

Green social prescribing for mental health and wellbeing

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Mental health in a post-pandemic era

- Common mental health problems have high prevalence of about 1 in 6 people in the UK
- During the pandemic the prevalence of mental health problems has increased, with 1 in 5 adults experiencing some form of depression in the first quarter of 2021.
- But the incidence of primary care recorded depression reduced by 43%, anxiety disorders by 47.8%, and antidepressant prescribing by 36.4% in English general practices
- Referrals to mental health services were less than a quarter of the expected rate
- Real prospect of a post-pandemic surge in demand for primary care mental health support and need for novel place-based solutions

Re-emergence of nature during the pandemic

- YouGov poll for the Mental Health Foundation found:
 - 50% agreed that being able to visit green space helped them cope with the stress of the coronavirus pandemic.
 - 73% of UK adults said connecting with nature had played an important role in managing their mental health during the pandemic
 - 34% had connected with nature more during the pandemic despite spending less time outdoors because of lockdown

Protective effects of nature for mental health

- A large observational study of 94879 UK Biobank cohort participants reported that increased residential greenness is associated with a 4% lower odds of major depressive disorder
- Perceived mental health positively associated with the quantity of objectively measured green space in the living or home environment and
- Activity in natural environment can lead to greater reductions in negative emotions such as sadness, anger and fatigue than comparable activity in synthetic environments
- Public green spaces within walking distance are important for supporting mental health

Nature-based social prescribing

- Nature-based social prescribing links people with structured and facilitated nature-based activities that have been specifically designed for people with defined health needs
 - Social and therapeutic horticulture (using gardening, food growing and plants to support wellbeing);
 - Care farming (involving the therapeutic use of agricultural landscape and farming practices)
 - Environmental conservation (involving activities designed for conservation and management of natural places for health and wellbeing)

Evidence for nature-based social prescribing

- Recent review by [Howarth et al.](#) suggests taking part in gardening or undertaking therapeutic activities are associated with improved wellbeing, increased physical activity and reduced social isolation
- [Annerstedt et al](#) in a review of 38 studies of nature-assisted therapy, that included social and therapeutic horticulture, conclude that there is a small but generally low grade evidence base for using nature-base interventions as a health resource
- Meta-analysis by [Soga et al](#) showed that 6 out of 8 studies of gardening were associated with improvements in depression
- [Natural England](#) reported that social and therapeutic horticulture, environmental conservation, and care farming were all associated with mental health benefits

Environmental and health co-benefits

- Proof of concept work with volunteers, including those with SMI, to gauge mental health benefits of nature-based activities
- Showed activities like green exercise and conservation activities linked with improved mood
- Significant association between reduction in stress and location
- Especially important were purposeful activities that conferred environmental and health co-benefits



Motivations for conservation volunteering

I want to see the reserve being maintained properly

I felt I'd had good activity and I could see I was doing something worthwhile in an important place—so it ticked the boxes of green space that was doing something useful

You can see the changes that we have made in some reserves. Some of the reserves we have made a real difference to



Connecting with nature

- Quality of time in nature matters
- Nature connectedness relates to how we relate to and experience nature
- Activities in nature can enhance connectedness with nature
- Nature connectedness associated with
 - Lower levels of poor mental health
 - Pro-environmental behaviours which can confer co-benefits for natural spaces
 - Feelings of life as purposeful and worthwhile 4x more than socio-economic status

Mechanisms of action

- Attention restoration theory:

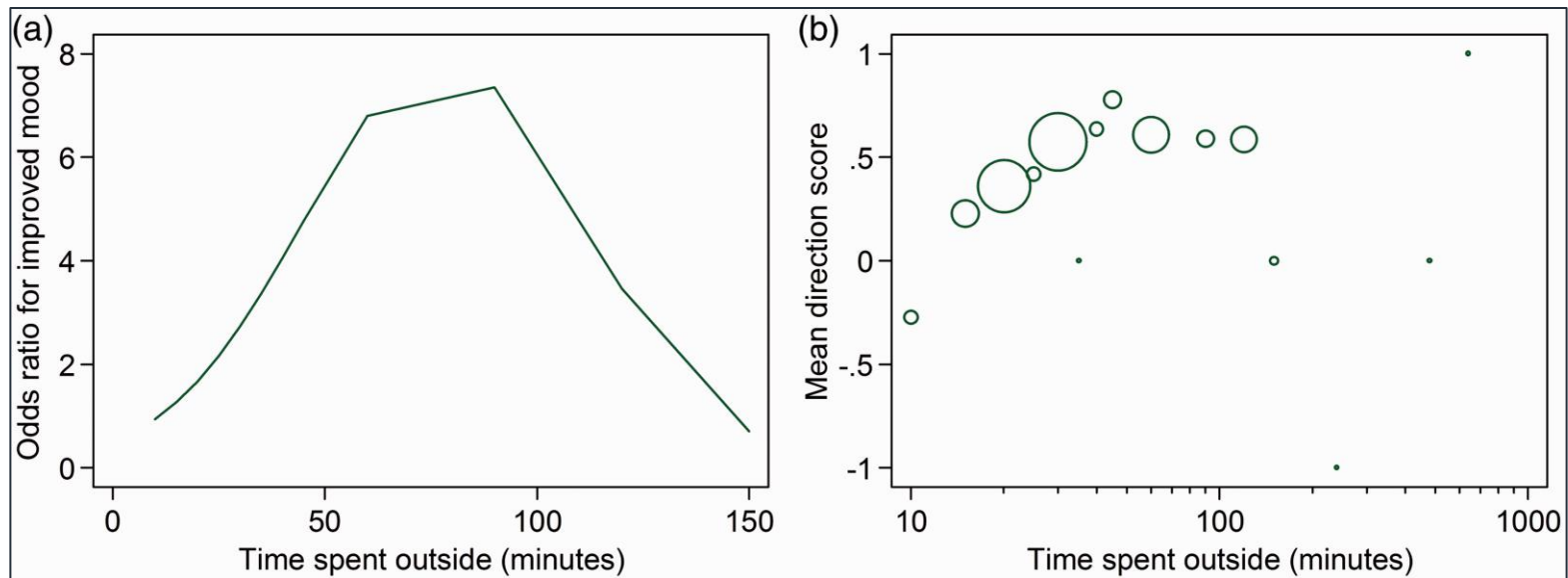
Exposure to natural environments stimulates mechanisms that restores attentional processes via 'soft fascination' and involuntary attention, leading to recovery from cognitive fatigue

- Stress reduction theory:

Exposure to natural environments reduces physiological stress and aversive emotion through activation of our parasympathetic nervous system, producing a psychophysiological stress recovery response owing to innate preferences to natural environments

Dose of nature

- Exposure to nature gardens among care home residents with mid-to late-stage dementia associated with improved mood
- Improvements in mood associated with relatively short duration after 20 minutes, with no additional benefits beyond 80-90 minutes



Future policy and research directions

- Increased accessibility and availability of nature-based activities for groups with higher vulnerabilities for mental health problems
- Emphasis on promoting activities that connect people with nearby nature rather than visits to remote nature
- Need for robust and experimental evidence that goes beyond cross-sectional associations

Evaluation of social prescribing

- NHSE developed a Common Outcomes Framework to inform decision making about measuring the impact of social prescribing
- The key areas it covers are
 - Impact on the person (e.g. how a person's wellbeing has improved);
 - Impact on community groups (e.g. number of volunteers, capacity of VCSE sector to take social prescribing referrals);
 - Impact on the health and care system (e.g. change in GP consultation and A&E attendance)

How to evidence the health benefits of nature-based social prescribing

- What information do decision makers need?
- What information do providers need?
- What systems are in place to capture robust health outcome data routinely?
- What systems are in place to capture robust social prescribing data routinely?



Thank you for listening