

Research summary report

Can a woodland activity programme benefit participant wellbeing and change the way they use woods?

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Overview:

- The impact of a woodland activity programme 'Actif Woods Wales' on both wellbeing and woodland use was the focus of this study
- Mixed methods provided quantitative data on change and focus groups gave insight into how changes occurred
- Significant positive changes were found for mental wellbeing and all other physical and psychological measures of wellbeing at programme end
- Positive benefits had held at the follow up point, meeting a key research gap on longer term impacts and wider lifestyle changes of such programmes
- Programmes acted as an adult 'greenspace turning point' connecting or re-connecting those with little or no previous experience of woodlands with nature
- Findings clearly showed how programmes could break down barriers to access and provide lasting wellbeing benefits. Sustainable funding and support could embed their role for both therapeutic and preventative social care

Nature and wellbeing

The wellbeing benefits of engagement with the natural environment are supported by an extensive body of research connecting to physical and mental health (Hartig, 2014). Evidence that green and blue spaces can support better longevity, wellbeing and health particularly for disadvantaged populations has been described (WHO, 2016). Despite the known benefits of spending time in nature, not everyone gains access to this pathway to health and wellbeing. There is a stubborn pattern of certain groups being under-represented in visitor figures for natural landscapes (Glover, 2019). This is particularly the case for people from lower socio-economic groups, with a disability, from non-white ethnic groups or older age groups.

Nature-based initiatives (NBIs) can provide a solution, acting as a bridge for people who may not easily find their own way to the natural environment. An NBI can be defined as structured or guided activities with a direct aim of using nature to improve health and wellbeing. There is a recognised research gap in relation to longer term impacts and lifestyle changes over time. Additionally, less is known about how benefits are effected and who benefits most. This research investigated these questions using 'Actif Woods Wales' as a case study.

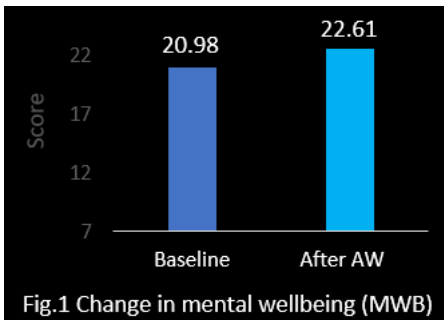
'Actif Woods Wales' (AW), a Coed Lleol' (Small Woods Wales) project have been running woodland activity programmes for adults for over 10 years. By partnering health and social care organisations with woodland project officers, the programme reaches people with a wide range of health conditions and support needs. Activities range from bushcraft and woodland walks to conservation, foraging, campfire cooking and outdoor mindfulness.



Methods

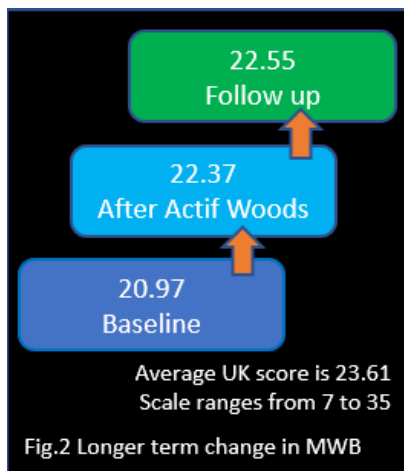
An interdisciplinary approach combined methodological and theoretical insights from the fields of health psychology and social geography. Questionnaires at baseline, end of course and a three month follow up measured mental wellbeing, self-reported health, physical activity, self-esteem, self-efficacy, social capital and factors affecting the frequency of use and use of woodlands. A parallel qualitative study enabled an in depth appreciation of processes of change with five end of course and four follow up focus groups.

Key findings: impact on wellbeing



End of course change

Mental wellbeing had increased by 2.21 points (mean score of 70 participants at these two time points). This was measured by the widely used Short Warwick and Edinburgh Mental Well-being Scale, (see fig.1, paired-samples t-test, $p = 0.001$). At individual level, a minimally important change is between 1 and 3 points. Additionally, end of course quantitative results demonstrated significant positive increase across all mediators of personal wellbeing (mental wellbeing, social trust, self-reported health, self-efficacy, self-esteem and physical activity). Data analysis showed that the impact was greatest for those reporting mental ill health and even more so for those reporting both mental and physical ill health.



Maintained change

The study showed that these gains had held at the three month follow up stage with no significant increases or decreases, providing critical evidence of maintained change. The mean scores of the 57 participants who took part at all 3 time points are shown in fig.2 (one-way repeated measure ANOVA test, $p = 0.004$).

Analysis of the quantitative data identified self-efficacy as a particularly important predictor of maintained change in mental wellbeing. The continued upward trajectory of the group mean for this construct meant that whilst it had been lower than the population norm at baseline, it actually exceeded it by follow up.

Understanding change

Qualitative methods help to understand change in more detail and pick up aspects that pre-determined questionnaires can miss. Using thematic analysis of transcripts, three main themes were identified, relating to personal change, social processes and the role of the natural environment.

Personal change: perspective shifts

Focus group data showed how wellbeing was affected by changes in perspective, such as more positive ways of self-appraising and increased confidence. These sentiments connected to a wider finding on how the



"I feel like I've got out of a rut as well...I feel like I'm not in my shell as much..." ('Wayne')

programme affected participants' perspectives on possibilities more broadly. For example, *"your bubble's got bigger instead of being smaller"* ('Janet'), a meaningful change for someone who had previously described herself as being socially isolated

and living with what she described as the 'stigma' of poor mental health. This shift was related to a combination of being in the woods, learning new skills and having new experiences and gives real insight into understanding how change occurred.

Personal change: lifestyle changes

Addressing the need for a better understanding of the sustainability of benefits gained, and whether longer term behaviour change is supported through fixed-term programmes, we learnt that this wider perspective gained over the course was indeed a catalyst to changing habits and positive behaviour change beyond the programme. This included for example, 'Dave', in recovery from substance misuse, who is now a regular conservation volunteer, 'Fiona', a young woman with multiple health issues, who gained the confidence to use a bus on her own and 'Derek', an older man with physical health issues, previously inactive, who now goes for a daily walk in his neighbouring greenspace. Thus, we can see how the programme leads to increased outdoor activity and social connectedness that extends well beyond the life of the course.

Social processes

The social processes inherent in the NBI experience, the *"being part of a team, doing stuff"* ('Angie'), were an important part of instigating positive changes in wellbeing. This was particularly the case for those with health and social care needs, where being in a group meant that they did not feel judged by their fellow group members.

"You don't have to perform for the trees"

One of the sub-themes from the qualitative data ('nature as balm') encapsulated the role that the natural environment played in supporting wellbeing change. The first quote in the box below shows how it supported emotion regulation, lifting spirits on a bad day, or providing a sense of peace or relaxation. The sensory experience was very central to the benefits described, for example providing a present moment experience which gave a break from anxious or ruminating thoughts. Taken together, this kind of experience was often described as providing a holiday feeling.

Much data related to what was unique about the woodland environment, for example deriving a sense of strength from the trees. Most notably for participants reporting mental ill health, the study showed that the programme worked particularly well for them because of several attributes of the woodland space. Key factors included being able to walk around to manage anxiety and shyness, or simply feeling more relaxed and comfortable there. A feeling that *"you can be yourself in the woods"* ('Angie') came through strongly as participants reported feeling that they could be themselves there, *"not judged by the trees"*.



Positive effect on mood:

"...it makes me feel better in myself and it clears the cobwebs" ('Janet')

Sensory experience:

"...its lovely to hear the bird song and the trees rustling" ('Jane')

Holiday feeling/escape:

"...it was just like, being away from things that go on in your head" ('Lou')

Drawings were used to gather attention and help participants encapsulate their experience. This drawing by 'Dave' shows how for him, benefits had proliferated at the three month follow up point:

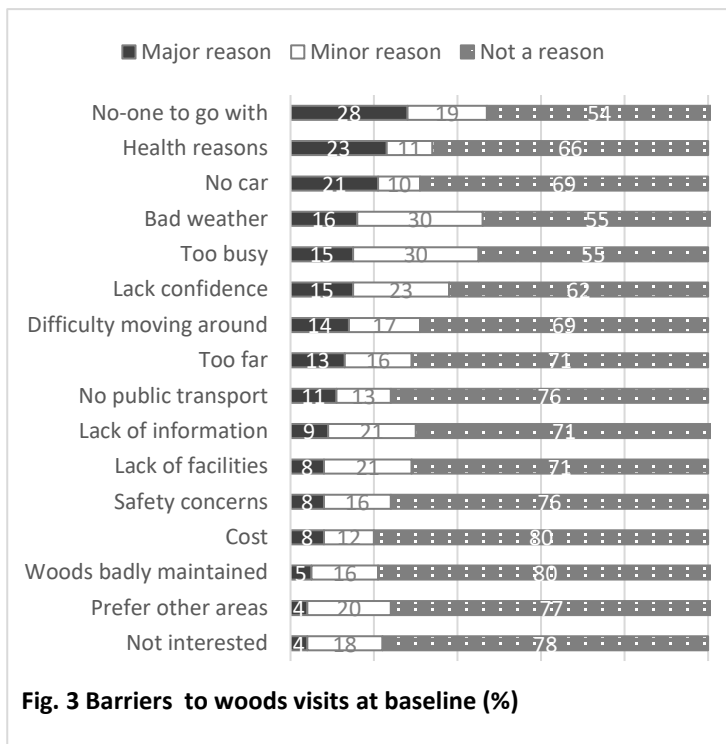
"Instead of my head being on fire, we're sat around a fire"

Key findings: impact on woodland use

How the programme impacted woodland use was a key part of the study. Findings showed that taking part had led to unsupported repeat visits to woods. The frequency of independent visits had increased at the end of course time point, and the indication at follow up was that this trend continued to rise.

“I don’t want to go just with me”

When asked about independent woodland visits at baseline, the most common major barrier (fig. 3) was not having anyone to go with. Post programme results showed that what constituted major barriers decreased and the number of barriers reported decreased significantly.



and the number of barriers reported decreased significantly. 17 per cent of the sample (n = 112) had never visited the woods prior to the course, and a further 30 per cent reported going only 1 – 4 times a year. This shows successful recruitment of people who stand to gain if their habits change.

With notable exceptions, it has been suggested that too much research focusses on those who already use nature regularly, and that until we address potential barriers to non-users, we are merely ‘tinkering around the edge’ rather than addressing fundamental challenges (Hitchings, 2013: 99).

The programme clearly addressed the ‘deep-seated psychological, emotional and socio-cultural nature’ (Morris et al., 2011:375) of

many of the barriers to woodland use. Together with the quantitative data, the qualitative results showed how this happened, including for those participants identified as ‘hard to reach’.

Putting woodlands ‘on your radar’



The focus group data also gave good insight into how taking part in a supported programme impacted woodland use beyond addressing barriers. Having a positive experience such as this in nature could act as a ‘greenspace turning or re-turning point’, giving confidence to new users and re-connecting those who had lost touch with the habit of visiting through mental or physical ill health or a lack of time.

“It’s opened my eyes to what’s out there”
(‘Wayne’)

This matters, as research shows that if children do not visit the natural environment when young, they are much less likely to in later years. For ‘Anna’ (quote below), and others who had not spent much time there previously, woodlands as a space for wellbeing really came on to their radar as a new possibility. As ‘Dave’ said, “It’s given me a lot more confidence in an environment that I wasn’t confident in before”. A young woman called ‘Fiona’ described how nature looked “nice” rather than “scary” to her following the course. This aligns with previous studies on non-users who have been said to lack the ‘very idea’ of spending time in nature, without which there is no starting point. As ‘Derek’ who newly takes a daily woodland walk since the course said, “...well I didn’t think it would be so enjoyable”.

“I think as the others have said, you know, just listening to bird song...just being in nature and also, you know, we all help each other...I don’t feel challenged by anybody here...everybody helps everyone else...and so...by the time you leave you feel quite good” (‘Anna’)

“Make more of it now”

A changed relationship with nature was reported in the focus groups which had led to more and different use of woodlands (like spending longer there or “making more of it”), partly due to “all the knowledge that we’ve gained from being here” (‘Marian’). A shift in the value attached to woodland was also reported, like in the quote on the right. They were described as a place to linger now rather than simply pass through, “It’s got a bit more meaningfulness in it, well for me anyway” (‘Dafydd’).

“...just being able to walk through the woods in a different way...rather than just seeing it as something that’s in the way...you know it can actually be a destination not just a place to get through...” (‘Dave’)

This included feeling more connected, not least due to the sensory engagement. On the ‘mindfulness in the woods’ course, outdoors as a place where it was easier to engage with practices was of unexpected benefit.

Conclusion

This study showed wellbeing increase and positive changes to woodland use aligning with longstanding theories about the benefits of time in nature. It is critical to evidence maintained change and this is one of the few studies to show that these benefits were sustained well beyond the intervention. Together, the quantitative and the qualitative studies show how such change occurred and augmented, meeting a gap in the literature that has been noted time and again.

The range of benefits identified link to a number of national policy goals for health and wellbeing, such as ‘A Healthier Wales’ (Welsh Government, 2018), promoting an increase in healthy behaviours for participants through enhanced physical activity and increased social contact to benefit mental wellbeing. From a policy perspective, projects like Actif Woods can contribute towards the achievement of this and other policies, not least the Well Being of Future Generations (Wales) Act 2015, ‘A More Equal Wales’, and ‘A Wales of Cohesive Communities’ as well as international policies like the United Nations goal for health and wellbeing.

Recommendations

Conservation organisations and land managers

- Geographical proximity to woodland is not enough. In order to increase the value of woodland to all sectors of society, provision needs to go beyond physically accessible sites.
- Many people had never had or had lost touch with the ‘very idea’ of spending time outdoors. For this to change a seed must be planted or re-planted regarding the benefits that woods can offer.
- There is a clear role for ‘Actif Woods Wales’ style provision here, i.e. working in partnership with health & social care projects to offer supported programmes where a sense of group can develop.
- Such provision is also an excellent and proven route to increasing access from groups who are persistently under-under-represented in countryside visit figures, particularly important given that access to nature can moderate socio-economic health inequalities (Wheeler *et al.*, 2015).
- Recognise the value of ‘being’ time as well as ‘doing’ time in nature for mental wellbeing when developing activity programmes or engagement events (e.g. mindfulness, forest bathing).
- The above can also be addressed through infrastructure, such as provision of space away from popular trails with basic seating and shelter so that activities can go ahead in all weathers.

In practice

- Providing structure and routine (e.g. through weekly provision) is important for breaking old, damaging habits (e.g. sedentary or insular lifestyles), and replacing with new, healthier habits.

- The opportunity to be picked up by provided transport is important in addressing barriers related to anxiety, depression and social isolation and therefore reaching those most in need.
- Bearing in mind that some very vulnerable people take part for whom leaving the house is a major step, where possible, include the promotion of independence as a flexible goal, e.g. setting up the site, lighting the fire, cooking.
- Build confidence for independent visits, for example by looking at maps/information on different sites, discussing how to get to other woodlands, encouraging people to lead short walks or sections of walks to build confidence or teaching map reading and route finding skills.
- Facilitated follow up sessions for when courses end have important therapeutic value and should be built into funding bids and planning. This reflective space for a former group can help maintain and crystallise positive change, cement social connections and intercept anyone who is struggling.

Research

- Ascertain the distance people travel to programmes to give an indication of how likely people are to re-visit the wood where programmes take place or visit somewhere nearer to where they live.
- Monitor longer term outcomes of similar projects.

Policy

- The role that nature-based health care can play in both improving health and wellbeing and widening access to nature is well established, but such provision lacks more embedded institutional backing and so those offering interventions struggle to secure stable and long-term funding.
- Recognising this, sustainable support is required to increase use. Central government funding through the health care system with well-developed social prescribing arrangements would enable long term community engagement that provides therapeutic and preventative care for people whilst also caring for the woodland environment.

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