plus and from his point of view it's been a massive plus because he's enjoyed it so much' (carer of a person with early-stage dementia involved in the pilot woodland activity programme).

- Enjoyment, fun and laughter: *'I enjoyed it thoroughly and missed it when I wasn't there' 'I would've liked to have been there all the time'* (person with dementia).
- Not feeling under pressure: *'There was no right or wrong' [making a dreamcatcher]* (person with dementia).
- Improvement in physical health: *'I didn't like the walking, but I got used to it! You all walked to my pace, I didn't walk to your pace. Once we got the pace, all walking the same pace, we were fine'* (person with dementia).
- Providing positive respite for carers: *'the experience for the carers is equally as important as for the people with dementia'* (ranger).

About willow weaving: *'She was not great at manipulating her hands, but she managed it and really loved it – seeing the process of cutting the willow, then making something, feeling the willow, working it, moving it through her fingers and then getting to take something from the woodland home with her'* (carer).

Meaning and identity

'One day we spent 15, 20 minutes trying to light a fire, but we never did get it going! I went to the newsagents afterwards and bought 4 cigarette lighters for him [the ranger] to help him light the fire next time!' (person with early-stage dementia involved in the pilot woodland activity programme).

- Being treated as equals: *'what I like about it is when the guy [ranger] steps up and then he cannae do it either [light the fire]. I've seen him going "I cannae do this!" That's what I like about it, because everybody's equal, I know we're not equal because you are advanced education wise and that, but when we all get together in the woodland we're all the same. That's what I like about it'* (person with dementia).
- Improvements in self-esteem: *'I didn't feel like the village idiot anymore'* (person with dementia).
- Increased confidence: *'I started walking back into town [after the woodland activity programme] because I felt more comfortable'* (person with dementia).
- Benefiting from learning new skills and trying different things: *'I was learning and that was a really good thing about it, I was learning'* (person with dementia).

- A sense of pride and achievement gained from completing activities and making things.
- Trying to get back something that had been lost due to dementia [lost identity]: *'I deliberately stood back, Mandy, in the hope that it will encourage him to become more of the social animal that he was' 'He loved his camera, but even that he's lost interest in. He used to love his photography, but less so now. I wish he would get back into it...'* (carer).

Social connectedness

- Meeting different people and interacting with the rangers: *'The interaction with the rangers has been really important. It's not been a case of them making judgements or anything. They haven't. They've gone in wholeheartedly and shown a lot of encouragement and not pre-judging'* (carer).
- Benefits to social skills and increased levels of socialisation: *'He was very much into everything and that encouraged the others to get involved'* (ranger).
- Group work on tasks and the relaxed atmosphere promoted team building and supportive behaviour among group members: *'everyone is in it together'* (person with dementia).

Building bird boxes to take home.



'I wouldnae think you could do anymore to make it any better. I liked it myself – you're in the camp and you've done what you've got to do [made a fire and boiled the Kelly kettle to make a cuppa], and you've been for a wee walk, and you come back and talk about things and when your time's up you go away. If I dunnae like a thing I wouldnae do it!' (person with early-stage dementia involved in the pilot woodland activity programme).

'At a shopping centre, or even going out to the cinema, or going for a meal, you are anonymous in the crowd, whereas when you're taking part in the woodland activity programme you've got an identity with others, you're not being ignored' (Forestry Commission Scotland ranger).

The importance of the woodland environment for people with dementia and their carers

Findings from the research show that the woodland environment provides for people with dementia and carers in the following ways.

Health

Physical well-being

- Improved spatial awareness: *'because she was much more relaxed and her focus was on the hills around her, she wasn't watching her feet, wasn't so conscious of where her feet were going and her confidence with her walking was really, really improved'. 'She could hardly negotiate stairs at home'* (health professional).
- Allowed people with dementia to be more able: *'people are actually more able when they're relaxed and if a woodland environment makes you feel more relaxed then it stands to reason that people will find that they are actually more able'* (health professional).

Mental restoration

- Peace, quiet and tranquillity: *'An escape from the noise that some people with dementia find so distracting and very difficult to filter out'* (carer).
- A relaxing atmosphere.

Escape and freedom

- A way of being in the moment: *'It's that moment when you think "wow" and you take a photo of that and try and capture the moment, because it's the moment that you're in isn't it, it's uplifting'* (health professional).
- Provides spaces and situations that don't make great demands on you: *'All I have to do is breathe in and out and put one foot in front of the other'* (person with dementia).
- A stimulating environment that also allows a person with dementia not to talk if they don't want to, or are unable to.

Enjoyment and fun

- Memorable experiences which were retained and recounted.

Nature connections

Sense of place

- A connection to past life experiences (reminiscence): *'I like being in the woodland because that comes with the fishing. When I went fishing I used to go away for walks, not too far, but I like to look at the shape of the trees "how have they gotten that shape?" I like it aye'* (person with dementia).

Sensory stimulation

- A meaningful, purposeful sensory experience: *'The power of the senses is a strong trigger for memories and being in the woodland is a complete sensory experience' 'Stopping and being able to touch things, I think that's really important. If everything in your dementia world is a bit uncertain and fluid, then to feel something that is really solid in your hand [a tree trunk] is really reassuring'* (health professional).

'For the last 10 months my mother was in a care home and during that time I sensed that, if you like, if you're an outdoors person, you start to suffer from sensory deprivation. They [care home staff] would argue that it wasn't, and it was only right at the end that I suddenly thought I've got CDs of birdsong, and I took them in [to the care home] and played them all the time that she was there and I really regret not doing it sooner' (carer during a walk-along interview).

Nature connectedness

- A strong connection to the changing seasons: *'reinforcing seasonal change, spring, the blossom in the trees, the buds coming out, birds collecting twigs for nesting, using nature's own sense of time passing, probably has a greater ability to call on somebody and help them with memory than reality orientation'* (health professional).

'There is pleasure in just walking in the woodland alone, but in company you develop connections with people and nature, you feel more confident and relaxed, conversations come easier, stumbling and searching for words because you feel under pressure seems to disappear...' (Alzheimer Scotland Dementia Link Worker).

Social development and connections

- A sense of togetherness: *'On our walks in the woodland, mum and I would feel very together and that as we walked together nothing had changed, that we were the same two people and time and experience hadn't really made a dent, and it was companionable. We're all so rushed these days'* (carer).
- A means to promote engagement and interaction: *'As we walked there was always something to discuss, the different plants, animals, birds...'* *'A way to reach somebody who appears to be locked in with dementia'* (carer).

'We use photographs sometimes to stimulate conversation, but photographs are two dimensional. If you are actually in the woodland you can feel that chill and you can feel that fine drizzle and you can feel that warm breeze and you can feel the sun. That stimulates memory, it stimulates reminiscence and it can create conversation and that's engagement and interaction. So I think woodlands have a huge resource, it's like a library of stimulation' (AHP Dementia Consultant).

Symbolic/cultural/spiritual significance

Religious and spiritual expression

- A visually appealing, calming and soothing environment, which meets the spiritual and emotional needs of people with dementia: *'I think a woodland is a huge source of spiritual input, that's where the spiritual environment lives with me, it's different to religion, it's something else'* (health professional).

Making a Native American dreamcatcher, decorated with special objects found in the woods.



Meaning and identity

- An environment that allows people with dementia to be themselves (sense of self).
- An opportunity to tap into a wealth of knowledge: *'Mum used to forage for things, she knew a lot of woodland plants and mushrooms you could eat'* *'When someone becomes older or develops dementia maybe other people put a wealth of knowledge to one side and they don't tap into it'* (carer).

Conclusions and recommendations

- The woodland activity programme for people with early-stage dementia has a direct connection to the Alzheimer Scotland 8 Pillars Model of Community Support through the pillars of therapeutic intervention, community connections and support for carers.
- Initial findings from the woodland activity programme illustrate the huge benefits that can be gained from taking part, both for people with dementia and their carers.
- The woodland activity programme can be seen as a complementary intervention, which will enhance the

services currently available for people with dementia, especially those in the early stages (where service provision is currently lacking).

- With the prevalence of dementia expected to continue to increase for many years, it is important to have alternative, more holistic services available, which are adapted for people with dementia of varying ages, with diverse interests, likes and dislikes and from many different backgrounds and geographical locations.
- The woodland activities being delivered by trained, knowledgeable and experienced rangers who were suitably resourced to run a successful and safe programme is an important factor.
- If a person with dementia wants to – and is able to – engage with tree, woodland and forest environments, it is important for them to have support from families, friends, green space and health-care staff to help them to do this, either individually or as part of an organised, supported group activity, such as a woodland activity programme.

Next steps

- To increase the evidence base by delivering and evaluating a further pilot woodland activity programme.
- To find funding to carry out a larger scale research and evaluation study to quantify the benefits of woodland activity programmes for people with dementia.
- To find funding to carry out an economic assessment of the benefits of the woodland activity programmes against more traditional therapeutic interventions.

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