

Critically evaluate the impact of outdoor recreation upon the health and wellbeing of a specific demographic group in your local area and make recommendations for the removal of barriers to participation

Introduction

There are several specific and broader obstacles to green social prescribing from a range of inter-disciplinary, multi-agency providers. I will analyse some of the pertinent problems I have discovered inherent in my research and experience and attempt to provide some potential solutions to the issues found. There are a variety of social characteristics, mainly accessibility, to address and resolve before any measurable success can be evidenced from the use of Green Prescription (GRx). In addition, for a GRx to contain any weighty value, success and evidence of health and social care benefits from a GRx must be recognised by both policy advisors and healthcare professionals, which fulfils governmental and capitalist measures. To this end, I will highlight some key points of Nature Capital, that in conjunction with Governmental and multi-agency collaboration, may act as a possible solution to accessibility issues and promote sustainability of the GRX, which is imperative in the present COVID19 effects of social isolation.

I will analyse and evaluate whether Green Social Prescribing can be a sustainable practice of our health and social service or whether it will be reserved for NBO's and community provision. For this purpose, I will be focusing on a local CIC project, Appletree Community Garden, in Agbrigg, Wakefield, which provides green space for nature-based green social prescriptions. I will explain the need for the Garden and its space by explicitly looking at the county's sociological characteristics regarding poverty, the health demographic in the greater area, and the immediate environment surrounding the community garden. I will highlight the barriers I observed from visiting the Garden from a specifically disabled ambulatory, white female viewpoint. I will provide some health care policies regarding health and wellbeing and green space in the county.

Green spaces, health and wellbeing and Green Prescriptions

Over the last twenty years, headway has been made into researching the effect of the environment and nature on health and wellbeing. The Biophilia Hypothesis by Wilson (1984) stated that an inherent bond connects all forms of life, and time in nature benefits human health. In addition, 'this complex bi-eco-psycho-social network, whereby all realms of life, seen and unseen are interconnected (Prescott, S & Logan, A. 2017) presupposes that humans improve in nature. This viewpoint is supported by research by Ulrich (1984), which focuses on reduced recovery times in hospital beds with a view of nature, and the Attention Restoration Theory by Kaplan and Kaplan (1989, 1995), which posits that the natural environment promotes the use of involuntary attention, providing an opportunity for recovery from mental fatigue.

In recent years the field has been expanding fast, and nature-based activities are gaining momentum due to their cost-effective, low-risk, simplified and enjoyable characteristics. Findings connect green spaces with enhanced wellbeing and decreased stress levels.

Following on from these critical writings in the 1980s on human wellbeing and health and the experiences that they produce has prompted and created a swathe of RCT's and experiments into outdoor adventures, attempting to measure its effect on human health. There have been various

reviews that have consistently identified positive benefits associated with parks and green spaces. These benefits range from lower levels of obesity, cardiovascular disease, reduced prevalence of type II Diabetes to alleviating comorbidities such as depression and anxiety. (See Gorov, E et al., 2016; Fong, K et al., 2018; James, P et al., 2015; Global Action Plan, WHO. 2018; Gilbert, 2016. Hunter, R et., 2015; Roberts, H et al., 2016).

The Green Prescriptions Programme (GRx), a health care initiative in New Zealand, was developed and launched in the 1990s following studies (See, for example - Pringle, R. 1998; Prochaska, J and Marcus, B. 1994; Booth et al., 1997; Lawlor et al., 1999; Gauvin, L & Brawley, L. 1993) that 'demonstrated that the Green Prescription is an efficacious intervention in relation to increasing physical activity (Patel et al., 2011. Pp.2). It is based on national guidelines of achieving 30 minutes of exercise per week, though prescribed by a GP as a holistic multi-agency approach countered to normative pharmaceutical practices of medication. In a GRx, a nurse would prescribe physical activity 'primarily for low-active and sedentary individuals who have a stable medical condition' (*ibid*). A Green Prescription lasts for a minimum of 3 months, with reviews carried out at intervals either in person or on the phone in counselling format.

The evidence of positive results from the GRx programme (See Anderson et al., 2017; Hamlin et al., 2016; Garratt et al., 2011; Elley et al., 2003) has led to the creation of multiple Green Prescription programmes (and other outdoor exercises) across the western world; in America National ParkRx Initiative. ParkRx America), Canada (PaRx: A Prescription for Nature) and the UK - Green Social Prescribing. Within these countries, nature-based organisations (NBO's) provide green (or blue) space for green exercise to benefit mental and physical health. 'It is acknowledged that the foundations of Green Prescribing require the interactions of three main phenomena - the natural environment, a social context and meaning activities' (Bragg, R and Leck, C. 2017; O'Brien et al., 2010).

People's positive interactions in the outdoors are subjective multi-sensory experiences that are self-legitimised; this can be a critical factor in analysing the success of a programme for a system that relies on tangible results for funding and longevity. Complex challenges and barriers to the GRx system persist as the field is still being legitimised. These issues are summed up precisely by Agnes Van Der Berg, who states in her paper *From Green Space to Green Prescriptions* (2017) 'if Green space is a medicine, then what are the active ingredients?', and with any illness, it is vital to understand the symptoms.

Wakefield Demographics

In January 2020, Wakefield was ranked as 54th most deprived county out of the 317 in England, ranking it in the top 10%, '54,200 people in the district are living in neighbourhoods amongst the top 10% most deprived in England – this is 15.7% of the district's population (IMD, 2019). The Community Garden resides in one of these districts, named the South Ward in Agbrigg. Levels of crime in 2020 were 115 crimes per 1000 people, with Wakefield being in the top 20 dangerous towns to reside nationally, and Agbrigg being the 4th most dangerous place for crimes to occur in Wakefield (<https://crimerate.co.uk/west-yorkshire/wakefield>). Skills and economic deprivation lead to many issues, drug abuse, anti-social behaviour and theft, mental health disorders and disability.

There are many different reasons for crime and unemployment increase, especially after the impact of COVID19 policy; According to Public Health England, Wakefield South Ward is in the top 25% worst percentile of long-term disability unemployment (<https://www.localhealth.org.uk>). Those who

had support have been severely impacted by lack of government funding and, consequently, outreach by the local programmes.

However, Due to essay limitations, I will solely look at those vulnerable and isolated due to such key characteristics as associated with health care - employment deprivation; education, skills and training deprivation; barriers to housing and services; crime; income deprivation.

Whilst "a higher proportion of green space in an area is associated with better health, the association depends on the degree of urbanity and level of income deprivation" (Mitchell, J and Popham, F. 2007). Quantity and quality are questionable despite many estates having green spaces. These tend to be spaces that are underutilised, inaccessible and aesthetically poor. Green spaces in areas of deprivation are, from personal experience, poorly maintained and abused; 'No Ball Games' is a common sight around council estates on grass. Play areas are small and overpopulated by many families with no shelter. Poor quality spaces add to issues of poor health; "The health benefits of poor-quality green space are not sufficient to negate the health problems of the resident population" (Mitchell, J and Popham, F. 2007). From this hypothesis, it is reasonable enough to assume that the links between ill health and poverty deprivation run high. as they do in this specific area and case.

Last year's ukactive National Summit introduced the concept of physical activity as 'society's golden thread' – an invaluable tool in the fight against troubling national challenges; from an ageing society to community integration, combatting childhood obesity to facilitating reductions in crime and anti-social behaviour (Sagoe, G. 2018). In the Wakefield Health and Wellbeing Plan (3yr Plan - 2018) set out in alignment with the 10yr NHS Plan and Green Paper on social care, the priorities were as follows

- Sustainable Communities
- Healthy standard of living
- Preventing ill health
- Giving every child the best start

The board is committed to integrating health, social care, and voluntary sector services concerning building sustainable communities. Furthermore, the project involves communities and integrates social enterprises 'across all areas of [their] work and at all levels of decision making and delivery' (www.wypartnership.co.uk), which is crucial to the role of Appletree Community Garden.

In addition, the Wakefield District Local Plan 2036 (technical document) sets out strategic detailed development of green, blue and open spaces, respectively, to allow best use by habitants. However, although this plan does not allude to community health and wellbeing issues, it recognises that overall green spaces are crucial to communities' physical and mental wellbeing (*Ibid.* Pp.1; Rolls, S. 2016). Especially to "lower socio-economic groups and (BAME) Black and Asian Minority Ethnic Groups [who] ascribe a much higher value to parks and green spaces than the national average" (Fields in Trust, 2018).

Appletree Community Garden

Formally an underutilised and partially disused micro-allotment site, Appletree Community Garden was set up in 2015 to monitor and develop the community whilst creating new green areas. As a part of Wakefield City's 'Health and Wellbeing board', the 'overall mission for Appletree allotment and community garden is improving health and wellbeing for people in Wakefield' (Wakefield Council,

2017). It offers a space for everyone to come together. Its activities are garden-based; in addition to creating a place of rewilding and permaculture, the gardening process produces food for the community; there is a kitchen where meals are cooked and provided for free. It is run and staffed by Spectrum CiC, a not-for-profit social enterprise, on behalf of the NHS and funded by the local council. The project has identified five essential SDG (Sustainable Development Goal; UN) challenges and aims -;

Greenspace, habitats and biodiversity (SDG 15)

- Green space creation and/or management

Social justice, cohesion and equity (SDG 10)

- Environmental education
- Social justice and equity
- Social cohesion
- Social interaction

Health and wellbeing (SDG 3)

- Enabling physical activity
- Improving physical health
- Creation of opportunities for relaxation and recreation

Cultural heritage and cultural diversity (SDG 11)

- Promotion of cultural diversity

Sustainable consumption and production (SDG 12)

- Sustainable production

As there are no recorded impact reports yet, which could be the impact of COVID19. I will speculate to the extent I feel the Garden addresses these challenges:

The Garden is extended and open, with raised and ground-level garden beds. It has marked out areas where specific activities occur:

- An outdoor kitchen
- A polytunnel for seeding
- A run for chickens and ducks
- The development of a children's area

Most of these areas are created with volunteers and key worker support. The Garden is open three days a week, ideally timed in school day hours and provides a meal. The space addresses creating and maintaining a green space to provide environmental education to various groups. These groups range from nursery children to local school groups for outdoor education purposes and is a community hub for local unemployed individuals. Vulnerable groups and individuals identified as needing assistance by various social care organisations, such as those with special educational needs, refugee and immigrant groups, rehabilitated offenders are scheduled to use the Garden.

My initial thoughts on the space limitations are as follows;

Initial accessibility

While the entry was easy to drive down, access to the Garden was initially challenging to find and is not marked on a map; however, it is near a bus stop. The entrance did not have a flat pathway, only a loose gravel road, a potential issue for those in wheelchairs or with visual impairments. The fact that it is not easily recognisable as a community garden/hub means that people do not know where it is or what it does. There has to be further marketing and advertisement in the immediate area.

Diversity of Workforce

The workforce consisted of 4 white abled bodied men. There is no female (or other gendered) perspective. I encountered support workers from organisations mentioned above, and at least 95% were white, male and from the UK with English as their only language; This shows an incredible lack of awareness in a highly deprived community populated by BAME and those for whom English is a second or third language. In addition, abled-bodies individuals tend to be unaware of accessibility issues understandably. I feel that gender, ethnicity, and disability diversification are critical in employee representation, especially in understanding how to relate to and support their clients. Generally, incorporating diversity is imperative in the planning and delivering any client and community-led education programme.

Amenities

One cramped cabin fits four workers, a multi-purpose desk, and office supplies. The areas that can host people are the polytunnel, the outdoor kitchen and a disused firepit area; none suited to winter weather and lacking comfort for those vulnerable and sensitive. Pathways are maintained; however not wide enough for full wheelchair use. A compost toilet has recently been built, but the ramp leading up to it had no lip to stop a wheelchair from rolling off; the door opened outwards, compacting this issue. I mentioned this concern to the staff alongside ones I had regarding handrails, needing a raised toilet seat, and emergency cord. These amenity access issues are essential to ensure that clients and volunteers are engaged and lead to increased attendance; for many, the safety of "other" needs to be higher than the security of home.

Sound pollution

The Garden is off a busy road, next to an active railroad track, and backs onto a school playground. Trees are necessary to create a sound barrier between these areas; however, they are severely lacking and instead, a steel fence surrounds the Garden. There is not much of an outdoor atmosphere for restoration. An empty grassy area at the end of the Garden provides free space - which is so close to the train tracks that it excludes an opportunity for restorative activities such as meditation, yoga and similar holistic exercises.

Lack of structured programming

A loose programme of activities may be suitable for workers with knowledgeable guidelines and timeline expectations, but not for new clients and volunteers who may expect a more structured approach for progression benefits. If an organisation has a continuous provision, there will be a scheduled plan of activities for the clients' attendance; otherwise, planning is made on an ad-hoc basis. Teaching and practicum will happen all around the Garden.

Despite these immediate accessibility issues, there remain numerous benefits to the Community Garden, including social engagement, increased new skills, and confidence, vital to success in a GRx

programme. Few people I spoke to expressed that it was something "different in their schedule" and enjoyed the outdoor time in the Garden. However, I feel it would be imperative for Spectrum CiC to review client's initial experiences rather than throughout or at the end of the programme due to the barriers I have identified above. as there are. I believe that this would assist with client's initial worries and the handling of introductions to a new experience, as some can find change more difficult than others.

Discussion

Many key factors affect the success of Green Prescribing, and engagement is a factor that is repeatedly recognised as being a challenge. Before engagement can occur, other steps in the GRx process can prevent success.

A GRx programme requires a multi-agency approach of health care and social care agencies working together to assess the needs of vulnerable, isolated and at-risk individuals. All sectors must understand the process and its benefits to legitimise the viability and longevity of the GRx program. However, despite "the potential benefits from service provision, third sector (community/voluntary/social enterprise sector) support to address the wider determinants of health in primary care often remains underused due to weak or non-existent links between the two sectors" (South et al. 2008).

A decade later, these concerns persist; issues of accessibility to services, matching clients with activity, inter-agency collaboration and communication and consistent terminology. Regarding the legitimacy of outdoor programmes, there are concerns regarding evidence of programme benefits, replicability, potentiality, and innovative tools for monitoring and evaluation purposes (Bloomfield, 2017; South et al., 2008; Van Der Berg, 2017). Furthermore, "researchers have....expressed concerns over taking the 'dose of nature' approach, in that it may be too reductionistic for the complex social settings in which it is provided"(Robinson, J and Breed, M. 2019). Local nature-based interventions alongside health care and social support referrals carefully applied can reduce health disparities through "their influence on proximate factors that are related to disparities in health and wellbeing" (Schulz, A and Norbridge, M. 2004. This indicates that local services are best placed for assessing and evaluating their NBO's immediate impacts on social disparities if they work together for mutual benefit.

Accessibility challenges occur in two forms during this process: the initial engagement of clients and patients from various backgrounds and the physical accessibility of the site or green space. Here I'll be focusing on the former.

Low levels of green prescriptions have been attributed to the complexity and challenges evident in the GRx process (Heiren et al., 2004). Engagement in the process relies heavily on the collaboration of health care professionals with Prescribing Coordinators and NBO's; GP's prescribe activity in nature or a similar social prescription; coordinators then match and refer the client to a service provider. This process requires essential and valuable communication, planning and education to progress. It "requires a coordinator who is able to speak (at least) two different 'languages'. The language of healthcare and practice: and the language of nature and environmental engagement" (Bloomfield, 2017). "GPs and other primary health professionals have been targeted as key actors who can support such integration by writing more 'Green Prescriptions'" (Hine et al., 2008; Patel et al., 2011; Nisbet and Hem, 2015 in Van der Berg, 2017). For this to occur, there is a need for an explanatory framework that specifies the main pathways and mechanisms of these interventions,

explicitly explaining how interacting with nature and green space may produce health benefits and prevent illness (Van der Berg, 2017). Swinburn et al., (1998) Green Prescription Study discovered that there was "overwhelming support for the inclusion of physical activity advice" when recommended by a GP during a consultation, distinguishing the unique position of GPs in the GRx process (Brandling, J and House, W. 2009; Kimberlee, R. 2013). GPs in the past have responded that engaging patients could be difficult because it is a new way of working and patients do not understand the process, which further highlights the need for clear collaboration for multiple key workers in the process (Friedli et al., 2012). Without the intervention of GP and other healthcare professionals, "the [GRx] delivery process can be disrupted, and negative outcomes can occur" (Moore et al., 2014; Durlak, J, 2008).

Also, to negate engagement issues from those that would benefit from GRx, "there is a growing recognition of.....links between.....environmental concerns and sociological issues such as ecological injustice...this has called for integrative approaches that aim to address these issues" (Robinson J and Breed, M. 2019). Government paper, 'State of the Environment: Health, People and the Environment' recognises that good, permanent access is needed, and as long as social inequalities are not addressed, then it will exacerbate current issues of chronic conditions, comorbidities and morbidity, valued at over £450 million per year (Rolls, S. 2016). Regulators, policymakers and individuals face the challenge of ensuring clients access good quality, rigorously tested, and well utilised GRx systems by ensuring broader social inequities are addressed in the short and long term.

There are challenges regarding limited empirical studies that scrutinise the functionality and sustainability of GRx schemes in practice (Bloomfield, D. 2017). Whilst there has been consistent epidemiological evidence of health benefits associated with exposure to green spaces (Gorov et al., 2016; Fong et al., 2018; James et al., 2018; Gilbert, N. 2016; Hunter et al., 2015; Roberts et al., 2016), there are still questions regarding the efficacy of green space. The lack of evidence and published studies highlights the need for rigorous and high-quality studies that evaluate factors that influence the implementation and delivery of green social prescribing services (Pescney et al., 2018). The lack of evidence and published studies highlights the need for rigorous and high-quality studies to evaluate the factors influencing green social prescribing services (*ibid*). "Randomised controlled trials are considered as the most reliable method, the 'gold standard of determining the effectiveness of interventions (Campbell et al., 2000). However, outdoor activities are considered highly flexible in type and timescale, providing a wide range of benefits to people with very different outcomes and results (O'Brien et al., 2010). The categories of variables are not exhaustive thus, emphasising the need for an explicit and legitimate structure for assessing good quality outcomes of the benefits of GRx programmes. Without this, there is a real risk that inequity in providing good quality greenspaces will be exacerbated in areas with high levels of BAME communities and lower socio-economic groups (Fields in Trust, 2018) due to lack of government foresight and trust in the benefits of the outdoors. DEFRA (Project Code BE0109, 2019) discovered that existing activities are often disjointed, short-term and opportunities to learn valuable lessons are missed, recommending "improving evidence-based and evaluative activities".

One way in which this can be achieved is through controlled studies developed with local policy and environmental planners, alongside public health strategies (Hunter et al., 2019; La Puma, J. 2019; Husk et al., 2019) to ascertain value in economic, health and social terms.

Reconomics Plus (2017), produced by Manchester University, reviewed academic literature and set out the unique value of outdoor recreation on mental and physical wellbeing. Economics Plus considers the wider benefits of outdoor recreation to include the economic value and all five of the

key outcomes of HM Government's *Sporting Future* strategy. Nature capital accounting helps to measure the benefits people and wildlife receive from natural 'assets' such as parks and green spaces; Greater Manchester's "Urban Pioneer" is a project that will see £9 Billion avoided health costs over the next 60yrs.

Nature Capital approaches are becoming an increasingly popular way to increase quality of life for populations worldwide (*See Oppla.eu*) alongside local government policies, NBO's, National Government guidelines and planning, Mental Health associations and environmental conservation organisations, i.e., Defra, EcoMinds, NHS Forest.

Conclusion

The Governments State of the Environment Paper was published during the COVID19 epidemic, during which residents were encouraged to exercise for one hour per day in their local vicinity. A study following this found a "significant increase in the likelihood of people reporting good health or high wellbeing" (White et al., 2019) (2016). The benefits of being outdoors have been made obvious, and it is clear that NBO's hold significant value in improving the health and wellbeing of their clients, patients and residents. However, I believe that there still needs to be improvements made with the connections between health care referrals. As someone who receives care through the NHS on a regular basis, I was unaware of at least six different NBO's on my doorstep that I could visit, attend or be referred to. Due to COVID19, the use of in-person appointments at GP surgeries is restricted, and therefore, referrals and assessments are limited, and the process for any treatment is lengthy and prolonged. This does not seem to be changing any time soon and is a huge barrier to effective nature-based healthcare.

I have introduced the concept of Green Prescriptions, their origins in healthcare and relevant studies and provided some insight into green social prescribing. I have evaluated and analysed Appletree's strengths and weaknesses and followed this with specific challenges to be found in the GRx system, followed by some recommendations for these issues to be improved. With the current pandemic climate, I do believe that there is an inherent need for NBO's to improve quality of life, as is being established with recent government plans for the future. However, it will take a while until we know what format they will take and how they are to be assessed for any benefit to be recognised in official terms.

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