

REVIEW ARTICLE

Gardens, agency and citizenship of people with dementia: a critical interpretive synthesis

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Abstract

People living with dementia are often presumed to have no agency or capacity to act in the social world. They are often excluded from participating in research while research methodologies may not capture their embodied engagement with people and places. Yet, like everyone, people with dementia can express their agency in nuanced ways, for example, through emotions or embodied expression. In the conceptual framework discussed here, nuanced agency is conceived as consisting of non-deliberative elements (embodied, emotional, habituated, reflexive and intersubjective) and deliberative elements (choices or decisions and facilitative). Although people with dementia have been found to benefit from gardens with their sensory appeal, how they experience gardens is not well understood. This critical interpretive synthesis aims to explore how people with dementia experience nuanced forms of agency and citizenship in gardens. A conceptual framework of agency was developed to address the aim and support the analysis. Analysis of the 15 included studies highlighted the value of the conceptual framework in identifying a wider and more granular array of nuanced agency expressed in embodied form and through dialogue. This included expressions of intersubjective and facilitative agency that informed opportunities for people with dementia to experience relational citizenship socially in communal garden settings. These findings suggest an opportunity for researchers to explore the embodied agency of people living with dementia more comprehensively by applying theoretical concepts of agency. Further testing of the framework's utility for guiding collection and analysis of primary data involving people with dementia in garden settings is recommended.

Keywords: agency; citizenship; dementia; discourse; garden; meaning

Introduction

Background

People living with dementia are often presumed to have no agency, or capacity to act in the social world. There is a prevailing social discourse that they have lost their

identity or sense of self (Harris *et al.* 2021), which serves to marginalise them, in spite of evidence showing that people with dementia retain aspects of their agency and identity (Matthews and Kennett 2022; van der Byl Williams and Zeilig 2022), even when their dementia is highly progressed. Like everyone, people with dementia can express their agency in nuanced ways, for example, through emotions or embodied expression (Boyle 2014; Boyle and Warren 2017; van der Byl Williams and Zeilig 2022), without necessarily relying on episodic memory, decision-making or communicating with language. In the conceptual framework of nuanced agency discussed in this article, nuanced agency is conceived as consisting of non-deliberative elements (embodied, emotional, habituated, reflexive and intersubjective) and deliberative elements (choices or decisions and facilitative). Places such as gardens, with their sensory and material appeal, have been shown to provide benefits for people with dementia, for example, supporting their wellbeing and personhood, and facilitating sensory and social connections (Buse *et al.* 2023; Newton *et al.* 2021). However, little is known about how people with dementia experience agency in gardens, as historically they have been excluded as participants in research, and research methodologies may not capture their embodied engagement with people and places. Research that investigates how people with dementia experience imaginative forms of agency in everyday places such as gardens is important because it can shed light on how we can support them to experience pleasure, wonder and challenge as valued citizens.

Meaning-making and agency

Rights-based approaches to dementia practice such as social citizenship consider people living with dementia to be active social agents (Reid *et al.* 2023) who make meaningful interpretations of their experiences (Bellass *et al.* 2019). Human agency depends on the capacity to make subjective sense of what you are doing in the moment and over time, to place yourself and your activities into a meaningful sequence (Matthews and Kennett 2022). There is a lack of consensus on how agency relates to dementia, although making choices and decisions – a deliberative form of agency – is a major focus of studies (van der Byl Williams and Zeilig 2022). Contradicting this, Boyle (2014) found that people with more progressed dementia adopted non-conventional ways of expressing their wants and wishes. Research participants exercised agency creatively in habituated, embodied or emotional forms; viewed situations intersubjectively; and engaged relationally in their daily lives, for example, using humour habituated in a marital relationship to exert influence (Boyle 2014).

The reflexivity of people with dementia (interpretation of one's or others' emotions) has also been identified as a relational form of agency that provides a fruitful basis for inquiry (Boyle and Warren 2017). This is consistent with the explanation of agency as broadly 'the idea of meaningful intentional action' (Zeilig *et al.* 2019, 17). Boyle (2014) calls for a broadened conception of agency for people with a cognitive disability that recognises emotional forms of social action and allows for imaginative agency. Similarly, van der Byl Williams and Zeilig (2022, 41) identify seven dimensions of agency, observing that it is useful to consider the agency of people with dementia on a continuum as people with more progressed dementia generally retain some dimensions of agency.

Assisted autonomy has been identified as integral to promoting the agency of people with dementia, for example, wife-carers using facilitative approaches to support the decisional and executorial autonomy of their husbands with dementia (Boyle 2013). Inverting this, it has been argued that active citizenship involves reconceptualising opportunities for people with dementia to participate in everyday work or care for others (Baldwin and Greason 2016, 295, 296), in effect, recognising their potential to facilitate the agency of others.

Citizenship

According to Baldwin (2008), maintenance of narrative agency is the starting point of narrative citizenship, which includes non-verbal articulations of stories to explore interaction among engagement, participation, meaning and identity (Baldwin and Greason 2016). We can foster the narrative agency of people with dementia by seeking to narrativise their symbolic means of expression, co-constructing narratives and examining the contribution people with dementia make to the narratives of others (Baldwin 2008). The original definition of social citizenship conceived of citizenship for people with dementia as a relationship or practice, emphasising the importance of upholding the rights of people with dementia and the need for them to be free of stigma and discrimination (Bartlett and O'Connor 2010; O'Connor et al. 2022). More recently, citizenship is considered to be 'relationally enacted in different spaces and places', whether 'envisioned or understood as a social practice or embodied experience' (O'Connor et al. 2022, 2340). Nuanced agency, facilitated autonomy and recognition of the possibilities of identity and growth have been identified as key aspects of citizenship for people with dementia in the research literature (O'Connor et al. 2022).

Gardens, agency and citizenship of people with dementia: an opportunity to dig deeper?

Although gardens have the potential to facilitate social ties and sensory connections with nature for people living with dementia, how people with dementia use gardens is not well understood (Gonzalez and Kirkevold 2014). Rather, there is an emphasis in the gardening literature on the therapeutic impact of gardens on people with dementia (Newton et al. 2021; Noone et al. 2017), consistent with more common biomedical-oriented discourses of dementia. As a result, empirical studies of people with dementia and gardens generally involve some form of measurement of wellbeing or quality of life through biomedical tests such as heart rate, cognitive tests and structured observation methods, often with the aim of demonstrating an association or causal relationship between garden-related interventions and improvements to wellbeing or quality of life. For example, studies on therapeutic gardens, wander gardens, sensory gardens, interior Japanese gardens and a renovated natural garden in care homes variously reported improvements in engagement, behaviour, medication, falls, agitation, quality of life, stress, depression/mood, cognition or self-consciousness of people with dementia (Murrone et al. 2021). Similarly, systematic reviews of horticultural therapy in care homes found it improves agitation (Lu et al. 2020), cognitive function and engagement (Zhao et al. 2022) in people with dementia.

Even though social activity is common in community and care home gardens (Bengtsson and Carlsson 2006; Gonzalez and Kirkevold 2015; Guaita *et al.* 2011; Marcus 2007), reviews of garden usage in care homes tend to concentrate on under-use (Barrett *et al.* 2019) or barriers to use, such as weather conditions, lack of protection from the elements, lack of staff training or leadership support (Gonzalez and Kirkevold 2014), physical barriers to access (Whear *et al.* 2014) and a lack of interaction with the local community (Hassink *et al.* 2019). Bowes *et al.* (2016) make the compelling observation that while research with people with sight loss tends to be focused on supporting independence and enablement, for people with dementia there is a greater emphasis on control and behaviour change in care homes.

It could be assumed that gardens, as nature-based environments that provide for social engagement, would facilitate the agency of people with dementia, similar to arts-related projects, which emphasise collaboration and the shared and relational qualities of creativity (Motta-Ochoa *et al.* 2022; Zeilig *et al.* 2019). There is a small base of studies on group gardening programmes that promote social participation of people with dementia in the social citizenship literature (Hewitt *et al.* 2013; Mmako *et al.* 2020; Noone and Jenkins 2018; Scott *et al.* 2022). However, it is uncommon for research methodologies to include qualitative research that captures the first-hand experiences of people with dementia in gardens, and when they do, staff or carers are generally recruited to provide feedback about people with dementia (Anderson *et al.* 2011; Bengtsson and Carlsson 2006; Gebhard 2022; Hassink *et al.* 2019; Hernandez 2007; Hewitt *et al.* 2013; Jarrott and Gigliotti 2011; Lovering *et al.* 2002; Magnussen *et al.* 2019). This helps explain why knowledge of the ways in which people with dementia exercise agency in households and domestic gardens through embodied practice as relational citizens is nascent (Buse *et al.* 2023), yet deserving of attention (Newton *et al.* 2021). Further, the natural environment as a facilitator of agency has been identified as an increasingly significant area of dementia policy and practice (Collins *et al.* 2023).

In this article, we take the opportunity to critically appraise the extent to which the research literature on gardens and people with dementia contributes to a deeper understanding of their experiences of nuanced agency to help us learn how we can support them as valued citizens (Newton *et al.* 2021) with opportunities to shape new discourses (Siiner 2019).

Methods

Methodological framework

A critical interpretive synthesis was chosen to address the aim. As an interpretive form of qualitative research synthesis, critical interpretive synthesis provides for a critical and reflexive approach to the literature and allows for review of epistemology, theories, methods and findings in the literature to be synthesised (Drisko 2020).

Synthesis aim

The aim of this critical interpretive synthesis is to explore the extent to which peer-reviewed papers provide insights into how people with dementia experience nuanced forms of agency and citizenship in gardens. The synthesis methodology and results are

Table 1. Study inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Includes discussion of meaning-making, agency or citizenship	Does not address agency or citizenship
Is a peer-reviewed article in a journal	Is a literature review
Is related to gardens, gardening or horticultural activity	Is not related to gardens, gardening or horticultural activity
Study participants include people living with dementia who may or may not have received a formal diagnosis	Is not about people with dementia
Is in English	Is not in English
Is an empirical study that employs a qualitative methodology	

reported according to the PRISMA 2020 reporting guidelines (Page et al. 2021). The study also aimed to explore the value of applying a conceptual framework of agency by testing its utility to improve recognition of the nuanced agency of people with dementia.

Eligibility criteria

Studies were included in the synthesis if they met the following eligibility criteria (Lockwood et al. 2020):

Population: People living with dementia who may or may not have received a formal diagnosis.

Concept: Expression of nuanced forms of agency and experience of citizenship in a garden setting. This may involve active or passive use of a garden or participation in a garden design consultation process.

Context: Gardens in care homes, domestic homes and communal gardens in the community.

Types of study: Qualitative empirical studies that meet the inclusion criteria. For the purposes of this critical interpretive synthesis, sense-making is considered to be a fundamental requirement for agency (Matthews and Kennett 2022) and the exercise of agency in gardens by people with dementia is considered to involve multi-sensory, embodied interactions with place (Buse et al. 2023). It is therefore assumed that empirical studies concerned with the agency of people living with dementia necessarily involve qualitative data collection methodologies. The scope was limited to studies published in English owing to lack of translation capacity. Research protocols, conference abstracts, editorials and grey literature including garden design were excluded as a preliminary scan of these sources indicated that the synthesis aim was more likely to be addressed in the peer-reviewed academic literature.

Table 1 sets out the study inclusion and exclusion criteria.

Search strategy

The general purpose of the search strategy was to identify original research articles on how people with dementia experience agency or citizenship in garden settings. As discussed, there is a lack of consensus on how agency relates to dementia, and garden settings can be found in a variety of place-based contexts, for example, gardens of private homes, care home gardens or community gardens. Therefore, the researchers used a variety of search terms to be as inclusive as possible. Reflecting this, the search strategy combined the following search terms:

- (1) dementia OR alzheimer OR cognitive disability OR cognitive impairment
- (2) horticultural therapy OR garden OR horticulture OR green care OR greenery OR ecotherapy OR community garden OR nature landscape OR outdoor landscape OR nature based
- (3) agency OR perspective OR purpose OR connect OR design OR enact OR citizenship
- (4) qualitative OR workshop OR interview OR ethnography OR phenomenology OR observation OR case study OR narrative OR session.

Literature was searched in CINHALL Plus with Full Text, ProQuest Central and PsychINFO databases using these search terms. The search strategy included modifying the search terms as needed to conduct searches in Cambridge Core, ProQuest Central and PubMed databases. These six databases were selected in consultation with a research librarian from the University of Wollongong as being representative of the cross-disciplinary nature of dementia-related research. Final search expressions for each database are displayed in File 1 in the online supplementary material. Electronic database searching took place in May 2024.

Study selection

The final list of studies by title and year was exported from each database to Excel for automated removal of duplicates. The first author (LR) then screened the records for potential inclusion in a two-step sequence: (a) title and abstract; and (b) full text. During this process LR applied the population, context and concept eligibility criteria discussed earlier to identify eligible studies for inclusion, and then exported the list of studies for full-text review to EndNote bibliographic software. Owing to the lack of consensus on how agency relates to dementia, already discussed, in the full-text review LR conducted a further review of the concept eligibility criterion by conducting a word search of each article to confirm that included studies contained at least one reference to ‘meaning’, ‘agency’ or ‘citizen*’ in the discussion or results section.

Data extraction

For each included study, LR extracted the characteristics of the included studies and entered them into an Excel spreadsheet as follows: author, location, publication, setting, participants (population), phenomena of interest (concept), methodology (overall

Table 2. A conceptual framework of nuanced agency

Element of agency	The person living with dementia was observed or recorded:	Mode/s of expression of agency
Non-deliberative		
Embodied	Expressing themselves through bodily movement	Embodied
Emotional	Expressing themselves through their emotions	Embodied or through dialogue
Habituated	Expressing themselves through habitual behaviour	Embodied or through dialogue
Reflexive	Making interpretations or judgements about themselves or others emotionally or cognitively	Embodied or through dialogue
Intersubjective	Engaging relationally with others	Embodied or through dialogue
Deliberative		
Choices or decisions	Making choices or decisions	Embodied or through dialogue
Facilitative	Facilitating others' agency	Embodied or through dialogue

approach), method of data collection, data analysis and extent of agency/citizenship discussion.

Assessment of trustworthiness (rigour)

For each included study, LR completed the Critical Appraisal Skills Programme (CASP) Qualitative Checklist (2018). The completed form was then checked by a second reviewer (LP) for accuracy.

Strategy for data synthesis

Initially, LR conducted theoretical thematic data analysis (Braun and Clarke 2019) to explore how people with dementia in the studies experienced nuanced forms of agency and citizenship in garden settings. The authors developed a conceptual framework of agency to support the analysis, consistent with critical interpretive theory, shown in Table 2. Coding of data to compare identification of nuanced forms of agency with and without the conceptual framework of agency was based on the elements of agency and the definitions set out in Table 2 and was agreed upon by all three authors. Then LR conducted the comparative analysis; LP and the third author (LS) also coded a sample of papers to enhance transparency and consistency in coding in the comparative analysis. Findings from the data analysis were reviewed and discussed progressively by the review team, including resolution of differences in coding.

Coding for the comparative analysis was conducted in two stages, consistent with the elements of nuanced agency and definitions in Table 2, as follows:

- (1) How agency is represented in included studies – examples of agency were coded only if the authors explicitly attributed a study participant's observed or recorded behaviour to agency or an element of agency in the context of a garden. If a participant's observed or recorded behaviour was reported (indirectly) by a third person other than the researcher, such as a family member or carer study participant, it was excluded from coding as inconsistent with the principle of asserting primary status to the personhood of a person with dementia. Mode/s of expression of agency refers to the way in which a study participant expressed their agency (embodied or through dialogue). If authors did not specify the mode/s of expression, it was coded as 'Not specified'.
- (2) Applying a conceptual framework of agency – in contrast, in the second stage of coding, the authors were not required to explicitly attribute a study participant's behaviour to agency in the context of a garden: the coder merely applied the elements of nuanced agency and the definitions in [Table 2](#) to the participant's behaviour as represented by the authors. However, the constraint in relation to indirect third-party reporting of a participant's behaviour and the requirement for their behaviour to be observed or recorded in the context of a garden were maintained.

Relaxing the requirement for authors of included studies to explicitly attribute a participant's behaviour to agency in the second phase of coding was intended to test whether application of the conceptual framework of agency would yield a deeper, richer insight into how people with dementia experience agency in gardens.

Results

As shown in [Figure 1](#), 1,135 records were identified from the database searches. After removal of 169 duplicate records, 966 records were screened by title and abstract by LR, from which 871 records were excluded, leaving 95 records to be screened with a full-text review. Following this, LR conducted the full-text reviews by applying the eligibility criteria and conducting a word search on the terms 'meaning', 'agency' and 'citizen*'. Then LS independently checked a random sample of records identified for the full-text review. There were no disagreements on inclusion. Following the exclusion of a further 80 records after the full-text review, the final number of included studies was 15. [Figure 1](#) sets out the review process undertaken according to PRISMA 2020 guidelines (Page *et al.* 2021).

Study characteristics

The 15 included studies were published between 2018 and 2024. Of the six databases searched in this synthesis, only one included a time limit of ten years for published studies. Most included papers were published in the United Kingdom ($n = 9$), with the balance from Australia ($n = 2$), Canada ($n = 1$), France ($n = 1$), Sweden ($n = 1$) and the United States ($n = 1$). Consistent with the eligibility criteria, all 15 peer-reviewed

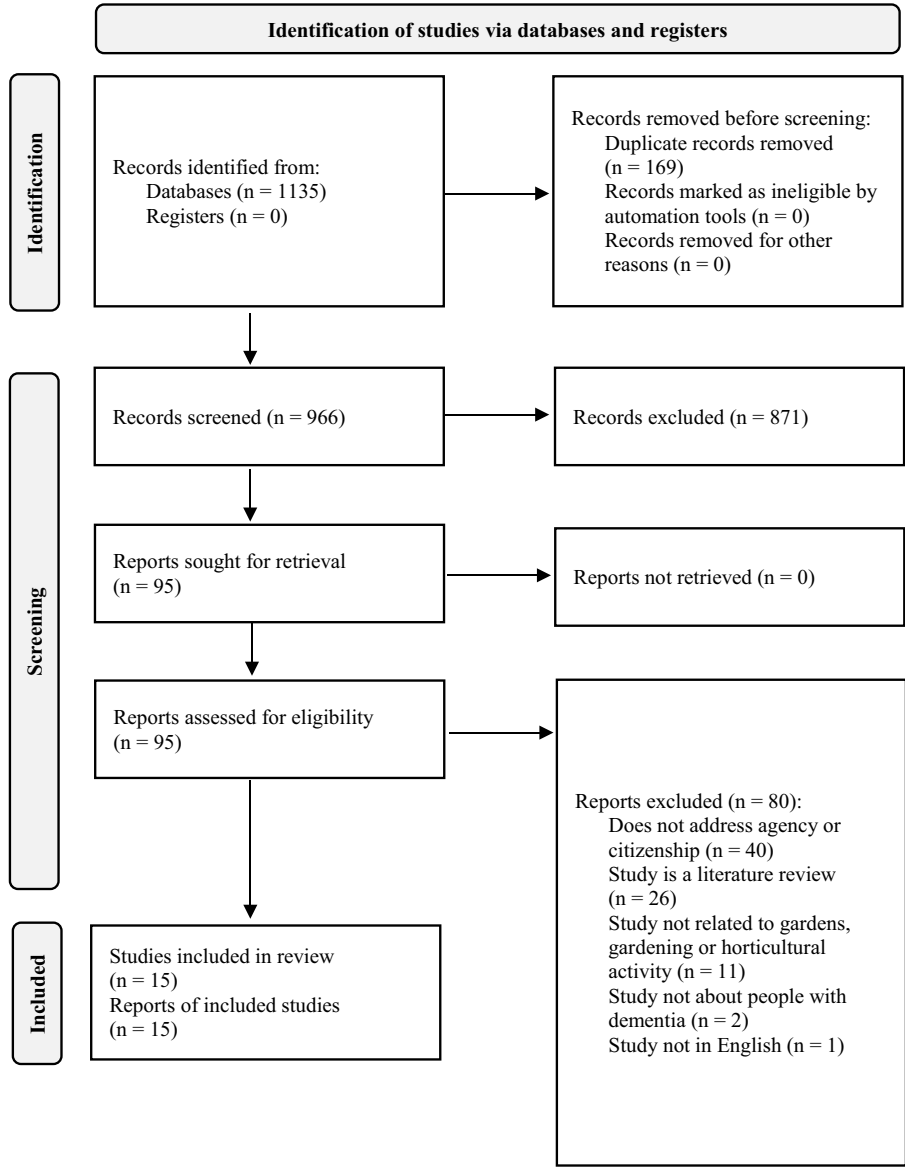


Figure 1. PRISMA diagram.

empirical papers employed a qualitative research methodology. Two studies used an action research approach (Noone et al. 2017; Swift et al. 2024), two used an ethnographic approach (Campbell et al. 2023; Johansson et al. 2022) and two used a phenomenological approach (Fielder and Marsh 2021; Smith-Carrier et al. 2021). There is also a mixed methods study that included Dementia Care Mapping (Morris et al. 2021) and studies that employed narrative inquiry (Li et al. 2021), a participatory approach

(Marsh *et al.* 2018) and secondary analysis of data from a qualitative project (Robertson and McCall 2020). Consistent with the eligibility criteria, all studies included people living with dementia, with sample sizes ranging from 3 to 46 participants. Two studies did not report the number of participants (Charras *et al.* 2020; Johansson *et al.* 2022) and eight studies also included other participants, such as care partners, family members, volunteers and employees.

Study settings varied, with six studies conducted in a community garden setting (Foster-Collins *et al.* 2024; Marsh *et al.* 2018; Morris *et al.* 2021; Noone and Jenkins 2018; Smith-Carrier *et al.* 2021; Swift *et al.* 2024), two studies in the garden of a private home (Buse *et al.* 2023; Campbell *et al.* 2023), one study in the garden of a care home (Styck and George 2022) and a further study in the gardens of a community day centre and a care home (Robertson and McCall 2020). Of the remaining studies, two studies were conducted inside a private home (Birtwell and Dubrow-Marshall 2018; Li *et al.* 2021), two were conducted inside a care home (Fielder and Marsh 2021; Johansson *et al.* 2022) and the remaining study was conducted indoors at a workshop facility (Charras *et al.* 2020). Most studies employed audio-recorded interviews as a data collection method ($n = 13$). However, a majority of the included papers also used a visual data collection method such as observation, walking interviews, garden tours, photography or video-conferencing ($n = 10$). Most studies ($n = 14$) included people with dementia in reporting results through direct quotes from recorded speech or from observations recorded in fieldnotes. One study (Charras *et al.* 2020) did not include direct quotes from people with dementia in reporting.

Two included studies focus on agency and citizenship of people with dementia in relation to gardens (Buse *et al.* 2023; Noone and Jenkins 2018). Both sets of authors provide a definition of a broader theory of agency in the introduction to their studies and discuss their findings on agency and citizenship. Noone and Jenkins (2018) discuss agency in the context of participants' expression of identity and embodied selfhood, whereby people demonstrate behaviour that is reminiscent of a previous vocation. The authors conclude that participants' determination to prove themselves in the project highlights the potential of the garden as a forum for the practice of citizenship. Buse *et al.* (2023) discuss embodied agency in the introduction to their study and identify agency as part of a theme about play and enjoyment in the garden in their findings. The authors discuss agency and relational citizenship in the context of broadening notions of relationships to include non-human actors, for example, pets, as shaping encounters. While Robertson and McCall (2020) do not provide formal definitions of agency and citizenship in their study, the authors discuss embodied creative agency and citizenship in their paper, arguing that framing people with dementia as active partners in their care supports a model of relational citizenship that emphasises reciprocity and interdependence to promote agency and participation. Similarly, while Marsh *et al.* (2018) do not provide formal definitions of agency and citizenship, the authors discuss citizenship in their paper, concluding that the community gardening programme supported 'active citizenship' in the form of positive risk-taking opportunities and 'respectful intersubjectivity' (Marsh *et al.* 2018, 175). The authors briefly discuss agency in the context of cosmopolitan citizenship and being able to make choices. Other studies discuss agency or citizenship briefly (Birtwell and Dubrow-Marshall 2018; Charras *et al.*

2020; Foster-Collins et al. 2024; Johansson et al. 2022; Li et al. 2021; Smith-Carrier et al. 2021; Styck and George 2022; Swift et al. 2024). In the remaining studies, discussion of agency is implicit through meaning-making or making choices (Campbell et al. 2023; Fielder and Marsh 2021; Morris et al. 2021).

Study characteristics are summarised in File 2 in the online supplementary material. The trustworthiness assessments of included studies are set out in File 3 in the online supplementary material. No studies were excluded by this quality assessment, although the authors used this information to clarify the limitations of this synthesis.

Digging deeper: applying a conceptual framework of agency to included studies

Applying a conceptual framework of agency to included studies resulted in at least one form of nuanced agency being identified in all 15 studies, compared with only five studies before applying the framework. The results of the analysis yielded numerous examples of nuanced agency, including multi-faceted expressions of nuanced agency. A comparison of how nuanced agency is represented in the included studies before and after applying a conceptual framework of agency is set out in File 4 in the online supplementary material. It shows a wider and more granular array of nuanced agency after applying the framework. Table 3 shows examples of nuanced agency from results of the analysis, including multi-faceted expressions of agency that are marked with an asterisk.

Studies conducted in gardens in situ with visual methods of data collection provide greater insights into nuanced agency

Five of the 15 included studies were coded as discussing at least one nuanced form of agency, offering insights into how participants living with dementia experienced agency as they engaged with the people and plants of their garden, whether playfully, reflectively or purposefully. All five studies involved data collection in a garden in situ with a visual method of data collection. The three papers that addressed agency in greater depth (Buse et al. 2023; Noone and Jenkins 2018; Robertson and McCall 2020) discussed a marginally wider range of nuanced forms of agency. For example, in their discussion of findings on playing, enjoyment and agency, Buse et al. (2023, 17) highlight Martin's diary entry about his table tennis game with Justine:

Tuesday 28 April 2020 We played table tennis after lunch. Justine won two games (Her words – it doesn't happen very often!) (Extract from Martin (person living with dementia) and Justine's (family carer) diary, household 6)

Through playing table tennis, Martin is able to reassert a sense of agency. Their discussions of table tennis also demonstrate a reciprocal playfulness between the couple.

Coding of this example highlighted Martin's agency as embodied (playing table tennis), reflexive (a sense of agency) and intersubjective (reciprocal playfulness), all non-deliberative forms of agency. The authors (Buse et al. 2023) selected creative qualitative

Table 3. Digging deeper: a conceptual framework of agency with examples of nuanced agency

Element of agency	The person living with dementia was observed or recorded:	Mode/s of expression of agency	Example of nuanced agency
Non-deliberative			
Embodied	Expressing themselves through bodily movement	Embodied	Martin observed and recorded walking behind Justine so he can support her by minimising the impact of doing things ‘wrong’ in the garden. ^a (Buse <i>et al.</i> 2023, 12)
Emotional	Expressing themselves through their emotions	Embodied or through dialogue	Christina recorded as saying, ‘I love the feel of the dirt.’ ^a (Smith-Carrier <i>et al.</i> 2021, 136)
Habituated	Expressing themselves through habitual behaviour	Embodied or through dialogue	Sandra observed continually tidying up the garden and removing dead heads from plants. (Buse <i>et al.</i> 2023, 10)
Reflexive	Making interpretations or judgements about themselves or others emotionally or cognitively	Embodied or through dialogue	R2 recorded as saying, ‘Oh, I just go out by myself. I’ve always been a loner ... Well, I just like being out there on my own and I can put in what I want.’ ^a (Fielder and Marsh 2021, 32)
Intersubjective	Engaging relationally with others	Embodied or through dialogue	Residents indoors at Forest Road care home observed as waving or nodding ‘Hello’ to other residents outdoors in the garden as they experienced ‘distant participation’. (Johansson <i>et al.</i> 2022, 170)
Deliberative			
Choices or decisions	Making choices or decisions	Embodied or through dialogue	Arthur observed to select a garden bed and enjoy working the soil in it independently. ^a (Noone and Jenkins 2018, 885 – 886)
Facilitative	Facilitating others’ agency	Embodied or through dialogue	Victoria observed taking the lead and nurturing her fellow gardeners, for example, repeating instructions to Claire and guiding her hands while planting seedlings. ^a (Swift <i>et al.</i> 2024, 3)

^aDenotes an example of nuanced agency that has been coded as multi-faceted, that is, consisting of more than one coded element of agency.

methods intentionally to capture the multi-sensory and embodied aspects of participants’ interactions and how they engaged with their material environment (Ward and Campbell 2013).

Similarly, in a discussion of findings on gardening and agency, Noone and Jenkins (2018, 885–886) highlight Arthur's expressions of emotional and reflexive agency as enjoyment and independent engagement with the garden. Both are examples of non-deliberative forms of agency:

The opportunity to work autonomously in the garden appeared to be particularly enjoyable for Arthur:

After we'd planted the spring onions, Arthur went over to one of the other beds of his own accord and started working the soil. I left him to it for as long as possible because I could see that he was really enjoying doing it, and it was interesting to see him engaging independently with the garden like that. To me, it shows that he feels comfortable in the space, and that he was really enjoying the gardening work because he wanted to do more of it. He's a very knowledgeable gardener, and he identified a task, and took it upon himself to complete it. (Researcher observations, week two)

The authors' observation of Arthur also includes a form of deliberative agency (choices or decisions) as Arthur identified and 'took it upon himself' to complete a task in the garden. In this example, Arthur's expressions of nuanced agency are embodied, in the absence of spoken language.

In another example of multi-faceted agency expressed in embodied form, Robertson and McCall (2020, 1166) portray a participant's agency as reflexive (a sense of agency), intersubjective (influencing the participation of others by joking and smiling) and deliberative (choosing not to engage in a garden-based sensory activity) in their discussion of findings on facilitating social and physical connection. The authors interpret the participant's behaviour as an act of resistance by applying a relational model of citizenship:

For example, in the midst of passing around plants and fruits during a sensory group activity, one participant placed a dock leaf on his head and sat, smiling, looking ahead, joking about what he was doing rather than engaging with the facilitator's plan to explore the sensory aspects of the plant (Day Centre, 20 April 2016). As such, this resistance was important in influencing the direction of participation. Even if a person chose not to engage, feeling a sense of agency about participation was an important element of the interaction between staff and participants during sessions. The key for successful arts-based engagement was in letting participants co-construct the experience and increase their agency while facilitating the social interaction rather than only the activity.

The remaining two studies (Marsh et al. 2018; Swift et al. 2024) also represent nuanced agency as an expression of citizenship, with participants in community gardens experiencing agency as freedom from restrictions they encountered in other settings. Marsh et al. (2018, 177) found that being in a garden among plants and birds seemed to encourage professionals and volunteer participants to 'trust their intuitions about intersubjectivity', which served to reduce hierarchical boundaries and promote respectful,

inclusive interaction. In this example, study participants living with dementia are identified as engaging in, rather than initiating, enhanced intersubjectivity. Similarly, Swift *et al.* (2024, 4) report that Arthur's 'embodied declarations of autonomy and agency' and Claire's 'blossoming' in response to the collaborative nature of the study enabled them to break free of the inequalities and restrictions that suppressed them as people living with dementia.

Applying a conceptual framework of agency yields more granular data on how people with dementia experience agency in garden settings

Applying the conceptual framework of agency with its transparent set of definitions yielded a wider and more granular array of nuanced forms of agency, bringing us closer to the complex, subtle aspects of agency experienced by participants living with dementia.

While Buse *et al.* (2023, 16–20) discuss embodied, reflexive and intersubjective forms of agency in the context of their findings on playing, enjoyment and agency, coding with the conceptual framework also revealed participants' emotional, habituated and deliberative forms of agency. In a poem written by Martin (Buse *et al.* 2023, 13), there are not only numerous examples of reflexive agency but also examples of emotional agency, with expressions such as 'don't agonise, it might be fun', 'Oh dear, a vicious circle looms' and 'the tiny change you've made', revealing Martin's mixed feelings about his work in the garden:

Our garden ... Days, weeks, months, years, how time passes, tears for fears.

Our garden ... needs to be done, don't agonise, it might be fun.

Procrastination rules my head, I've other things to do instead, with planning out perfect plots, of rearranging plants and pots, to where I think they need to grow, to make our plot a flower show.

Yet need to be done, the challenge set, soil is stable, not too wet, spade and fork then hoe hoe hoe, it's off to work I go go go.

... Oh dear, a vicious circle looms, time to gather pots and brooms, store those forks, hang high the spade, reflect the tiny change you've made.

The authors (Buse *et al.* 2023, 10) observed Sandra as 'continually tidying up the garden and removing dead heads from plants' in a walking interview, suggesting a form of habituated agency. In another instance of multi-faceted, nuanced agency identified from the coding, the authors (Buse *et al.* 2023, 12) explain how Martin described 'walking behind' as a 'deliberate adjustment of his practice to support Justine, because "I'm aware that if I do things wrong it's going to make it twice as hard for Justine"'. Here, Martin expresses intersubjective agency through his concern for Justine and chooses to walk behind her, reflecting embodied and deliberative forms of agency. In a further example, applying the conceptual framework to Noone and Jenkins' study (2018, 885–886) also identified Arthur's embodied form of agency in

the authors' discussion of findings on gardening and agency as he 'started working the soil' and Claire's intersubjective agency as she declared, 'We organised a whole project!'

In ten of the 15 included papers, participants' observed or recorded behaviour was not explicitly attributed to agency or an element of agency, yet coding with the conceptual framework identified at least one form of nuanced agency. In some of these studies, coding was based on limited information, for example, brief quotations from participants about giving life to the plants coded as reflexive agency (Birtwell and Dubrow-Marshall 2018, 83) or 'working with our hands, and getting dirty' (Styck and George 2022, 362), coded as embodied agency. However, in other studies, coding with the conceptual framework revealed a more complex, nuanced picture of participants' expressions of agency. For example, in Smith-Carrier et al.'s (2021, 136–137) discussion of findings on activating sense of touch and the social benefits of gardening, coding identified Christina's emotional and embodied agency ('I love the feel of dirt') and Bill's reflexive and intersubjective agency ('It was good how they got in there and did it. We are part of something.'). Similarly, in Fielder and Marsh's (2021, 31–32) discussion of results on gardening and social connection, coding identified expressions of nuanced agency through participants' dialogue, such as R1's reflexive and emotional agency ('Oh, such a pleasure, to be able to keep these things going') and R2's reflexive and deliberative agency ('Oh, I just go out by myself. I've always been a loner ... Well, I just like being out there on my own and I can put in what I want'). Johansson et al. (2022, 170–171) offer a moving and detailed account of care home residents' experiences of spatial dynamics and magnetic places in their observational study. While the authors do not explicitly attribute residents' behaviour to agency, coding with the conceptual framework identified Jeanette's emotional agency from fieldnotes at Oak Palace: 'She [Jeanette] says that she often looks at the view from this window. Across the street we see a flower bed with violet flowers and Jeanette comments that she finds them beautiful' (Johansson et al. 2022, 171). Coding also identified residents' intersubjective agency ('they could participate ... by waving or nodding hello to people') and deliberative agency ('Some residents chose to sit on benches'):

Some residents chose to sit on benches that were placed in exterior corridors on the second floor facing the indoor garden rather than go to the garden. From there they could participate in a distant and less-intense way, which they expressed through commenting on what was happening and interacting with what was going on in the garden by waving or nodding hello to people. In this way, the garden and the exterior corridors hold the same qualities as a neighbourhood where brief as well as more extensive social interactions take place. Importantly, the 'neighbourhood quality' did not stem from being as if it was a neighbourhood, but rather from being an authentic neighbourhood yet one that was adjusted for people with cognitive and other limitations by being a clearly defined space that is small scale and easily accessible.

In this example, residents at Forest Road experienced 'distant participation', expressed in embodied form (Johansson et al. 2022, 170).

A conceptual framework of agency offers insights into how people with dementia experienced citizenship in garden settings

Coding with the conceptual framework of agency identified communal rather than household gardens as settings in which participants living with dementia were more likely to experience intersubjective agency in a group rather than in a dyad ($n = 9$). Consistent with the findings of Marsh *et al.* (2018, 175) discussed earlier, in this synthesis studies with settings in communal gardens were characterised by ‘respectful intersubjectivity’. Upholding the intersubjectivity of people living with dementia in garden settings is complex, nuanced (Marsh *et al.* 2018) and facilitated by participatory project design approaches (Swift *et al.* 2024). Study participants were coded as expressing intersubjective agency through dialogue or in embodied form in seven of the nine studies in a communal garden setting. Four of these studies employed an action research or participatory research method and discussed citizenship in theory and practice (Marsh *et al.* 2018; Noone and Jenkins 2018; Robertson and McCall 2020; Swift *et al.* 2024).

Authors of studies in communal garden settings represented intersubjective agency in various ways as an expression of personal identity, an opportunity to make social connections and experiencing a sense of community. For example, Noone and Jenkins (2018, 884) describe Claire’s role in helping and caring for others as an ‘inherent part of her nature’ and reflective of her life experience as a mother and grandmother. According to the authors, participation in the gardening sessions enabled Claire to express this aspect of her identity in her interactions with others in the garden. In other studies, participants experienced intersubjectivity as an opportunity to make social connections (Styck and George 2022) and to be part of a community without fear of being judged or criticised (Foster-Collins *et al.* 2024). Some study participants experienced intersubjective agency as an opportunity to shape new social roles (Styck and George 2022) or to develop a new, shared identity (Noone and Jenkins 2018, 886):

Victoria: We all enjoyed it, anyway. It’s relaxing, and it gets you away from that crowd in there. [laughs]

Sarah: That’s another thing I was thinking about, actually. Because obviously you all know each other

Victoria: Yes, we do

Sarah: But do you feel like this has sort of made you into a different little group, away from the main group?

Victoria: Aye, it has. Just try talking to them lot in there!

Arthur: We’re the gardeners

Claire: It’s made us into a different unit, hasn’t it?

Sheila: Aye, it has

The authors (Noone and Jenkins 2018, 886) portray the study’s collective gardening project as an opportunity for participants to create a ‘new social dynamic’ or, in the words of Claire and Arthur, a ‘different unit’ known as ‘the gardeners’.

Expressions of intersubjective agency in the form of participants leading or helping others in a communal garden setting and the benefits this can bring were highlighted in several studies (Foster-Collins *et al.* 2024; Morris *et al.* 2021; Noone and Jenkins 2018;

Robertson and McCall 2020; Styck and George 2022; Swift et al. 2024). In three studies, a participant's behaviour was coded as facilitative agency, whereby participants facilitated the agency of others. Robertson and McCall (2020, 1169) describe the impact of the physical environment on a participant who was not engaged in activities indoors but was then observed to respond to an invitation to go for a walk in the garden by leading a group of people on the garden pathway as he smiled, laughed and made eye contact with others. Swift et al. (2024, 3) record their observation of Victoria 'taking the lead' and nurturing her fellow gardeners, 'particularly Claire, who sometimes struggled with the gardening activities. On a number of occasions, I observed Victoria repeating instructions to Claire and guiding her hands whilst planting seedlings.' Of note is the authors' use of empowering titles such as 'Victoria runs the show' for the vignettes that wove together participants' biographical information (narrative identity) with their observed behaviour. In the final example of facilitative agency (Foster-Collins et al. 2024, 16), a participant anticipates an opportunity to advise another gardening group:

[Another allotment group is] going to invite us to go down and see what they've done [and] where we can help them in any way ... [And with] me being in the building trade before. I've got quite a bit of experience on safety ... So, I've applied all these things to our allotment. And they think that maybe I could help them apply the safety things to their allotment, as well. (attendee, Group H)

Here, the participant also reflects on how this opportunity aligns with their professional background and strengths.

Discussion

This critical interpretive synthesis aimed to explore the extent to which peer-reviewed papers provide insights into how people with dementia experience nuanced forms of agency and citizenship in gardens. Results from the literature search revealed a new and emerging evidence base, with all 15 included studies published in the last six years. We developed a conceptual framework of agency to address the synthesis aim, consistent with critical interpretive theory. This involved comparing how nuanced forms of agency were represented by authors in the studies from coding of the data with and without applying a new conceptual framework of agency.

Our analysis showed that application of the conceptual framework of agency revealed a wider and more granular array of nuanced agency. This seems consistent with other findings on under-recognition of agency (Boyle 2014) and a commentary on a lack of clarity about how agency is reported in the literature (O'Connor et al. 2022). Without the framework, at least one form of nuanced agency was discussed by authors in five included studies, compared with identification of a nuanced form of agency in all 15 studies after applying the conceptual framework of agency. Of greater significance, perhaps, is the tendency for included papers to assume a simplified, opaque and apparently unproblematic view of the agency of people living with dementia. For example, our synthesis found only two studies that provided a definition of agency in relation to people with dementia (Buse et al. 2023, 2; Noone and Jenkins 2018, 881), with the authors noting the limitations of agency theory for this population and referencing the work of Boyle (2014) or Kontos (2004, 2012). A narrow view of agency in people with

dementia tends to overlook their capacity to exercise relational agency and a social self, especially people who do not communicate verbally (Boyle and Warren 2017). This in turn may fuel the framing of dementia as an institutional concern in social discourse (Siiner 2019) that is lacking in humanity.

Despite the relatively small number of included studies, our analysis revealed a wider and more granular array of nuanced agency expressed in embodied form and through dialogue after applying the conceptual framework of agency. We found that the framework's transparent set of definitions of nuanced agency that included recording how a participant expressed their agency (embodied or through dialogue) facilitated a systematic approach to identifying more complex forms of nuanced agency in study participants. For example, we identified multi-faceted expressions of nuanced agency, such as Martin's expressions of reflexive, embodied, intersubjective and deliberative agency as he chose to walk behind Justine out of concern for her wellbeing (Buse *et al.* 2023). The analysis highlighted powerful examples of observed nuanced agency, such as the 'distant participation' of residents indoors at Forest Road who waved to other residents in the garden (Johansson *et al.* 2022, 170), supporting the notion of embodied expression (O'Connor *et al.* 2022) and embodied learning (Robertson and McCall 2020) as key tenets of relational citizenship for people with dementia.

Our analysis also revealed gaps in our findings on nuanced agency, particularly with respect to participants' expression of habituated agency. We identified just one example of habituated agency from the analysis with Sandra's continual tidying up of the garden and removal of dead heads from plants (Buse *et al.* 2023). This may be explained by under-recognition of observed nuanced forms of agency in the studies: although a majority of included studies included a visual form of data collection ($n = 10$), embodied expression of a nuanced form of agency was identified in only six of the studies.

Our findings on how people with dementia experienced citizenship in gardens demonstrate the ways in which nuanced agency supports a social form of relational citizenship (O'Connor *et al.* 2022) by amplifying the link between communal garden settings and participants' experiences of intersubjective agency. Participants experienced intersubjective agency as opportunities to express their personal identity, make social connections, engage in a sense of community, create a shared social identity and lead or help others. This then focused our attention on the conceptual link between the intersubjective agency of people with dementia in a communal garden setting and opportunities to exercise facilitative agency, a deliberative form of agency. In the three examples of facilitative agency we identified in our analysis, study participants initiated or expected to initiate a form of change, and the nature of their participation in the garden aligned with their strengths and interests. These examples of intersubjective and facilitative agency underline the significance of supporting people's narrative agency (Baldwin 2008) while recognising their nuanced agency, identity and growth through co-constructed learning (Robertson and McCall 2020) as key elements of citizenship (O'Connor *et al.* 2022). They also support the notion of communal garden settings having the potential to uphold the relational citizenship of people with dementia (Noone and Jenkins 2018) socially, while fostering new forms of discourse that assert their personhood.

Limitation and recommendations for future research

This is the first time a conceptual framework of agency as discussed in this article has been applied to the literature, so the framework and the method are relatively untested. In this study, we applied the conceptual framework of agency to support secondary analysis of reported findings, rather than primary data. This is a limitation as it is very possible that more examples of agency could have been derived if we had access to the data. However, the results of our synthesis demonstrated an opportunity to recognise and report the agency of people with dementia consistently and to a granular level in the included studies. This suggests that there is merit in exploring the potential of the framework to support a more structured approach to data collection, analysis and reporting of the nuanced agency of people with dementia, including opportunities for them to experience relational citizenship.

In future, we recommend that researchers take the opportunity to modify their data collection and analytical methods to explore embodied expression of agency among people living with dementia more comprehensively by applying theoretical concepts of agency consistently. In the short term, we recommend further testing of the conceptual framework of agency on primary data collected from studies with people with dementia in garden settings. Depending on the results, the conceptual framework could then be applied in qualitative empirical studies in other study settings.

Conclusion

This critical interpretive synthesis aimed to explore the extent to which peer-reviewed papers in the academic literature provide insights into how people with dementia experience nuanced forms of agency and citizenship in gardens. Applying a conceptual framework of agency with its transparent set of definitions revealed a wider and more granular array of nuanced agency among study participants, including multi-faceted expressions of nuanced agency. Communal gardens were identified as having the potential to uphold the relational citizenship of people with dementia socially, with some study participants experiencing intersubjective and facilitative forms of agency in communal garden settings. Future research should employ modified data collection and analytical methods that apply theoretical concepts of agency consistently to explore the embodied agency of people with dementia more comprehensively.

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