Provision of outdoor nature-based activity for older people with cognitive impairment: protocol for a scoping review from the ENLIVEN project

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Method Article

Keywords: Alzheimer's, stroke, Parkinson's, care farms, walking, gardening, woodlands

Posted Date: February 15th, 2023

DOI: https://doi.org/10.21203/rs.3.rs-2577060/v1

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Abstract

The aims of the scoping review for which the protocol is presented here are:

· To identify and characterise the types of outdoor nature-based activity for older people with dementia and other forms of cognitive impairment that have been the subject of research and for which research evidence is available.

· To identify and describe the range of outcomes examined in the research studies on this topic.

Introduction

Rationale

Evidence indicates that for people with, or at risk of, cognitive impairment, the benefits of outdoor activity include maintaining independence and meaningful occupation, promoting social inclusion, stimulating memory and the senses, and enhancing identity and self-esteem [1, 2]. Connecting people with familiar everyday outdoor spaces and special places in the natural environment, and the activities and relationships that arise within these places, enhances social engagement and quality of life [3, 4].

Older people with cognitive impairment, however, experience extensive and significant barriers to accessing the natural environment [5–8] with many excluded entirely [5, 7, 9–11]. Addressing barriers to inclusion requires both changes in social and organisational attitudes and practices, and support for individuals and families [12]. However, a lack of evidence about what is appropriate and beneficial for whom, in what contexts and under what circumstances, makes it difficult for potential providers of activities to know how to address the needs of this group [13]. As a first step, this scoping review will aim to identify the current research evidence about the provision of nature-based outdoor activity for older people with cognitive impairment.

Objectives

· To identify and characterise the types of outdoor nature-based activity for older people with dementia and other forms of cognitive impairment that have been the subject of research and for which research evidence is available.

· To identify and describe the range of outcomes examined in the research studies on this topic.

Methods

We will use a scoping review due to the broad nature of the question being asked and the need to search both primary research and grey literature. We will conduct the scoping review in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA-SR) Statement and follow the guidelines outlined by [14] and [15].
Eligibility Criteria

We will use the SPIDER [16] search strategy. SPIDER (Sample - Phenomenon of Interest – Design of study – Evaluation - Research type) is appropriate where the review covers studies with a range of methods.

S – Older people (defined as aged 65 or above) with cognitive impairment arising from dementia or another health condition, families or supporters of older people with cognitive impairment, representatives of organisations providing outdoor nature-based activities.

PI- Identification of different forms of nature-based activities and provider involvement with regard to engaging older people with cognitive impairment including capturing evidence about the experiences of older people with cognitive impairment and their families and supporters.

D – All types including randomised clinical trials, pre-test post-test comparisons, observational and cohort studies, case studies and evaluations.

E – Any outcomes considered.

R - Quantitative, qualitative, and mixed methods approaches.

Exclusion criteria:

- Publications in languages other than English.
- Editorials, commentaries, letters, opinion-based papers.
- Research based solely on adolescents or children.

Information Sources

Primary research and grey literature.

Search Strategy

We will search from 1st January 2009 to the present, as follows:

1. Primary research using healthcare, health policy psychology and sociology databases including PubMed, Social Care online, Social Policy and Practice, Cochrane, AgeLine, CINAHL and APA PsycInfo.
2. Primary research using environmental, business, tourism and leisure databases including Environment complete, Business complete, GreenFILE, Humanities International Complete.

Data Management
Primary research data will be charted in Excel using a pre-designed standardised form. Web-based resources and grey literature will be reported in line with published guidelines [17].

Selection process

1. Searches will be conducted in the selected databases and duplicates removed.
2. Titles and abstracts will be screened by two researchers working independently to identify irrelevant studies. Reason for exclusion will be recorded in each case. Any titles and abstracts on which there was disagreement will be retained and discussed with a third team member to reach a decision.
3. Full-text versions of all studies that might potentially meet inclusion criteria will be retrieved. A data charting form will be developed to facilitate systematic extraction of any relevant information from papers identified as meeting the inclusion criteria. Each study will be independently assessed by two team members. Cases of disagreement will be referred to a third team member to reach a decision.
4. The reference sections of included studies, previous reviews identified through the searches, and key papers and book chapters known to the research team will be scrutinised to check for any additional studies potentially suitable for inclusion. Abstracts and, if appropriate, full-text versions of these will be evaluated as set out above.

Data Extraction

Data extraction will be undertaken by two researchers working independently to ensure complete accuracy. A third team member will check the first 10% of extractions for accuracy and consistency.

Data Items

The following information will be extracted where available:

- Study information: author, title, journal, year of publication, country of origin, funding sources.
- Study characteristics (as applicable): design, theoretical framework, sample size, control group, type of nature-based activity, provider of the nature-based outdoor activity, group or individual activity.
- Target populations: cognitive impairment of older person, family or supporter; age; gender; ethnicity; socioeconomic classification.
- Target settings: type of outdoor space or natural setting.
- Outcome measures: observational tools and standardised questionnaires used in quantitative studies; themes and categories identified in qualitative studies.
- Statistics: type of analysis, results, all pre, post and follow-up means and standard deviations.

Outcomes And Prioritization
The primary outcome of the review will be a characterisation of the types of outdoor nature-based outdoor activities for older people with cognitive impairment for which research evidence is available. The secondary outcome will be a description of the outcome domains considered, including details of any standardised measures employed and grouping of themes or categories covered in qualitative accounts.

**Study Quality And Risk Of Bias**

As this is a scoping review, we will not make a formal assessment of study quality or risk of bias.

**Declarations**

**Funding:**

UKRI/ESRC Healthy Ageing Social, Behavioural and Design Research Programme (SBDRP) Grant (ES/V016172/1)

The authors declare no competing interests.

**References**


