

Editorial

Green care in psychiatry

Sharon Cuthbert, Alan Kellas and Lisa A. Page

**Summary**

Engagement with natural environments is associated with improved health and well-being in the general population. This has implications for mental healthcare. Implementation of targeted nature-based interventions (green care) meets recovery needs and would enable research to develop, clarifying what works best for whom.

Keywords

Psychosocial interventions; sustainability; cost-effectiveness; nature-based care; green care.

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Sharon Cuthbert (pictured) is a consultant psychiatrist at Sussex Partnership Foundation Trust, UK, and an RCPsych Sustainability Scholar 2019–2020. **Alan Kellas** is a consultant psychiatrist at Avon and Wiltshire Mental Health Partnership NHS Trust, UK, and Nature Matters representative on the RCPsych Sustainability Committee. **Lisa Page** is co-chair of the RCPsych Sustainability Committee, a clinical senior lecturer at Brighton and Sussex Medical School, and an honorary consultant liaison psychiatrist at Sussex Partnership NHS Foundation Trust, UK.

The COVID-19 crisis, which has forced limitations on daily human activity, has demonstrated the vital part nature plays in daily life. Exposure to the natural world, whether through landscaped areas, wilderness or contact with animals, boosts mood and increases physical activity, and we consider here how evidence of these advantages relates to mental healthcare. Delight in newly observed ‘rewilding’ of urban and suburban spaces has also been a reminder of a natural world under threat. Placing nature-based care at the heart of services can form part of a transition towards sustainable ways of working.

Why is being in nature effective?

Spending a total of 2 h or more in natural environments per week is associated with better health and well-being. Theoretical mechanisms include the concept of attention restoration, whereby immersion in, and ‘soft fascination’ with, the complex stimulus of the natural world reduces attention fatigue. Ulrich’s stress recovery model, drawing on pschoevolutionary concepts and early research showing that a view of a natural setting improves recovery from surgery, posits more rapid physiological recovery from stress in natural environments and is supported by evidence of reduced cortisol levels (additional references are in the supplementary appendix, available at <https://doi.org/10.1192/bjp.2020.166>). A recent functional magnetic resonance imaging study demonstrated that natural soundscapes capture attention, reduce distraction and increase parasympathetic activity.¹

As organisms, we respond powerfully to the environment around us. Increased physical activity, inherent in accessing outdoor spaces, directly enhances mood and reduces anxiety. Although outdoor hazards include accidents, allergy and zoonotic exposure, benefits of exposure to green space are seen across the lifespan, including increased well-being, improved social capital, better pregnancy outcomes and reduction in mortality, particularly respiratory and cardiovascular.² This potential for positive impact on physical health has implications for psychiatrists seeking to address the mortality gap for those with severe and enduring

mental illness, and the theoretical plausibility of advantages of increasing outdoor activity has been bolstered by reports from small trials showing improvements in various parameters, including waist measurement, when green care is added to standard treatment with antipsychotics in schizophrenia.

Increased availability and access to nature offers benefit across the population, and access to green space has been shown to buffer adverse health effects of social and economic inequality. However, the most vulnerable and deprived are likely to have least access to green space and therefore to require targeted interventions. For those with severe and enduring mental illness, green care therapies offer a way into the natural environment, part of a virtuous cycle of increased physical and social activity in a pleasurable context. Various including horticulture, conservation, care farming and more, they tend to incorporate meaningful activity and social interaction, and offer potential as a rich multimodal approach to improving symptoms and quality of life.³ For clinicians, exploring patients’ access to and connection with the natural world provides insight into lifestyle and needs and an opportunity to develop new therapeutic strategies. Gardening and walking groups, for example, may be used in community, rehabilitation and acute teams – woodland and adventure groups have been used successfully with groups of young people, with self-reported improved emotional management and well-being. Natural settings have been described as offering a levelling and humanistic approach, which can enable engagement with therapeutic processes, particularly for individuals who struggle to engage in formal settings, and have long been identified as useful spaces within which to engage highly traumatised populations, including war veterans and asylum seekers. Therapies delivered in a natural environment reduce the intensity of demand and being in nature elicits feelings of comfort – even of joy – and may stimulate the senses and areas of the cortex that enable accessing and reprocessing of traumatic memory – eye-movement desensitisation and reprocessing (EMDR) was first conceived of as a therapy through experience of a park walk.

What works, and for whom?

Questions remain. Green care describes complex interventions, reliant on highly variable third-sector provision, and research is transdisciplinary. Studies have historically been small and of limited quality, reporting over brief timescales and inadequately powered to clearly demonstrate effects, particularly for specific groups. Many evaluations are qualitative, with sparsity of randomised controlled trial data. A review of the literature by Masterton et al⁴ notes that negative findings are rarely reported

(or sought) and identifies targets for the robust evaluations and research required to answer outstanding questions. With what model should green care offerings attain fidelity? How effective is green care in those with severe mental illness as compared with milder mental illness, and which therapies best suit which conditions? Not all green (or blue) spaces are equal, and perception of green space may be more important than size or distance. Some aspects of green care may be key to increasing 'nature connectedness', whereas others (e.g. focusing on production or knowledge) may detract.

Nevertheless, existing evaluations suggest clinical and cost-effectiveness. Commissioned studies through the Wildlife Trusts in the UK showed a return of £6.80 in well-being benefits for every £1 spent on projects for those with mental illness. A recent study, while falling short of revealing non-inferiority, showed equivalence of nature-based therapy with cognitive-behavioural therapy, and efficacy in reducing symptoms.⁵ Qualitative evaluations confirm that being in nature-based settings is enjoyable, and suggest that staff may also benefit.

How does green care happen?

The disparate evidence base reflects the variety of current green care offerings. Most of the wide range of providers are third-sector organisations, many of which are keen to improve access to natural spaces, but may be less confident working with those with severe and enduring mental illness or at higher risk. Providers are frequently underfunded, so prescribing a 'dose of nature' is difficult and uncertain. Nature-based approaches are largely absent from clinical guidelines and resources for well-being, even where evidence is stronger. Patients describe natural environments as sorely wanted in in-patient settings, yet outdoor spaces may be neglected. Advocating for, and implementing, systems encouraging access to nature could and should be part of good psychiatric practice, with some trusts and commissioners leading the way in partnership with nature organisations and practitioners.

In a world where natural spaces more than ever need to be appreciated, green care offers an opportunity to increase connection with the natural world – offering benefits both for the environment and for health. It forms part of a broader panoply of holistic care that responds to basic human need and supports wider functioning. Developing local green care and incorporating nature into treatment pathways offers new opportunities to engage with patients and to explore the benefits that closer working with nature brings. Social prescribing initiatives may offer a gateway to exploring currently available options, but it will need to be reinforced with accessible and appropriate choices, particularly for patient groups with additional needs.

Advocacy and support for green care driven by clinicians, and reinforced at an institutional level, together with well-coordinated commissioning can be part of a 'green recovery' and increased sustainability of mental healthcare. The evidence at present suggests

potential for green care as an additional therapeutic tool in the psychiatric arsenal – making green care more 'robustly prescribable'⁶ and providing concurrent research funding will enable a better evidence base for use in those with severe mental illness. At a time of ecological and climate crisis, it is now urgent to embed ways of working that enhance the natural world and our connection with it.

Sharon Cuthbert , Millview Hospital, Sussex Partnership NHS Foundation Trust; and Brighton and Sussex Medical School, Brighton, UK; **Alan Kellas**, Avon and Wiltshire Mental Health Partnership NHS Trust, Bath, UK; **Lisa A. Page**, Sussex Partnership NHS Foundation Trust, Worthing; and Brighton and Sussex Medical School, Brighton, UK

Correspondence: Sharon Cuthbert. Email: sharon.cuthbert@sussexpartnership.nhs.uk

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Supplementary material

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Author contributions

S.C. drafted the manuscript and all authors contributed to revision and final approval.

Declaration of interest

All authors are members of the Royal College of Psychiatrists' Sustainability Committee. ICMJE forms are in the supplementary material, available online at <https://doi.org/10.1192/bjp.2020.166>.

References

- Gould van Praag CD, Garfinkel S, Sparasci O, Mees A, Philippiades AO, Ware M, et al. Mind-wandering and alterations to default mode network connectivity when listening to naturalistic versus artificial sounds. *Sci Rep* 2017; **7**: 45273.
- World Health Organization. *Urban Green Spaces and Health: A Review of Evidence*. WHO Regional Office for Europe, 2016.
- Bragg R, Atkins G. *A Review of Nature-Based Interventions for Mental Health Care* (Natural England Commissioned Report NECR204). Natural England, 2016.
- Masterton W, Carver H, Parkes T, Park K. Greenspace interventions for mental health in clinical and non-clinical populations: What works, for whom, and in what circumstances? *Health Place* 2020; **64**: 102338.
- Stigsdotter UK, Corazon SS, Sidenius U, Nyed PK, Larsen HB, Fjorback L. Efficacy of nature-based therapy for individuals with stress-related illnesses: randomised controlled trial. *Br J Psychiatry* 2018; **213**: 404–11.
- Buckley RC, Brough P. Nature, eco and adventure therapies for mental health and chronic disease. *Pub Health* 2017; **5**: 220.

