

Nature's affordances: challenges and opportunities

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Keywords

Nature, Affordance, Design, Nature-based Solutions, Wellbeing

Introduction

Research into links between health and nature recognises that nature is a great source of primary prevention and health promotion for the general population and particular groups (Hampshire et al., 2021; Ward Thompson et al., 2014). Spending time in nature supports mental and physical health, is associated with a sense of gratitude and self-worth, and can help people recover from stress and mental illness. This kind of experience with nature also helps build a sense of place and community and foster feelings of belonging. This has been particularly apparent during the coronavirus (COVID-19) pandemic (Poortinga et al., 2021). COVID-19 triggered a surge in social innovation to address issues ranging from food poverty to social isolation, combined with a dramatic turn to nature as a source of solace, stress relief and relaxation. In urban environments, local green space became particularly significant in this regard (Ugolini et al., 2020), with access to green space understood as a major source of resilience during the pandemic (Geng et al., 2020). Simultaneously, greater discussion of climate change gave rise to growing understandings of the need to redefine human interactions with natural ecosystems.

Nature-based Health Services (NbHS)

There is growing interest in (re)connecting people with nature, either through developing green areas in people's nearby environment or encouraging and facilitating people to actively participate in nature-based activities (Van den Berg, 2017). These activities range from health promotion programmes and projects for the general population, like green gyms or community gardening, to more therapeutic interventions for individuals with a defined need, like care farms or horticultural therapy. These different tiers of interventions are

illustrated in Figure 1. Nature-based activities and programmes primarily aimed at achieving health benefits (shown as light green areas in Figure 1) are the focus of this chapter and are termed Nature-based Health Services (NbHS).¹

¹ The term often utilised for projects, activities and services of this nature is Nature-based Solutions. However, as this encompasses a plethora of forms while the chapter's focus is narrower (as per Figure 1), we are applying the term Nature-based Health Services.

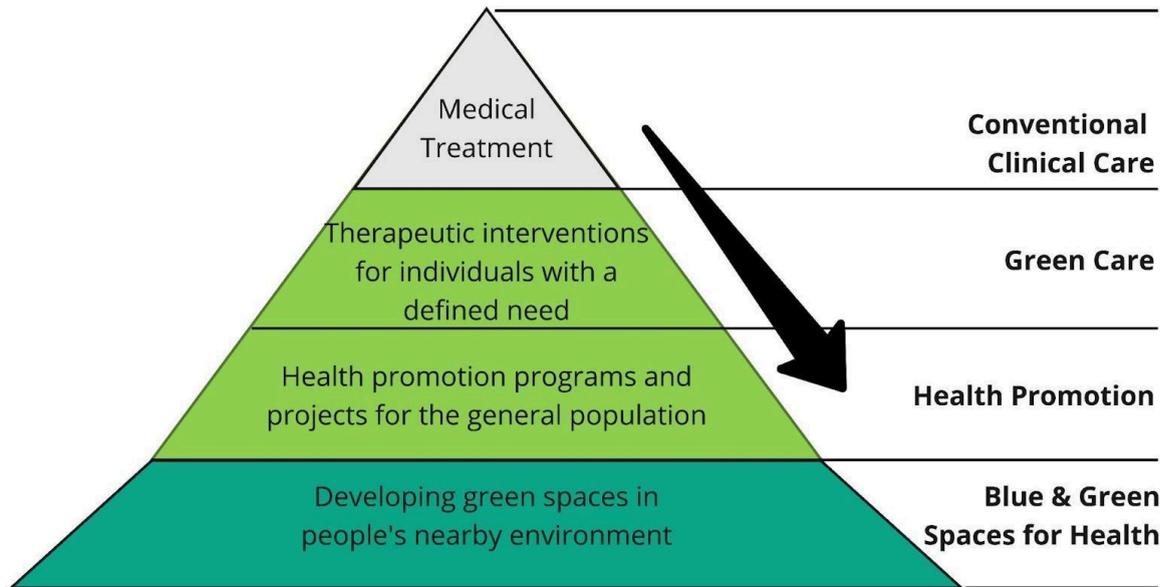


Figure 1: Tiers of nature-based healthcare interventions.

The public's growing interest in nature echoes the shift of focus in public health thinking and practice from treatment to prevention through a more integrated approach. NbHS are a cost-effective way to mitigate demand for medical interventions. One pathway is through Green Social Prescribing: non-medical ways of supporting wellbeing through programmes of activity involving nature. This thinking provides great promise to change the landscape of healthcare, and opportunities for stakeholders to participate in implementation. However, while nature can benefit wellbeing, opportunities need to be visible, comprehensible, possible and desirable to be fully realised. Developing and delivering these activities entails challenges and requires people to work together to negotiate the complex ecosystems involving existing green spaces and potential sites, funders, stakeholders, and legal and regulatory frameworks, as well local politics, custom and practice (McHale et al., 2020). Research into these relationships and realities is, therefore, vital to inform policy that works to address inequality and support wellbeing.

This chapter investigates the perceived affordances for NbHS to identify opportunities offered by nature for wellbeing, as well as any challenges present. 'Affordances' is used here

to describe the action possibilities for people who play important roles in realising the health and wellbeing benefits of nature.

Affordances

'Affordances' as a term was first introduced to conceptualise people's relational experience with external space (Gibson, 1979). Now it is often understood as the function(s) or possible action(s) that objects offer through interactions with users (Ditzler et al., 2018; Harwood & Hafezieh, 2017). This relationship emerges from the object's properties and the user's characteristics (Norman, 2013), and results in a range of possible interactions (Eastwood et al., 2022). Norman (2013) sees that affordances can be invisible, and that 'signifiers' or signals help people discover how to access affordances and, thus, reveal possible actions. Norman distinguishes actual from perceived affordances; a range of actions might be possible but those perceived (directly or from past experience) may be more likely to occur. This interacts with the user's desires, intentions and capabilities to determine how they may ultimately decide to act. However, if no affordance exists there can be no possibility for action. Similarly, if accessing an affordance is extremely challenging, it could be considered functionally non-existent – the ease with which different affordances can be actioned will determine how the actor is likely to act. Therefore, only when (1) the affordance exists, and (2) there is information available such that the actor perceives the affordance, and (3) can potentially act upon, and wants to act upon, the affordance, does the affordance become realised. At this time, the actor may be willing and able to act on this opportunity.

In the context of Nature-based Health Services (NbHS), when the awareness of nature-based activities as options for health and wellbeing is absent, or when the barriers to act upon these opportunities (e.g. accessing necessary funding, bureaucratic processes) are considered too immense to overcome, the opportunity will not be considered actionable.

Investigating the affordances of local NbHS, this chapter aims to understand whether nature-based activities for health and wellbeing are considered perceptible and desirable

action opportunities by stakeholder groups who play an important part in developing, delivering, supporting or participating in local NbHS. The chapter focuses on the three stakeholder groups: the local council, local third sector,² and local communities, particularly those operating within Walsall, England. Their early experience and perceptions of NbHS are important to help us to understand the affordances of nature-based activities as options for health and wellbeing. Green Social Prescribing, as a specialised path to NbHS, is also discussed to investigate how Green Social Prescribing is perceived by the UK's National Health Service (NHS) and social care organisations, such as those providing mental health support, and how the system of Green Social Prescribing functions.

Through analysing the affordances of NbHS, the chapter aims to reveal opportunities for crisis response and recovery both in the context of COVID-19 and beyond. The following questions are investigated in relation to NbHS delivered to communities in Walsall, in order to understand their affordances:

- The extent to which stakeholder groups are aware of NbHS, consider it relevant and valuable for achieving their desired aims, and engage with it accordingly.
- The extent to which the stakeholder groups perceive the challenges and barriers to fully engaging with NbHS, and work to overcome them.

This chapter reports on findings from Nature's Way: Co-Creating Methods for Innovating Nature-based Solutions for Public Health and Green Recovery in a Post-COVID World project, funded by the AHRC (Art and Humanities Research Council), UK.

Walsall as an example

² The third sector consists of charities, social enterprises, community groups, voluntary organisations, faith groups, equality groups, co-operatives, community interest companies and housing associations.

This paper takes Walsall, a medium-sized urban area in the West Midlands, England, experiencing high levels of deprivation and health inequality, as a case study. Walsall is ethnically and culturally diverse, with around a quarter of its population from minority ethnic communities (Walsall Council, 2022b). Walsall is one of the most deprived 10 per cent of local authority areas in England,³ and overall health is poor (Walsall Council, 2022a). From this, learnings can be taken to local authority areas, and neighbourhoods within those areas, wherein deprivation is present. These insights hold significant potential for transferability; 61% of local authority areas in England, for example, contain one neighbourhood in the most deprived decile (Ministry of Housing, Communities & Local Government, 2019). In these deprived areas, health is getting worse and health inequalities are increasing, particularly since the 2008 financial crisis and subsequent austerity measures (Marmot et al., 2020).

Walsall was one of the locations hit hardest by the coronavirus (COVID-19) pandemic in the UK (Office for National Statistics, 2021a). Even before COVID-19, about 28 per cent of Walsall's population had experienced mental health problems, and isolation during the pandemic is thought to have exacerbated existing problems (Poortinga et al., 2021).

Research has shown that the health benefits of access to green space are disproportionately greater in income-deprived populations (Mitchell and Popham, 2008), including ethnically diverse populations (Roe et al., 2016). Walsall, therefore, stands to benefit by having wellbeing needs addressed through nature-based activities that can contribute to recovery after crisis and ongoing resilience. Walsall Council considers that promoting health through nature is a strategic priority (Active Black Country, 2017; Baggott, 2018). However, little research has been conducted to understand how the top-level strategy work translates into perceivable, accessible and desirable action opportunities at the community level.

³ England is divided into 316 local authority areas, excluding the Isles of Scilly, most of which are led by a local council comprised of elected councillors and tasked with providing and managing the public services within their authority area (National Statistics, 2021b)

Research methods

The project used a design-led research method to understand the affordance of Nature-based Health Services (NbHS) and reveal challenges and opportunities to implement NbHS at a local level. The project took Walsall as a case study, particularly considering the impact of the coronavirus (COVID-19) pandemic.

Design-led research is a form of participatory action research. It is an open-ended, collaborative and transdisciplinary approach for new, creative and actionable solutions for complex challenges. It allows the researchers to incorporate their creative practice into the research design and as a part of the research outputs. Developing NbHS is a complex challenge that requires collaboration between different disciplines and stakeholders in the system; we used design-led research to achieve this. We hoped to use design-led research to generate transformative knowledge, facilitate multidisciplinary and multi-stakeholder collaboration, and foster an innovation culture and practice from the bottom up.

The project started with mapping the NbHS system in Walsall to establish the local context and knowledge base, through reviewing literature and policy documents, observing how NbHS projects in Walsall were developed and delivered, and interviewing key stakeholders to understand their perspectives. This was followed with in-depth understanding of the lived experience of individuals representing key stakeholders of NbHS in Walsall, including community organisations that provide NbHS (allotments, community gardens, public green spaces). Some of the stories were developed into short documentaries and played back to the community through a screening event. Workshops were delivered to validate the learnings and to disseminate the findings to the community. Visual tools, such as user journey maps, stakeholder maps, and storyboards, were used to facilitate the discussion and summarise the learning from the project.

The project generated a wealth of data in different formats including interview transcripts, video clips, reflective journals, notes, and visual materials. As the project was action-based, we used weekly team meetings to reflect our learnings and workshops to share and validate these learnings. The process helped to generate a good understanding of the local context, lived experience, perceived challenges, and opportunities for small-scale nature-based projects, depicting the affordances of nature-based projects for these stakeholders; this revealed the possibilities, effectiveness and scales of NbHS.

During the 18-month project, we worked with 130 people from 55 organisations ranging across third sector organisations, social housing providers, Walsall Council, volunteers, local residents, academics, policy-makers and funders.

As the project was delivered during the COVID-19 pandemic, most interviews and interactive workshops were conducted digitally, but observation was conducted in person during site visits. The wider adoption of digital tools (e.g., Zoom, Miro) during the pandemic made the project scheduling more flexible. This combination of remote research activities and intensive in-person engagement proved important for understanding the situation, developing trust, and ensuring genuine collaboration.

Challenges to realising the affordances of nature

Local council

Walsall Council, like local councils across the UK, is the primary owner of land in their local authority area. Publicly accessible land in Walsall is overseen by its Healthy Spaces team, which is responsible for the maintenance of parks and other public spaces. Third sector organisations generally lease the land to run Nature-based Health Services (NbHS). Walsall is recognised as being particularly green, having 112 public parks and playgrounds, thirty-four allotments and community gardens and many natural and semi-natural green spaces, as well as a green corridor (Baggott, 2018).

Walsall Together is a partnership of local council, NHS, social housing, voluntary and community organisations. The establishment of Walsall Together demonstrates the council's intention to collaborate with the NHS and others to take collective responsibility for managing resources, delivering NHS standards, improving physical and mental health, promoting wellbeing and reducing inequalities across the local authority area (NHS England, 2022). In particular, green spaces are considered valuable local assets to support community health (Baggott, 2018). The council also considers its local authority area to have a wealth of strong community assets, which include (but are not limited to) an active third sector, plenty of green spaces, and a strong sense of local identity that celebrates the diverse backgrounds of residents (Walsall Council, 2022b).

However, we identified a range of challenges that potentially hinder the delivery of these visions and strategies. Firstly, inequality in local blue and green spaces for health appears to be a significant challenge, particularly as these spaces are foundational in delivering NbHS. The coronavirus (COVID-19) pandemic exaggerated inequalities and made unequal access to green space visible. Although Walsall is a very green town, many of the green spaces are of poor quality and have limited access. Green space, especially good quality space, is not equally shared amongst the population (Figure 2 and 3). People from minority ethnic groups, for example, tend to have less local green space and of a poorer quality. Considering the average combined size of parks, public gardens, or playing fields against population density, Walsall is ranked 237 amongst 373 local authority areas across England, Wales and Scotland. This indicates a very high population pressure on green space in Walsall, normally associated with high deprivation levels (New Economics Foundation, 2020).



Figure 2: The Butts Community Garden (2021), Walsall. This Nature-based Health Service was founded during the pandemic on a piece of scrap land that was a thoroughfare and hotspot for fly tipping.



Figure 3: Borneo Street Allotments (2021) is located a short distance from The Butts Community Garden but has been in existence for a century, and has, at times, received significant investment and support.

Revenue budget reductions have limited the council's ability to drive forward some of their plans and respond to the needs of NbHS. These reductions have significantly impacted Walsall's green space provision, losing £1m between 2013 and 2018, along with a quarter of management and development staff (Baggott, 2018). As such, the service has, as of mid-2022, not been able to deliver the objectives set out in Walsall Council's own green space strategy (Baggott, 2018). In sum, reduced investment in green space services limits the council's ability to deliver actionable opportunities for communities to benefit from nature, both in post-COVID recovery and going forward. For example, cuts to funding, maintenance and management, compounded by the pandemic (increased visitors and anti-social behaviour), left many spaces in disrepair.

Third sector

Third sector organisations are instrumental in delivering Nature-based Health Services (NbHS) in Walsall. It is estimated that, as of 2019, there were 1,591 such organisations operating in Walsall, including informal, unofficial groups (One Walsall, 2019). Of these, an estimated 31 per cent base their primary service and activity around health and wellbeing (One Walsall, 2019), making this the lead reported service.

Although the benefits of nature for wellbeing are well documented in academic research and promoted from top down, awareness of this approach (i.e. health through nature) amongst local organisations varies. Those already involved in delivering nature-based activities in Walsall, such as community gardens, demonstrated significant awareness of, and advocacy for, nature's wellbeing benefits. Their NbHS were understood by users as a sanctuary and lifeline, particularly since the onset of COVID-19. A great deal of focus was placed on activities - both physical and creative - as a means to support wellbeing, while others focused more on creating attractive, calming spaces for independent and ad hoc attendance,

and a couple of sites had a more direct mental health focus (such as through regular wellbeing support groups, or running the project with volunteers consisting of individuals with learning disabilities and diagnosed mental health conditions). As one service provider told us: 'we've created a real unique community here ... our lads can come here and be themselves, relax, talk to themselves without feeling self-conscious because we've created this atmosphere. And it's bringing people together through gardening – that's my little catchphrase, and that's what it's about'.

Other third sector organisations primarily operating without a nature-related focus do not necessarily see nature as an important means to achieve their goals, for example those working in health and community development (One Walsall, 2019). However, while the level of awareness is inconsistent, a large proportion of third sector organisations contribute to the delivery of NbHS, including those focusing on health and wellbeing (31 per cent), environment and conservation (13 per cent), social and community care (9 per cent) (One Walsall, 2019). Many more, for example, those operating in communities (22 per cent) and education (24 per cent) (One Walsall, 2019), have the potential to reconsider and expand their offerings to include NbHS. Prior to the involvement with this research, for example, one project partner provided social care and health and wellbeing services to local communities, but has since developed nature-based activities, including an urban garden and food growing project.

The way local councils operate has profound influence over their relationship with NbHS providers. Third sector organisations tend to have more positive experiences when councils are open and collaborative, both internally between departments and externally. A complex system of permissions and processes is present in Walsall. In the context of NbHS, the challenge is revealed particularly in the process of accessing land through Community Asset

Transfers⁴, leasing procedures, and accessing other resources and support from the council. Significant knowledge and persistence is required to navigate through these complex systems. It is often challenging to know who to contact; NbHS providers may also not be able to make contact with anyone or find themselves passed around departments. One interviewee stated, 'it's really important the care systems themselves hear what the barriers to communities are. I think an important relationship is between communities and their local care systems, and potentially through their local authorities who can help with those connections'.

Our interviews with service providers revealed that further difficulties are experienced in terms of conflicting priorities, biases, and knowledge levels between council officers and the third sector. A lack of transparency and consistent communication (internal and external) were described as real barriers. Budget cuts also have a significant impact on the level of support the council provides. As such, a challenging relationship with the local council was reported by some third sector organisations, though to different degrees. In some exceptional cases, the relationship has been consistently positive, largely attributed to the proactive and committed Healthy Spaces team at Walsall Council and the leaders of the particular NbHS providers, demonstrating the unequal ways local council support can occur. These relationships take time and energy to cultivate; newcomers without such connections may face significant barriers.

All third sector interviewees reported a significant focus on financial concerns in relation to their projects and/or organisations, and often these issues were a source of anxiety. They regularly had to be creative and show significant initiative to bring in the funding required for expansion or just to sustain themselves, such as through arts grants, crowdfunding

⁴ Community Asset Transfer involves the transfer of responsibility for assets from councils to the third sector. This is either a transfer of management responsibility, short- or long-term lease, or outright ownership.

campaigns, membership schemes and small business ventures. In general, third sector organisations obtained funding from multiple sources, with grants often being awarded for particular projects or elements of the overall operation. Our observation aligns with One Walsall's report (2019), which suggests that the third sector's income in Walsall is derived from several sources; the largest over the preceding year being grants (32 per cent), charging for services (24 per cent) and contracts and commissioned services (10 per cent). National Lottery funding schemes play a significant role, and notably, were involved with all the organisations we spoke to, often as their primary source of financial support.

However, it appeared more common to receive funds for infrastructure than for staffing, meaning that many projects continued to be run in a voluntary capacity, which constrains their potential and resilience. The hidden costs of delivering NbHS are rarely acknowledged and frequently ineligible for funding; this includes maintenance of green space and hosting volunteers. Additionally, investment in indoor spaces for activities is not guaranteed, even though it makes projects accessible year-round and offers more opportunities to more people (Figure 4). Expansion - and therefore impact - of NbHS projects can be limited by practicalities, such as access to toilets, water and electricity.



Figure 4: The Seed Hut was built as part of One Palfrey Big Local. It comprises a number of rooms for activities, the project coordinator's office, a kitchen and toilets (2021).

Many local third sector organisations face challenges in receiving consistent numbers of volunteers.⁵ During the pandemic, organisations observed that some volunteers, particularly older people (a key demographic), expressed unwillingness to resume their roles due to COVID-related health concerns. However, they felt the increased interest in nature seen during the pandemic held the potential to draw in new volunteers as the country began opening up throughout 2021. It is imperative that projects sustain themselves through regular and sufficient volunteer engagement, and younger participants are an important part of securing continuity. Volunteer-led projects may also be limited, not by lack of expertise or commitment, but due to volunteers' need to balance participation with other obligations. During the pandemic, many such obligations were temporarily removed for

⁵ One Walsall is an infrastructure organisation which supports third sector organisations across Walsall. Formal and informal support networks be invaluable, even when other fundamental necessities (e.g. financial and human resources) are less secure.

some, potentially leaving more capacity for volunteering. However, a complex situation was described by interviewees regarding closure of community gardens during lockdowns, limited opening hours and activities outside lockdown periods, restricted numbers due to social distancing rules, and COVID-related health concerns. This all occurred during a time of increased demand for support, as noted by one interviewee: 'Charities have less capacity and, at the same time, many are experiencing increased demand [during COVID-19] ... significantly increased in some cases: 200-400% increases in calls'.

In most cases, these organisations rely on a handful individuals to operate in a voluntary capacity. Walsall-based NbHS projects often pivot around these individuals, who are central to the project's success through their personality, determination, specialist knowledge and lateral thinking. As well as being part of the workforce, they often provide the leadership required for projects to bid for funding through constituting formally as committee members. Those new to the roles may experience a steep learning curve and may be put off quickly by the demand. Greater support and investment in these community leaders is important in sustaining and scaling local NbHS.

Significant barriers exist for many third sector organisations to scale up so their offerings can benefit more people in need. Most such organisations are small, and some are informal and not officially registered. While this can be effective, for many, it can mean competing for resources while duplicating other organisations' efforts and failing to operate efficiently. Collaboration is an important means for ensuring different experience, skills and knowledge necessary for delivering NbHS are present. However, connections and collaborations amongst the local third sector resemble a loose patchwork, either between different NbHS providers, or between NbHS providers and other organisations. These connections tend to be informal and unevenly distributed; some people have solid connections they can mobilise to benefit their projects but it can be difficult for those without such contacts.

On the whole, these organisations make great efforts to engage local residents using a variety of methods, including site signage (in shown in Figure 5 as an example), social media and physical marketing materials (e.g., flyers). These are important factors to consider for organisations wanting to draw in new visitors and participants, even though they may not be seen as core elements of the service. The methods taken to engage the communities where NbHS are located are key, and can work to either compound exclusion or support inclusion. A reliance on digital communication, for example, may compound patterns of digital exclusion experienced by certain groups, such as the elderly. Additionally, this is reportedly time consuming and not always effective, so careful thought must be given to ensure the best use of the organisation's often stretched resources.



Figure 5: Welcome sign and information board at the entrance to Winterley Lane Allotments (2021).

Public events are another important means to engage the local community, whether these be regular events throughout the year, such as open days or larger one-off events, like

community festivals. These can be valuable opportunities for bringing new audiences onto green spaces and making them feel more comfortable in accessing these spaces in future.

The third sector benefits from being led by locally-based individuals with significant knowledge of the communities they serve. This close connection and intimate knowledge enables the project facilitators to productively engage community members, and to develop their activities in line with local interests, something which enhances impact. However, operating in this way requires greater investment into staff time, knowledge and training, which not all organisations can afford.

Communities

Reportedly, a significant proportion of Walsall residents do not understand what mental wellbeing is or how they can improve their own wellbeing (Walsall Council, 2022b). It is now a key priority for Walsall Council to ensure all residents are aware of opportunities available to them to improve and maintain positive wellbeing; it appears Nature-based Health Services (NbHS) are one type of opportunity that has not reached the wider public. However, in line with wider trends (Poortinga et al., 2021), greater interest and awareness of the wellbeing benefits of nature is noted in Walsall as a result of COVID-19, as evidenced, for example, through growing allotment waiting lists. Additionally, over the course of the pandemic, Walsall has seen an increase in engagement with green spaces, recorded by Walsall Council's Healthy Spaces team through people counters at prominent sites, as well as anecdotally. In fact, there was such an increase in some areas that the Healthy Spaces team attempted to redirect visitors away to smaller, local green spaces. Increased interest is also inspiring innovation, as one interviewee noted: 'I think COVID has taught many people that nature has some solutions. I think there is a greater realisation of that, so we are seeing more projects coming forward, which are about simply trying to connect people from all walks of life, all ages, all races, to nature'.

Inclusion is a great challenge for many NbHS, and is a significant consideration in Walsall given its rich cultural diversity. It is often the case that disadvantaged population groups, who have been disproportionately impacted by COVID-19 and remain more likely to experience deprivation, are less likely to experience the wellbeing benefits of nature. Our research highlighted the need to tailor services to the cultural groups targeted; not understanding the needs of that group prevents the production of something meaningful. Additionally, even when third sector organisations are deeply embedded in their community, there can be tensions based on religious or cultural preferences. This is especially challenging for those NbHS providers who have less connection to local residents, or only began operating just before or during the pandemic.

Accessibility for those with physical disabilities is also a common concern for NbHS providers. In particular, a number of organisations received funding to improve accessibility for wheelchair users. However, some participants from the Deaf community reported specific concerns around accessibility and safety, generally choosing to access green spaces with family or groups. This reiterates the need for ongoing consultation with those with a range of access needs. General accessibility can be significantly influenced by practical elements, for example, fences and opening hours. In Walsall, noticeable access differences were observed between green spaces: some are permanently open, others have scheduled opening hours, and some are enclosed by security fences, leading to inconsistencies in levels of accessibility.

Differences in perceptions add to this complexity. For example, some allotment sites have encountered resistance and lack of interest in community-focused approaches from long-standing tenants. Tenants expressed concerns about possible anti-social behaviour and for community activities to interfere with their personal enjoyment. Such reluctance holds the potential to keep the benefits within small sections of the community and prevent new groups from becoming inspired by, and comfortable in, green spaces. However, this seems

to be changing, as exemplified by an allotment manager who invested significant effort in engaging those expressing scepticism. Their efforts led to greater acceptance and wider engagement with members of the local community.

As previously noted, although Walsall is particularly green, many sites are of poor quality. Site cleanliness and the immediate local environment were given as reasons why some local residents chose to access nature further afield or not at all. It can be challenging for NbHS providers to improve site quality and maintain high levels of cleanliness to achieve interest and engagement from local residents, particularly if the site is subject to anti-social behaviour. Increases in anti-social behaviour during the pandemic, such as fly-tipping and public intoxication, were reported during our research both by local council workers and service providers. It was suggested that this may have resulted from the closure of social spaces along with disruption to council-led provisions. Anti-social behaviour in some areas leads to fewer people accessing them, and those who do may not be as engaged with nature as they could be. However, conversely, it was also reported that increased numbers and engagement in green spaces can reduce such behaviour, as it may be more likely when spaces are empty. Anti-social behaviour plays a significant role in people's perceptions of whether green space/nature is safe, and therefore, whether they will visit these spaces. Other constraints, such as lack of time or travel options, were identified as relating to reduced engagement in NbHS. This is largely consistent with national statistics from March 2022, where 'too busy at home' (20 per cent) and 'too busy at work / with family commitments' (16 per cent) were some of the main reasons for not engaging in outdoor activities given by a sample of 2,000 adults living in England (Natural England, 2022).

Health and social care organisations through Green Social Prescribing

Green Social Prescribing is a specific pathway to Nature-based Health Services (NbHS) developed by the NHS to achieve the political interest in nature as a non-clinical intervention for wellbeing. In July 2020, NHS England announced £5.5 million investment for a

cross-government project aimed at tackling mental health issues through Green Social Prescribing (UK Government, 2020). Public Health England, in the report 'Improving Access to Greenspace: A new review for 2020', clearly states that local green (and blue) spaces are critical assets and Green Social Prescribing is an effective approach to enable people to start using these spaces and to continue to use them. The establishment of link worker roles was integral to this strategic vision in the UK. The role is primarily in signposting and referring individuals towards Nature-based Health Services directly (e.g. through provision of resources) and indirectly (e.g. through advocacy).

Walsall's Green Social Prescribing operates through multiple referral routes: primary care, social housing providers, and the council's Healthy Spaces team which is further divided into four geographical hubs. Each of Walsall's referral routes has its own methods and networks, which can increase reach, but adds complexity and possible siloed ways of working and duplication.

A large number of link workers were recruited during COVID-19 (NHS, 2020). While this is encouraging, care must be taken in recruitment because disconnection between referrers and service providers can emerge if link workers lack understanding of the community they serve. The NHS only funds the link worker role, without integrating it into the support system as a whole, which can exacerbate disconnection. Currently, social prescribing directs patients away from the NHS towards local NbHS providers without giving those providers sufficient funding. The increased demand and escalation of needs under COVID-19 compounds the challenges for these organisations to meet varied needs and ensure inclusive and equal access - something likely to be further accentuated should Green Social Prescribing be intensified as part of post-pandemic recovery policy without necessary investment. One interviewee framed it thus: 'One of the reasons why social prescribing – I think particularly for nature-based areas – isn't taking off [is] because there's no money in

social prescribing for us. If a person doesn't come with their own personal funding pot, or we've got funding from a third party, we can't offer places to people under social prescribing'.

Third sector organisations in this research generally reported minimal engagement in formal social prescribing mechanisms, though there was an awareness of this process and some interest in involvement. Of note was one NbHS organisation's negative experience of participation in Green Social Prescribing. Initially offered a financial incentive for participation, the organisation was sent no referrals. The following year, continued participation was offered only if the project leader travelled off-site to provide nature-based activities elsewhere. As a result, the organisation withdrew their participation. This highlights the importance of a more mutual collaboration based on sufficient understanding of how NbHS operate, and effective communication and coordination between people involved in referral processes.

Opportunities for action

The majority of challenges we have identified already existed before the onset of the coronavirus (COVID-19) pandemic. Underfunding for green spaces and the third sector, for example, has been a chronic problem in England for at least the last decade. However, our study found that, as well as exacerbating existing issues, the pandemic placed additional pressure on already stretched systems in several ways, such as an increasing need for Nature-based Health Services (NbHS) attributable to the pressures people experienced through the pandemic, reduced volunteer capacity, and increased wear and tear on green spaces.

Walsall Council plays a significant role in supporting the delivery of NbHS to local communities and is fully committed, as evidenced in various self-published documents. However, it is constrained by a range of barriers including lack of high quality and equally distributed nature-based assets (e.g. parks and lakes), and lack of funding and resources. There is, however, a strong third sector fully embedded in the culturally rich communities

located in this local authority area. Their commitment, passion, and rich local knowledge constitute an important, while often-ignored, local asset. Opportunities lie in a much closer collaboration between the council and this sector. Improved communication, more streamlined and transparent processes, and greater willingness to invest in the valuable service these organisations and groups provide, will improve the relationship with, and increase the trust from, the sector, potentially leading to greater and more equal opportunities for accessing NbHS. In particular, opening up opportunities for access to unused green spaces allows interested and capable community groups and individuals to develop NbHS. Additional opportunities lie in the councils promoting NbHS to the general public to enable wider take-up.

Walsall-based third sector organisations are varied in foci and operation, an awareness and understanding of nature as an effective means to wellbeing is not equally shared. There is a great opportunity to raise awareness so more organisations join this approach, and more NbHS can be developed to cater to the diverse needs of local communities. Those delivering NbHS experience challenges in capacity, funding and scaling, as do many other local third sector organisations. Our research findings demonstrate that collaboration provides one avenue toward much-needed growth to tackle these challenges effectively, reducing fragmentation, duplication and inefficiency – something of particular concern in this period of post-pandemic recovery, with stretched resources and increased demand for services. Stronger sector leadership is important in facilitating this kind of collaboration. Further, to tackle the challenge of inclusiveness, cultural differences and individual needs need to be fully considered. Rather than using a standardised approach, place-based thinking is highly relevant here to refocus on people and their local context, putting their expertise, experience, passion, and interests in the centre in investing, developing and delivering NbHS. More hyper-local, specialised and tailored NbHS should be developed to offer more diverse options, thereby expanding NbHS's user base to include more vulnerable and ethnic minority

communities. Our research, therefore, suggests this mode of service delivery as a potential method of enhancing crisis recovery and ongoing community resilience.

The general public have experienced a greater connection to nature and greater awareness of its wellbeing benefits over the pandemic, as shown in 'The People and Nature Survey' by Natural England (UK Government, 2021) which looked at how people's perception of nature changed during the pandemic. Associated awareness of inequality in access has also surfaced. Our research has revealed that a range of issues contributes to the uptake of NbHS; some are practical (e.g. access, green space quality), and some are social (e.g. safety, inclusion), and emotional (e.g. relevance, motivation). The uptake of NbHS is tightly intertwined with the operations of third sector organisations and their engagement strategies. Decisions made by both local councils and third sector organisations directly affect whether NbHS provide a real opportunity for individual wellbeing.

Green Social Prescribing is one pathway for people to access NbHS. In addition to the challenges and opportunities outlined earlier, it faces extra challenges as well as greater opportunities. It is challenging for the existing system to respond to the need for better governance beyond individual organisations, better funding pathways and better infrastructure. Existing health infrastructure is a complex of entrenched practices patched with new concepts. Within this, new pathways, which optimise the potential of nature for health, are harder to generate, especially when communication and coordination between stakeholders is lacking. Adding to this complexity, delivery requires collaboration beyond the health sector to include the natural environment and social infrastructure, the absence of which can be a major drawback for delivery. There needs to be a co-operative mechanism that works across all the organisations involved. A holistic approach to understand the complexity of local systems is required, in contrast to a narrow sectoral focus. Greater buy-in is needed from health professionals. The link worker role needs to be fully embedded in local networks and local knowledge to be fully functional, something which requires an investment

of time, training and individual commitment. Overall, a more integrated system is a prerequisite for Green Social Prescribing to be rolled out successfully on a wider scale. Our research highlights this critical situation; future research would benefit from investigating and proposing the exact working mechanisms of such a system.

Our research demonstrates that the biggest challenge for the overall affordance of NbHS for all is that NbHS operate in complicated ecosystems of overlapping jurisdictions, multiple sectors, uncertain funding and competing interests, which are challenging to navigate. As such, we recognise the importance of a genuinely bottom-up place-based approach that considers the totality of local assets, including the realities of the physical locality and local lived experience. The richness of local knowledge held by grassroots organisations is usually under-valued, and could be used more effectively to connect people with their local natural environments. This is a pressing concern given the huge potential for nature to benefit wellbeing, particularly if equal access is ensured, something that became undeniable during the pandemic. Bottom-up and bespoke approaches toward NbHS, combined with investment from local and national authorities, and significant within- and cross-sector collaboration, can support the wider need to address health inequalities and improve wellbeing, particularly in times of crisis.

COVID-19 has had a disproportionate impact on more disadvantaged population groups and has widened health inequalities (World Health Organization, 2021). NbHS can help address such inequalities, by tackling mental health difficulties in more vulnerable groups, for example, as well as supporting wellbeing in the wider population. Local service providers understand the places and communities they serve and, therefore, have the potential to develop and fine tune the outreach and services required by vulnerable groups. It is high time to give them the recognition and resourcing they need to fulfil this vitally important role. There can be no truly effective upscaling and mainstreaming of NbHS until these conditions are met.

Summary

Our research has highlighted that if the potential affordances of urban nature are to be actualised, the following four conditions must be met:

- The value of Nature-based Health Services and the key role of the third sector in their delivery must be recognised in policy and in the knowledge and expertise of stakeholder organisations responsible for commissioning and delivery;
- Nature-based Health Services must be adequately resourced, with funding pathways tailored to the specific needs of the third sector;
- The provision of the high quality accessible urban green infrastructure, which is the foundation for Nature-based Health Services, must be secured.
- Improved mechanisms for stakeholder collaboration are required, to enable effective collaboration and ensure equity in access to resources, knowledge and expertise.

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