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## Prescribing gardening and conservation activities for health and wellbeing in older people

Kerryn Husk, Rebecca Lovell, Ruth Garside

Finding cost-effective and culturally acceptable community based health care interventions which address the multi-morbidity and complex health care needs of older people is a priority. One new area gaining significant traction is 'social prescribing', or the linking of individuals, by a primary care professional, to community-based, non-medical interventions. One of the main referral options for social prescribers has been outdoor activities such as gardening or environmental conservation schemes. Increasingly, such social prescriptions are providing health professionals with more creative options to address the complex needs of patients. There are myriad ways in which these activities are prescribed; a GP might direct a patient to an activity with an information leaflet, or there may be a more complex system where dedicated link workers provide an initial referral and on-going support to help overcome any barriers to engagement.

More well-established is the use of gardening and conservation activities to promote health, with evidence indicating that interaction with the natural environment offers both recuperative and preventative effects. Gardening, in the UK and elsewhere, is a popular activity, especially for the over 65-year age group and gardening and environmental organisations are increasingly recognising the potential health gains. There are numerous interventions which build on this and aim to engage people to both improve the environment but also their health. [1] Although there are few controlled, independent studies which have robustly examined the outcomes of gardening and natural conservation interventions, reviews of the wider evidence suggest there are significant perceived benefits for key groups and that the interventions make use of well evidenced pathways such as increased physical activity and social contact. Qualitative studies indicate the importance of increased opportunities for meaningful activity, social connectedness, and – importantly – fostering a connection to nature.

How can developments in health services research inform our understanding of socially prescribed gardening and conservation activities as a component of the care of older people? First, despite the growing popularity, there has been a paucity of good quality evidence which can support the ongoing development of effective social prescribing referral mechanisms for older population. Much of the existing evidence provides little guidance as to what works, in which contexts, and for whom. However new studies are being developed in collaboration with primary care settings which will help clarify the crucial elements of successful social prescribing models for different populations and settings. [2, 3]

Secondly, there has been an increase in the use of systematic approaches to identify the therapeutic potential of gardens and outdoor activities to address specific health conditions in older age. For example, a recent review [4] examined the impact of gardens and outdoor spaces on the mental and physical well-being of people with dementia. Despite the limited evidence base, there were indications in quantitative data that access to gardens and outdoor spaces were associated with decreased levels of agitation in people with dementia. Included qualitative studies indicated that both residents and staff valued gardens as places of relaxation and spaces to stimulate memories and activities, as well as being areas for social interaction; thought to accrue through both sensory stimulation and reminiscence.

Thirdly, and more broadly, a recent review of qualitative evidence [5] showed that older people garner significant enjoyment and pleasure from interactions with gardens and other natural environments. Even those who were unable to, or who did not want to, engage physically, valued the visual connection to gardens through windows. Descriptions of the experiences of 'being' outdoors

indicated the importance of the multi-sensorial environment and highlighted the embodied nature of 'doing' activities such as gardening in the natural environment. Such descriptions add to the evidence that socially prescribed gardening and conservation activities may be acceptable to harder to reach older populations.

Brought together, these emerging bodies of evidence are informing future social prescribing activities, and we are learning that the ways in which the social prescription is presented and the type, depth and nature of the engagement with interventions are central to sustained adherence to an activity and potential for health gain.

In summary, there is clear potential for gardening and nature-based interventions, delivered through a social prescribing mechanism, to impact positively on health of older populations. What is lacking is evidence about how these impacts may differ across contexts, populations and settings, and whether or not they are cost-effectiveness or have the capacity to reduce burden on health systems. As of yet, we don't know, for example, which activities are most valued by participants, whether it is better for activity groups to comprise only those with particular needs or conditions, nor how best to harness group-effects for positive interaction. In addition, referral of people to such interventions is largely on an ad hoc basis, based on local connections with enthusiastic general practices or activities reliant on short-term funding. It is crucial that systems are developed that ensure that socially prescribed activities are sustainable and consistent. Future work must focus on these questions in order to maximise the potential these approaches offer both the older population and the health service.

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