Understanding the Experiences and Psychological Wellbeing of Adults Living with Dementia in Rural, Age in Place Communities

Melinda Kay Helal

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Faculty of Health and Medicine

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Declaration

I declare that the work presented in this thesis is, to the best of my knowledge and belief, original and my own work. The material has not been submitted, either in whole or in part, for a degree at this, or any other university.

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ABSTRACT

Background and Purpose. As the global population ages, understanding the experiences and psychological wellbeing of older adults becomes increasingly important, particularly for those living with dementia in rural communities. This study explores the challenges and lived- experiences of older adults with dementia who choose to age in place (remain in one's home until the end of life) within rural settings. Focusing on the United States, where an estimated 46 million older adults live in rural areas, this research addresses a significant gap in the literature regarding the social and environmental factors that influence psychological wellbeing in these populations.

Method. Using three approaches to data collection, comprising semi-structured interviews, social network mapping, and visual documentation, the study examines how the built and social environments of rural communities impact the psychological wellbeing, life satisfaction, and sense of purpose among older adults with dementia.

Findings. The study revealed three key findings regarding the psychological wellbeing of older adults with dementia in rural, age-in-place communities. First, participants demonstrated a strong attachment to their rural communities, which fostered feelings of support, safety, and belonging. This connection helped maintain a positive outlook and reinforced a sense of stability. Second, social relationships, whether among lifelong residents or newcomers, were vital to participants' life satisfaction and mental health. Engaging with family, friends, and community members provided a significant boost to wellbeing, especially for those who had relocated to smaller towns. Third, the study challenged the notion that support networks diminish as people age. Many participants showed creativity and resourcefulness in seeking support, utilizing compensatory strategies like relying on friends, family, or community members for

transportation or other needs. These actions allowed them to maintain autonomy and stay connected, despite limited resources. Despite challenges like fewer healthcare services in rural areas, participants exhibited resilience, demonstrating that strong community ties can effectively support psychological wellbeing and autonomy, even in underserved environments.

Conclusion. This study highlights how strong community attachment, social relationships, and personal resilience contribute to the psychological wellbeing of adults living with dementia in rural, age in place communities. It challenges prevailing assumptions that rural settings are less suitable for ageing in place and demonstrates how, with the appropriate social and environmental supports, these environments can effectively foster autonomy and psychological wellbeing for individuals living with dementia.

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Glossary of Terms

Term	Definition
Ageing in Place	The ability to remain in one's home until the end of life
Built Environment	A physical space that serves the people living within a community such as banks, grocery stores, places of worship, parks, community centres and post offices
Dementia	A neurodegenerative syndrome that impairs a person's memory, whilst also affecting the ability to undertake activities of daily living and making day-to-day decisions
Psychological Wellbeing	A state of being that encompasses mental health, life satisfaction, and a sense of meaning and purpose
Rural Community	A sparsely populated area with limited resources
Rural Setting	A location miles away from the town centre, and with barely any surrounding dwellings
Light Rural	A location on the outskirt of the town centre, and with a few surrounding dwellings
Medium Rural	A location within the city limits, but on the outskirts of town
Social Connection	A sense of having close relationship with others
Social Environment	Locally situated relationships with family members, friends, and those living within a community
Social Inclusion	A process in which individuals are integrated into the social, economic, and cultural fabric of their society
Social Exclusion	A process by which individuals are denied access to social opportunities and resources

Chapter 1: Introduction

The rapid growth of the older adult population, particularly those aged 65 and older, presents significant challenges to communities, healthcare facilities, and policymakers. One of the most pressing concerns is the ability for individuals to age in place – living in their homes and communities as they grow older. This challenge is intensified by the sheer scale of preference for ageing in place. According to a 2021 American Association of Retired Person's (AARP) survey, about 77% of US adults aged 50 and older reported that they prefer to remain in their homes as they age rather than move elsewhere (AARP, 2021). While often associated with a desire for independence, ageing in place also reflects older adults' wish to maintain familiarity and continue living in an environment that holds personal and emotional meaning (Wiles et al., 2012; Rowles, 1983). While ageing in place offers benefits such as maintaining independence and remaining connected to social networks, it also can offer comfort, stability, and a sense of control, even as cognitive changes progress. This desire for independence is especially pronounced among adults living with dementia, a condition that affects millions globally (Rapaport et al., 2020). This presents complex challenges, particularly for those living in rural areas. Rural communities, although often close-knit, generally face limited access to healthcare services and fewer healthcare providers, often traveling long distances for medical care, making specialized treatments more difficult to access. Additionally, inadequate transportation options further complicate the situation, as rural communities offer limited public or community transportation to access essential services. The lack of adequate resources in rural settings often exacerbates the difficulties these individuals face as they age in place with dementia, including emotional strains and isolation. This chapter introduces the central issues explored in this study, which focuses on the experiences of adults living with dementia as they age in place within rural communities. The study aims to investigate how the social and built aspects of the rural environment impact their psychological wellbeing. The chapter

provides background information on the growing demographic of older adults, the concept of ageing in place, the prevalence of dementia, and the specific challenges faced by rural populations. Additionally, the chapter outlines the theoretical frameworks that guide this research and sets the stage for a deeper analysis of the lived experiences of adults ageing in place with dementia.

1.1 Background

Dementia is an umbrella term used to describe a group of symptoms characterized by a decline in cognitive function, which impairs an individual's ability to think, remember, and perform daily activities (Alzheimer's Association, 2019). Dementia refers to a group of disorders, rather than a single condition. The most common form of dementia is Alzheimer's disease, which accounts for approximately 60-70% of all dementia diagnoses (WHO, 2020). Dementia is often characterized by a progressive deterioration of cognitive abilities, including memory, language, and decision making, which interferes with an individual's ability to age independently (Alzheimer's Association, 2025). While dementia can affect individuals from all economic, social, and ethnic backgrounds, it is commonly diagnosed in older adults, with the risk of developing dementia increasing as age advances (Prince et. al, 2015).

Globally, it is estimated that more than 55 million people are living with dementia, with almost 10 million new cases being diagnosed each year (WHO, 2025). The prevalence of dementia is expected to increase significantly in the coming decades, driven by a growing ageing population and an increased life expectancy rate (Prince et al., 2015). This growing public health issue is particularly concerning for low and middle-income countries where health care facilities often struggle to meet the increasing demand for dementia care services. These countries face challenges such as limited resources and a shortage of trained healthcare service providers (Ferri et al., 2005).

In the United States, an estimated 6.7 million individuals aged 65 and over are currently living with dementia (CDC, 2023). This growing population presents significant economic

and social burdens not only for those living with dementia, but also for their families and the healthcare systems. Research indicates that dementia often leads to challenges such as limited access to healthcare services, emotional strain, and social isolation, especially in rural areas where resources are limited (Bishop et al., 2019; Aranda et al., 2021).

According to a 2017 Commonwealth International Health survey of 11 high-income countries, American adults aged 65 and older are among those most likely to live with more severe health conditions and face economic hardships compared to counterpart countries (The Commonwealth Fund, 2017). Additionally, across all the countries surveyed, few older adults [65+] reported discussing psychological wellbeing with their primary care providers (Osborn et al., 2017).

There is limited research in the United States exploring ageing in place with dementia, particularly for those living in rural communities. This is especially true when examining the role of the neighbourhood environment and how informal social support might influence the wellbeing of persons living with dementia. This research gap is particularly concerning given the large population of individuals who will either choose or be constrained (e.g., financially) to age in place in the United States. In fact, residents living in rural areas made up 14% of the US population (46 million) in 2021 (Dobis et al., 2021). Many of these individuals share concerns about having limited access to healthcare, social care, and other support services, relying heavily on family and friends for assistance (Miller et al., 2023). With these limited resources, understanding the life-experiences and needs of this population is fundamental to moving research forward to benefit this group (Innes et al., 2011).

Building on the aforementioned insights, this research attempts to contribute to the development of long-term, community-based solutions for individuals ageing in place with dementia in rural environments. By investigating the psychological wellbeing of people with dementia in rural communities, it is possible to gain a deeper understanding of the frameworks that might better support their integration into local environments.

Identifying the specific benefits, challenges, and needs they face will help inform the design of targeted support services and interventions aimed at addressing these gaps. Such interventions could improve access to services in rural areas by fostering stronger community engagement and improving access to local healthcare providers (Miller et al., 2023; Dobis et al., 2021). This research is essential to ensure that rural populations are not left behind as the demand for dementia care increases, making it a critical component to public health and ageing policies (Bennett et al., 2022). Ultimately, the aim is to create environments where individuals living with dementia can age in place with enhanced dignity and psychological wellbeing.

To better understand the role of both the built and social environments, the function each serves within a community setting needs to be examined. The built environment refers to the physical spaces, such as banks, grocery stores, hospitals, and post offices. These spaces serve the practical needs of individuals living within a community. In contrast, the social environment focuses more on the emotional and relational aspects of the community, including the social relationships between individuals - family, friends, and acquaintances. The social environment is not necessarily tied to a specific geographical point or distance; rather, social relationships can be formed and maintained through in-person interactions or by using technology that connects individuals over long distances.

This research builds on the argument that ageing studies have traditionally emphasized physical limitations and cognitive challenges, such as memory, attention, and problem-solving difficulties, while often neglecting how individuals with dementia experience life in their social and physical environments (Li et al., 2021). Much of the existing research regarding these experiences and needs of this population has emerged primarily from the United Kingdom, Sweden, and Canada, which will be discussed in Chapter 2- so there is a gap for understanding in US context.

These compounding challenges highlight the critical need for research aimed at improving access to essential services, such as healthcare, transportation, and social

support for those ageing in place with dementia in rural areas. Given the prevalence of dementia across the United States, particularly in Texas, which ranks among the top three states with the highest dementia rates (Dhana et al., 2023), there is a pressing need for further research in this area.

1.2 Ageing in Place

The term “ageing in place” lacks a clear and universally accepted definition due to the differences in perspectives, including those of family members, cultural norms, and a wide range of supportive services (Retnayake, 2022; Rowles, 2017). The interpretation of what it means to age in place can vary significantly based on individual priorities and societal expectations, further complicating the establishment of a uniform definition. Wiles et al., (2012) emphasizes that healthcare providers, policymakers, and older adults themselves interpret the concept through the lens of their priorities and unique perspectives, leading to multiple, often conflicting, definitions.

Cultural factors also play a significant role in shaping the meaning of ageing in place across different populations (Wiles et al., 2017). For example, many Western cultures view ageing through a lens of independence and self-sufficiency, emphasizing the importance of older adults maintaining a sense of self within their homes (Rowe et al., 1997). In contrast, some Asian cultures emphasize a duty of children to care for their ageing parents. Intergenerational living, where family members are expected to take care of older relatives, also result in a different understanding of ageing in place (Chappell & Funk, 2010).

Family members of older adults play a crucial role in assisting with decisions regarding living arrangements and care as ageing progresses. For example, an adult child might encourage a parent to modify their home for safety or assist them in assessing local community services, such as transportation or social activities. This involvement not

only promotes the older adult's wellbeing but also strengthens their connection to community (Weng et al., 2020).

The diverse needs of older adults make a universal approach to ageing in place unfeasible (Kane & Kane, 2001). Some older adults may be physically independent and able to live alone with minimal assistance, while others may require modifications to their living space or in-home care due to chronic health conditions. This variability underscores that ageing in place is not a uniform experience but rather depends on individual circumstances and preferences. Understanding, addressing, and tailoring support to meet these diverse needs is crucial for enhancing the quality of life of older adults, not only by promoting independence and safety, but also by sustaining emotional connections, identity, and a sense of belonging within familiar surroundings (Wiles et al., 2012; Rowles, 2017).

Finally, according to Pastalan (2013), ageing in place is being able to remain in one's current residence even when faced with increasing need for support. Given the absence of a single universal definition, and drawing on Pastalan's positioning, this study defines ageing in place as 'remaining in one's home until the end of life'.

1.3 Psychological Wellbeing

The term "psychological wellbeing" has an established and accepted definition. It is well-established in the field of psychology and encompasses several core components that are particularly relevant for older adults living with dementia in rural communities. Drawing on the work of Ryff (1989) these components include: 1.) mental health, which reflects an individual's emotional and psychological state; 2.) life satisfaction, which refers to a sense of happiness and fulfilment; and 3.) a sense of meaning and purpose, which relates to how individuals perceive their roles in life and the value they place on their experiences. Ryff's framework has been widely utilized within further studies, such as those by Boyle et al. (2010) and Kim et al. (2017), all of which align to her model. The components of psychological wellbeing in this framework are interconnected. For

example, a strong sense of purpose can enhance life satisfaction (Kim et al., 2019). In contrast, declining mental health and insufficient social support can negatively affect both life satisfaction and the perception of meaning (Bakhshandeh & Stephens, 2024). This thesis will therefore adopt the definition of psychological wellbeing as 'a state that encompasses mental health, life satisfaction, and a sense of meaning and purpose,' as reflected in widely accepted psychological wellbeing frameworks (Ryff, 1989; Martyr et al., 2018).

Addressing psychological wellbeing is crucial for improving the quality of life in older adults with dementia, particularly in rural settings where access to support services and healthcare may be limited. Interventions that focus on enhancing psychological wellbeing can lead to more effective support systems for this population (Innes et al., 2011).

1.4 Living with Dementia in Rural Environments

Rural communities within the United States account for approximately 14–15% of the population, or about 46 million people, including many older adults living with dementia who are ageing in place (U.S. Census Bureau, 2020; CDC, 2023). As the older population [65+] remains one of the fastest-growing demographics in the United States and many other countries, addressing their needs is becoming increasingly critical. This challenge is particularly pronounced in rural areas, where most older adults reject the idea of transitioning to long-term care facilities and instead prefer to age in place (Cohen & Greaney, 2023).

Ageing in place, defined in this study as remaining in one's home until the end of life (see Section 1.2 for more details), enables individuals to maintain a sense of independence while preserving familiarity, social connections, and emotional ties to the home and community (Iecovich, 2014; Wiles et al., 2012). For those living with dementia, these connections can provide a sense of stability, identity, and comfort in the face of cognitive decline.

However, rural communities face significant limitations that complicate successful ageing in place for individuals living with dementia. These include a lack of adequate healthcare facilities, delayed diagnoses and treatment, limited access to trained professionals, and an overall shortage of community resources (Douthit et al., 2015; Abner et al., 2025). The built environment in rural areas also frequently lacks necessary infrastructure, such as accessible transportation systems and nearby medical clinics, further compounding the challenge (Lanthier-Labonté et al., 2024). Inadequate transportation limits the ability to travel independently for essentials like groceries, medical appointments, or social visits.

These logistical challenges are closely tied to issues of psychological wellbeing. The increased geographical distance from services and support systems in rural areas can lead to delays in care, which may worsen symptoms and reduce life satisfaction, sense of purpose, and overall psychological wellbeing (Ryff, 1989; Bishop & Schmitt, 2021). Social isolation and loneliness are of particular concern for individuals with dementia, as they may exacerbate cognitive decline and reduce opportunities for mental engagement (Innes et al., 2011).

Yet, rural environments may also offer unique protective factors. Some individuals living in rural communities benefit from close-knit social networks and strong cultural values such as self-reliance and family cohesion (Kane & Kane, 2001). These features can enhance life satisfaction, foster a sense of purpose, and provide emotional support—all of which are critical for maintaining psychological wellbeing. The social connections typical of rural living may help counterbalance the effects of isolation, acting as buffers against the negative impacts of cognitive decline (Weng et al., 2020).

This study focuses on understanding the challenges and lived experiences of older adults ageing in place with dementia in rural areas. It highlights how both the built and social environments shape their capacity to age well and maintain psychological wellbeing over time.

1.5 Theoretical Approach

There is broad agreement within the scientific community that the environment can both facilitate and constrain psychological wellbeing as individuals age. This research explores the experiences of older adults with dementia living in rural, age in place communities, with particular attention to neighbourhood resources and social networks. While various theoretical frameworks within gerontology offer valuable insights into the relationship between ageing and psychological wellbeing, particularly in the context of dementia and rural living, this study focuses on three well-established and widely applied theories. These theories were selected for their direct relevance to the challenges addressed in this research and their combined ability to provide a comprehensive lens for understanding environmental interactions, emotional responses, and adaptive processes in older adults with dementia: 1.) the Selection, Optimization and Compensation (SOC) Theory, 2.) the Ecology of Ageing Theory, and 3.) the Socioemotional Selectivity Theory (SST). A more detailed discussion of these theories and their specific relevance to this study is provided below.

The Selection, Optimization and Compensation (SOC) Theory (Baltes & Baltes, 1990) draws from a lifespan perspective on social relationships and ageing. As individuals age, it becomes necessary to adapt to various biopsychosocial changes to align with their abilities. This adaptation involves selecting activities or social engagements and optimizing or compensating for limitations to meet a desired objective or outcome (Baltes, 1997). In the context of ageing in place, communities that support these adaptative strategies contribute to greater psychological wellbeing in older age. This theory emphasizes adaptability and coping strategies, suggesting that the ability to engage meaningfully with one's environment – based on mutual respect and understanding – is necessary for maintaining overall wellbeing.

The SOC Theory is particularly relevant to ageing in place with dementia in rural environments, as it provides a framework for understanding how individuals adapt to the challenges posed by cognitive decline and the limitations of rural living. These

changes require individuals to rely on compensatory strategies to maintain a sense of purpose and psychological wellbeing. Communities that provide support for selection, optimization, and compensation – through accessible social networks, neighbourhood resources, or social ties - enable older adults ageing in place with dementia to meaningfully engage with their living environment, even within the constraints posed by rurality.

While the SOC Theory offers a valuable framework for understanding adaptive strategies within this population, its applicability may diminish as dementia progresses. As cognitive decline advances, impairments in memory, attention, and executive functioning increasingly compromise an individual's ability to select meaningful goals, optimize available resources, and compensate for losses. These cognitive limitations, which are central to the progression of dementia, directly limit the effectiveness of these adaptive strategies outlined in the SOC framework (Baltes & Carstensen, 2003). In rural environments, where healthcare services and resources are more limited than in urban areas (Bishop et al.,2019), these challenges become more pronounced, potentially hindering an individual's ability to meaningfully engage in their environment. Therefore, although the SOC Theory provides valuable insights into coping strategies, it may need to be adapted for individuals with more advanced dementia, especially as their needs change over time.

The Ecology of Ageing Theory (Lawton & Nahemow, 1973) provides an overarching framework that suggests personal and environmental influences contribute to ageing well due to the dynamic interaction between an individual and their environment. This theory argues that personal competence (such as cognitive ability) and environmental characteristics (such as housing, neighbourhood, and transportation) are interconnected. This dynamic interaction between these factors plays a crucial role in determining wellbeing, especially for those ageing in place (Wahl et al., 2012). This mutual exchange between person and environment is particularly relevant to individuals living with dementia, as this person-environment fit can significantly impact quality of life and the experience of ageing.

This theory is especially relevant to understanding ageing in place with dementia in rural communities. In these geographical areas, the person-environment fit is often challenged by limited social and healthcare resources, which can affect the individual's ability to remain in their community while maintaining wellbeing. For older adults with dementia, ensuring the environment is supportive, through strong social networks, accessible healthcare, and access to transportation, becomes crucial for maintaining quality of life (Levasseur et al., 2015). This theory underscores the importance of creating liveable environments that adapt to the needs of individuals with dementia, while also enhancing their ability to age in place.

Based on the Ecology of Ageing framework (Lawton & Nahemow, 1973), subsequent work in environmental gerontology has shown that the connection between a person and their surroundings is not only practical but also carries emotional meaning. In this regard, the emotional bond people form with their home and community plays an important role in supporting wellbeing as they age (Rowles, 1983; Rowles & Bernard, 2013; Wahl & Oswald, 2016). From this ecological point of view, being attached to a place means more than just living there for a long time, it reflects personal identity and self-awareness, a collection of life memories, and feelings of safety and belonging that help people cope with the challenges of ageing and cognitive decline (Wiles et al., 2012). For older adults with dementia, these connections help them stay oriented and manage their emotions as their abilities decline. Within rural contexts, familiar landscapes, long-term social relationships, and everyday routines can reinforce this ecological balance by allowing individuals to remain as insiders in their own environments even as cognitive capacity declines. In this way, place attachment can be seen as the personal, lived experience of the Ecology of Ageing Theory, connecting the environment's support with the deep personal meaning it holds for individuals as they age in place.

However, while this theory is valuable for understanding the environment's role, the Ecology of Ageing Theory may not fully account for the impact of socioeconomic and cultural factors that shape rural environments. In rural settings, socioeconomic challenges such as low-income levels and limited access to affordable healthcare

present significant challenges to older adults living with dementia (Cohen & Greaney, 2023). Furthermore, cultural values in rural areas, such as a strong emphasis on self-reliance and informal caregiving within families, may not always align with the formal caregiving systems that this theory suggests are necessary for successful ageing (Cohen & Greaney, 2023). Therefore, while the Ecology of Ageing Theory provides valuable insights into the relationship between individuals and their environment, it may need to take into consideration the unique socioeconomic and cultural dynamics of rural living, which can significantly influence the psychological wellbeing and ability to age in place for individuals with dementia.

The Socioemotional Selectivity Theory (Carstensen, 1992) focuses on the importance of emotionally meaningful social interactions in later life and its impact on psychological wellbeing. According to this theory, subjective wellbeing and age are closely related; as one ages, physical health tends to decline, yet subjective wellbeing remains stable or even improves (Diener et al., 1998). This theory suggests that individuals become more selective in their social relationships and prioritize those that provide emotional support and fulfilment. This theory also highlights that those who engage in meaningful relationships tend to facilitate more effective emotional connections which help maintain a greater sense of purpose and life satisfaction (Carstensen, 1999). Furthermore, the theory suggests that consistent social involvement and neighbourhood interactions can strengthen an individual's sense of meaning, supporting key aspects of psychological wellbeing such as autonomy, connectedness, and personal growth.

This theory applies directly to the experiences of those living with dementia in rural settings, where individuals may become more selective in maintaining emotionally meaningful relationships to support their psychological wellbeing (Carstensen, 1999). In rural areas, smaller close-knit communities can provide the emotional support needed to foster psychological wellbeing in individuals ageing in place with dementia, who may otherwise experience social isolation due to cognitive decline (Cohen & Greaney, 2023).

Engaging in emotionally supportive relationships helps individuals maintain a sense of purpose and life satisfaction, even as their cognitive abilities change (Weng et al., 2020).

However, while Socioemotional Selective Theory is valuable for understanding the dynamics of social relationships, it may not fully account for the challenges dementia presents while maintaining social relationships. As cognitive decline progresses, individuals with dementia often experience difficulties effectively engaging in social interactions, which complicates the process of selecting and maintaining meaningful social connections (Cipriani et al., 2020). Additionally, rural environments often lack opportunities for social engagement, as community-based programmes are limited (Innes et al., 2011). This limits opportunities for individuals with dementia to engage in emotionally fulfilling relationships (Keady et al., 2012). It is also important to consider how the progression of dementia affects the selectivity of relationships. As dementia advances, individuals may become even more selective in their social relationships. This can lead to social withdrawal. Therefore, while the theory emphasizes the importance of selective social connections, its application to individuals living in rural areas - where social support networks are often limited - may require considering the unique challenges that rural living presents.

Integrating place attachment into the Ecology of Ageing Theory, therefore, deepens its explanatory power by highlighting the emotional dimension of ageing in place. It situates person–environment fit not only in terms of physical competence and accessibility but also in terms of emotional belonging and connection, and personal meaning, which are especially vital for individuals ageing in place with dementia in rural settings.

1.6 Thesis Scope and Structure

This thesis focuses on examining the implications of rural environments and how they may impact psychological wellbeing for people living with dementia as they age in place, with a research question as follows:

What is the impact of living in rural, age in place communities on the psychological wellbeing of older adults living with dementia?

The purpose of this study is to explore the life-experiences of adults living with dementia as they age in place within a rural community and to understand the impact such place has upon their psychological wellbeing from multiple methods: semi-structured interviews, social network mapping, and visual documentation.

This study draws on a systematic literature review performed by the researcher and presented in Chapter 2, to explore the important role of neighbourhood environments in promoting psychological wellbeing for individuals living with dementia as they age in place. The review highlights a gap in the existing research concerning populations living in rural areas of the United States of America.

The remainder of this thesis is structured as follows. Chapter 3 introduces the study methodology, the research design, community, and participant descriptions. The multiple data collection methods employed in this present study and described within this chapter, were chosen to capture the multi-faceted information about the participants, including their personal perspectives. Open-ended questions were sought to gain a better understanding of the subjective perspectives of each participant, photography was incorporated to enable participants to play an active role in the research process, and social network mapping techniques were employed to gain an understanding of family and social ties within the community. This research design actively engaged the participants, and in turn, allowed their experiences and perceptions to be clearly voiced and included.

Chapter 4 presents findings that are especially relevant in gaining a deeper understanding of the ways in which the built and social environment creates opportunities for people living with dementia to socially and emotionally interact and connect with others in their rural community. In this chapter, three themes are

presented by following Thomas and Harden's (2008) reflexive method of thematic analysis (TA) on neighbourhood reflection, photovoice, and social network mapping interviews conducted with the participants.

Chapter 5 follows with a discussion of the findings. Within this chapter, the researcher explores the impact of living in rural, age-in-place communities on the psychological well-being of older adults with dementia. This chapter examines three main themes identified from the analysis (Chapter 4), comparing them to existing literature. The findings and supportive narratives offer new perceptions and understandings of those ageing in place with dementia in rural environments. This discussion also addresses the importance of building sustainable support systems within the local ecosystem, healthcare services, and formal networks. Additionally, the study is reflected upon within this chapter, noting both its limitations and successes. Finally, Chapter 6 concludes the thesis.

Chapter 2: Literature Review

This chapter presents a systematic literature review of the available body of knowledge relevant to the thesis topic: Implications of Neighbourhood Environments and How they Promote Psychological Wellbeing for People Living with Dementia as they Age in Place. Guided by the SPIDER Framework, the review explores key factors influencing psychological wellbeing among adults with dementia, particularly within neighbourhood environments. The review question and eligibility criteria are presented in detail below. PubMed, Scopus, and Web of Science were selected as the primary databases used to implement the search strategy. The Critical Appraisal Skills programme checklist (CASP) was used to assess methodological quality of the articles that met the inclusion criteria. In total, 628 peer-reviewed articles were identified through the database searches, with an additional 21 records identified through references. After screening over 120 articles, 15 articles met the inclusion criteria and were selected for data extraction and analysis. For synthesis, Thomas and Harden's (2008) six-stage method was employed, which involved line-by-line coding of the text, developing descriptive themes, generating analytical themes and subthemes, synthesizing the findings, interpreting the results, and evaluating the quality of the evidence.

2.1 Introduction to the Systematic Literature Review

As life expectancies have continued to rise, societies face increasing challenges in addressing the implications of global ageing. The global population of adults aged 65 and over is projected to increase significantly, with estimates suggesting this group will reach 1.6 billion by 2050, more than doubling the current numbers (United Nations, 2019). This rapid demographic shift highlights the urgent need for sustainable and inclusive frameworks that support ageing in place, particularly in rural areas where healthcare services and resources are often limited. In this context, understanding the factors that enable older adults to age in place is becoming a crucial area of health research (World Health Organisation, 2020). As Oswald et al. (2007) emphasize,

declining capacity – including reduced mobility and memory – poses significant challenges to ageing in place. Without adequate healthcare, social support, and environmental adjustments, older adults may struggle to maintain their independence. This is not only a matter of the decline of physical and mental health but also relates to an individual's ability to engage meaningfully within their community and preserve their human dignity and quality of life at home. Therefore, addressing these complex needs is crucial, not only from an individual-focused perspective but also to ensure ageing in place can be achieved in an affordable and cost-effective manner (Bookman, 2008).

Evidence suggests that the majority of people living with dementia prefer to age in place, within their homes and community settings, rather than in care communities or assisted living facilities (Turner et al., 2016). There are several reasons for this preference, including emotional attachments associated with the home environment, a desire to maintain familiarity with people and places, and the encompassing feelings of safety and security (Lebrusán & Gómez, 2022). Given that dementia is a progressive disease characterized by cognitive and functional decline, it is increasingly important to understand how to support and enable neighbourhood environments to adapt in ways that potentially lessen the reliance on formalized care services. A deeper understanding of the complexities of how the neighbourhood environment can provide a viable and safe alternative is crucial, as it can enhance the wellbeing of individuals living with dementia and help them maintain independence longer. To this end, a deeper understanding of the complexities of how the neighbourhood environment can play a supportive role as a viable and safe alternative is becoming of paramount importance.

A supporting and enabling neighbourhood environment has the potential to promote inclusion, social integration, and engagement - all factors that are important in maintaining a sense of self-worth and quality of life (Gardner, 2011). Consequently, the growing importance of understanding how people living with dementia age in place within their community and neighbourhood has captured the attention of researchers across multiple disciplines including biomedical and social.

Studies on the relationship between people living with dementia and their neighbourhoods typically focus on the effects of these spaces from a caregiver's perspective (Swaffer, 2014). However, in recent years, as societies become more aware of the ageing population's needs, there has been a growing interest in investigating neighbourhoods from the subjective perspective of residents ageing in place with dementia. This shift can be attributed to several factors. First, the World Health Organisation's Global Network of Age-friendly Cities and Communities (GNAFCC), highlighted the importance of supportive environments that promote social inclusion and independent living for older adults, including those with dementia (WHO, 2015). As a result, there has been an increased focus on investigating neighbourhoods from a subjective viewpoint of those ageing in place with dementia. Additionally, research has increasingly explored how both the built and social environments impact the lives of those ageing in place with dementia (Fang et al., 2016; Calkins, 2018). Despite many reviews that highlight the caregiver perspective, very little focuses on the "lived experiences" of individuals living with dementia. For example, a study by Sturge et. al (2021) focused on how features of the social and built environment contributed to the wellbeing of people with dementia living at home, whereas this current review investigates the impact of community and neighbourhood environments on the wellbeing of people living with dementia who intend to age in place.

Understanding how a community or neighbourhood can support the needs of this population to age in place gracefully is of global importance, aiming to achieve cost-effective approaches to improve their quality of life. Understanding how to design and sustain neighbourhoods fit for this purpose remains challenging. This systematic literature review aims to contribute to the understanding of the benefits and challenges in living in certain neighbourhoods and communities from this population's perspective.

2.1.1 Literature Review Aim

This literature review explores how individuals' interactions and connections provide support and promote psychological wellbeing as they live and interact with their neighbourhood/outside environment for persons living with dementia.

***Review Question**: How do neighbourhood environments promote psychological wellbeing among older adults living with dementia as they age in place?*

The review aims to:

1. Understand the ways in which a neighbourhood may create opportunities to socially and emotionally interact with others within the community.
2. Explore how people living with dementia maintain a sense of belonging that support positive wellbeing as they age in place. This is done by investigating the role neighbourhood environments play to promote social and emotional wellbeing among older adults living with dementia as they age in place.
3. Synthesize existing qualitative research pertaining to how community dwelling residents who live with dementia subjectively experience living within their neighbourhood environment as they age in place. Such synthesis would critically evaluate the available evidence from scientific literature to assess the current state of knowledge and identify implications to support psychological wellbeing.

2.2 Theoretical Frameworks: Understanding Ageing, Dementia, and the Role of Resources

This literature review draws on relevant theoretical frameworks to explore the experiences that promote psychological wellbeing for individuals living with dementia, emphasizing the potential of neighbourhood resources and social interactions in supporting ageing in place. While there is general agreement within the gerontological literature that the environment plays a significant role in shaping opportunities and

constraints as individuals age, this review specifically investigates how the neighbourhood environment can foster social inclusion, participation, and overall social, psychological, and emotional wellbeing for those living with dementia. The frameworks of social inclusion and exclusion and the ecological ageing theory provide insights into understanding how neighbourhood settings can either support or hinder the ageing in place experience for those living with dementia.

The concepts of social inclusion and exclusion are fundamental to understanding the experiences of individuals living with dementia within their communities. These concepts highlight the importance of participation and integration, which are central to the psychological wellbeing of older adults (Scharf et al., 2001). Social inclusion emphasizes the need for access to social networks, community resources, and opportunities for engagement, while social exclusion examines the barriers and social liabilities that individuals may face when ageing without adequate support, such as social opportunities and resources (Levitas et al., 2007). Both concepts are essential for understanding how dementia and other age-related challenges impact their lives within their communities. For older adults, including those with dementia, social inclusion can significantly impact their wellbeing. Scharf et al., (2001) emphasize that participation in social, cultural, and community activities is essential in maintain a sense of belonging, especially as cognitive abilities change with age.

Social inclusion is particularly important for those living with dementia. Duane et al. (2013) found that individuals with dementia often experience isolation and reduced social involvement in community settings. However, research suggests that supportive environments - characterized by strong social networks, available and accessible resources, and public awareness – can help mitigate these challenges and promote social inclusion. For example, neighbourhood characteristics such as walkability and proximity to social outlets influence the extent in which individuals with dementia can stay active and involved in their community (Gibson et al., 2019).

The Ecology of Ageing Theory, proposed by Lawton & Nahemow (1973) and explored in Chapter One is fundamental to understanding how individuals with dementia interact with and experience their living environment. This theory emphasized the dynamic relationship between the person and their environment, suggesting that successful ageing is dependent on the balance between competence and the demands of the environment. As individuals age, they may face an increased difficulty in navigating and adapting to their built and social environment, which may impact their overall wellbeing. For example, a lack of community support, insufficient transportation options, or an inaccessible home environment can create significant barriers, hindering both physical and social engagement. Recent research has shown that environments that support independence and offer meaningful social interactions are crucial for improving the wellbeing of people with dementia (Brawley and Wesson, 2018; Lai and Weisman, 2021).

By integrating the concept of social inclusion/exclusion and the ecological theory of ageing, this literature review underscores the complex ways in which individuals living with dementia experience ageing in place within their neighbourhoods. Both frameworks reinforce the need for a holistic understanding of how environmental and social factors collide to shape the quality of life and affect psychological wellbeing, particularly those with dementia. Social inclusion and the availability of community resources are critical in supporting individuals with dementia, while the ecological model offers a lens through which to examine how well neighbourhoods and environments meet the changing needs of older adults.

2.3 Review Approach and Methods

This systematic review uses a thematic synthesis to gain an in-depth knowledge on how neighbourhood environments promote social and emotional wellbeing among older adults with dementia as they age in place. This review follows Thomas and Harden's

(2008) six-stage method: familiarization with the data, line-by-line coding of the text, development of descriptive categories, organising categories into themes, synthesizing the findings, and interpreting the results while evaluating the quality of the evidence. This interpretive approach (Silverman & Patterson, 2021) utilizes thematic synthesis to generate an overview to understand the experiences and views of people with dementia who are living independently and to gain a better understanding of how local neighbourhoods impact psychological wellbeing as described across the studies.

2.3.1 Review Framework

Due to its suitability for qualitative evidence synthesis, the SPIDER Framework (Cooke, Smith & Booth, 2012) is used to assist in defining the review question and eligibility criteria in line with the following criteria: Sample, Phenomenon of Interest, Design, Evaluation, Research type, as shown in Table 1.

Table 1. Application of the SPIDER criteria to the review question and eligibility criteria

SPIDER criterion	**The current study**
Sample	Community-dwelling adults independently living with dementia.
Phenomenon of Interest	Studies about how neighbourhoods impact social and emotional wellbeing through investigating the lived experiences of ageing with dementia while ageing in place (e.g., intending to live in own home until end of life)
Design	Qualitative design. Methods include semi-structured interviews, walking interviews, focus groups, participant observation, recorded or filmed neighbourhood tours
Evaluation	Thematic analysis, descriptive, interpretive based upon experiences and views
Research Type	Studies published in peer-reviewed journal articles between January 2010 and August 2022 written in English

2.3.2 Inclusion and Exclusion Criteria

Inclusion and exclusion criteria set the parameters for this systematic literature review and to identify which studies were relevant and useful within the neighbourhood/ dementia/ ageing in place domain.

Inclusion Criteria

Papers were included if they followed a qualitative research design, as the findings provide a rich and deep understanding of the experiences, which aligns well with the aims and objectives of this review. Studies in which participants are community-dwelling older adults diagnosed with dementia are included. Additionally, research aimed at investigating how neighbourhood environments promote social and emotional wellbeing for adults with dementia as they age in place were included. The literature date parameters were selected to cover January 2010 through August 2022. This date range of 2010 to 2022 was chosen to align with the establishment of the WHO Global Network of Age-friendly Cities and Communities (GNAFCC), which marked a global shift toward ageing in place within urban environments. This initiative encouraged cities to create environments that promote health and wellbeing, including for individuals with dementia. While much of the focus has been on urban settings, rural environments also present unique opportunities and challenges for ageing in place for individuals with dementia. Additionally, WHO'S (2015) guidelines on dementia, social determinants of health, and the built environment have influenced research on how neighbourhood settings can enhance psychological wellbeing for those with dementia. This date range ensures the inclusion of research that reflects this global effort and awareness. Furthermore, by focusing on all ages, the review captures research on all age groups, including people with young onset of dementia. There were no restrictions in location, though only papers written in English were included.

Exclusion Criteria

The exclusion criteria for this systematic literature review were based on several key considerations. First, studies that did not approach the topic using a primary qualitative research method were excluded. This ensured that the review focused on capturing in-depth, personal experiences from older adults living with dementia, rather than the perspectives of carers or healthcare professionals. Accordingly, studies reporting participants living in long-term care settings were excluded, as the research question focuses on understanding the experiences of people with dementia who aim to age in place within the neighbourhood. Papers reporting solely on formal or informal caregiver or staff/professional perspectives were also excluded. In studies involving mixed participant groups (e.g., caregivers or professionals), only data collected directly from individuals with dementia were included.

Additionally, studies that did not address psychological wellbeing within the context of ageing in place were excluded, as this is the core focus of the review. Studies reporting only quantitative or mixed methods data were also excluded to ensure emphasis on the nuanced, lived experiences of the participants. Further exclusions included documents published before 2010, and publication types such as scoping reviews, realist reviews, literature reviews, protocols, book chapters, or literature not written in English. While such documents are valid in other research contexts, they were excluded here to ensure the inclusion of original data and direct quotes from participants. These first-person accounts provide valuable insights into the lived experiences of older adults ageing in place with dementia, which secondary sources or broader syntheses cannot offer. Table 2 summarizes the inclusion and exclusion criteria.

Table 2. Summary of Inclusion and Exclusion Criteria

Inclusion & Exclusion Criteria	Inclusion criteria: • Research in which participants are community-dwelling adults living with living with dementia • Research aimed at investigating how neighbourhood environments promote social and emotional wellbeing for adults with dementia • Peer-reviewed research written in English • Primary qualitative research design • Published between January 2010 and August 2022 Exclusion criteria: • Participants living in long-term care setting, age-segregated housing or with a partner or caregiver • Research examining formal/informal caregiver or staff/professional perspectives • Papers published before 2010 • scoping reviews, realist reviews, literature reviews, protocols or book chapters • Literature not written in English

2.3.3 Search Strategy

The literature search was conducted using three electronic databases: PubMed, Scopus, and Web of Science. Following discussions with a Lancaster University specialist librarian, these databases were selected as they cover a broad range of disciplines and are relevant to the research question. By using Boolean operators 'AND' and 'OR', the search strategy used a combination of terms that linked to the concept of persons living with dementia as they age in place within a neighbourhood setting. Search terms for databases included (dementia), (neighbourhood OR outdoor spaces), and (ageing in place). The use of additional terms linked to the concept of wellness and included 'independent living' and 'wellbeing'.

Although the term ‘ageing in place’ was included as a search term within Scopus and Web of Science, it was not used as a primary term in PubMed. Initial testing revealed that the phrase was inconsistently indexed within PubMed records, limiting its reliability, and using it alone would likely have excluded relevant studies. To strengthen the comprehensiveness of the search and reduce this risk, broader and more consistently applied terms such as ‘independent living’, ‘community dwelling’, and ‘wellbeing’ were incorporated. These terms captured the same underlying idea of ageing in place, even when that exact phrase was not present in the article. The full search strategy is presented in Appendix 1.

A total of 628 citations were identified through the electronic database searches of PubMed, Scopus, and Web of Science. Reference lists were also reviewed for suitability, leading to identification of an additional 21 articles. The database and reference search combined resulted in a total of 649 articles identified for further evaluation, as shown in Figure 2-1.

Data management of the review process was streamlined using an excel sheet created for each database search. Additionally, an excel sheet was also created for the additional articles found through reference scanning. All four excel sheets were organised by author, title, and year of publication. Due to broad nature of search terms, titles, abstracts, and key words were screened within each database set. During this screen, 503 irrelevant records and 21 duplications were removed, leaving a total of 125 potentially relevant citations being retained for a full-text assessment and merged onto one main excel sheet. Appendix 2 presents the detailed excel sheet that presents the citations applicable to the full-text review.

In the next phase of screening, three subgroups (inclusion, exclusion, and for further review) were set up in Excel and the remaining 125 articles were sorted accordingly. This inclusion, exclusion, further review table organised the data horizontally for easier reflection and processing as shown in Appendix 3. They include articles that mention the keywords in their titles or abstracts but did not entirely or partly discuss matters relating

to the review question, were placed in the further review group. The further review articles were individually read and reviewed based on the established eligibility criteria. The entire process from identification (database search), to screening, to verifying eligibility, and applying inclusion criteria, is depicted in Figure 2-1 below. As a result, 15 studies met the inclusion criteria and were included in this review. Appendix 4 summarizes the key characteristics of these included studies.

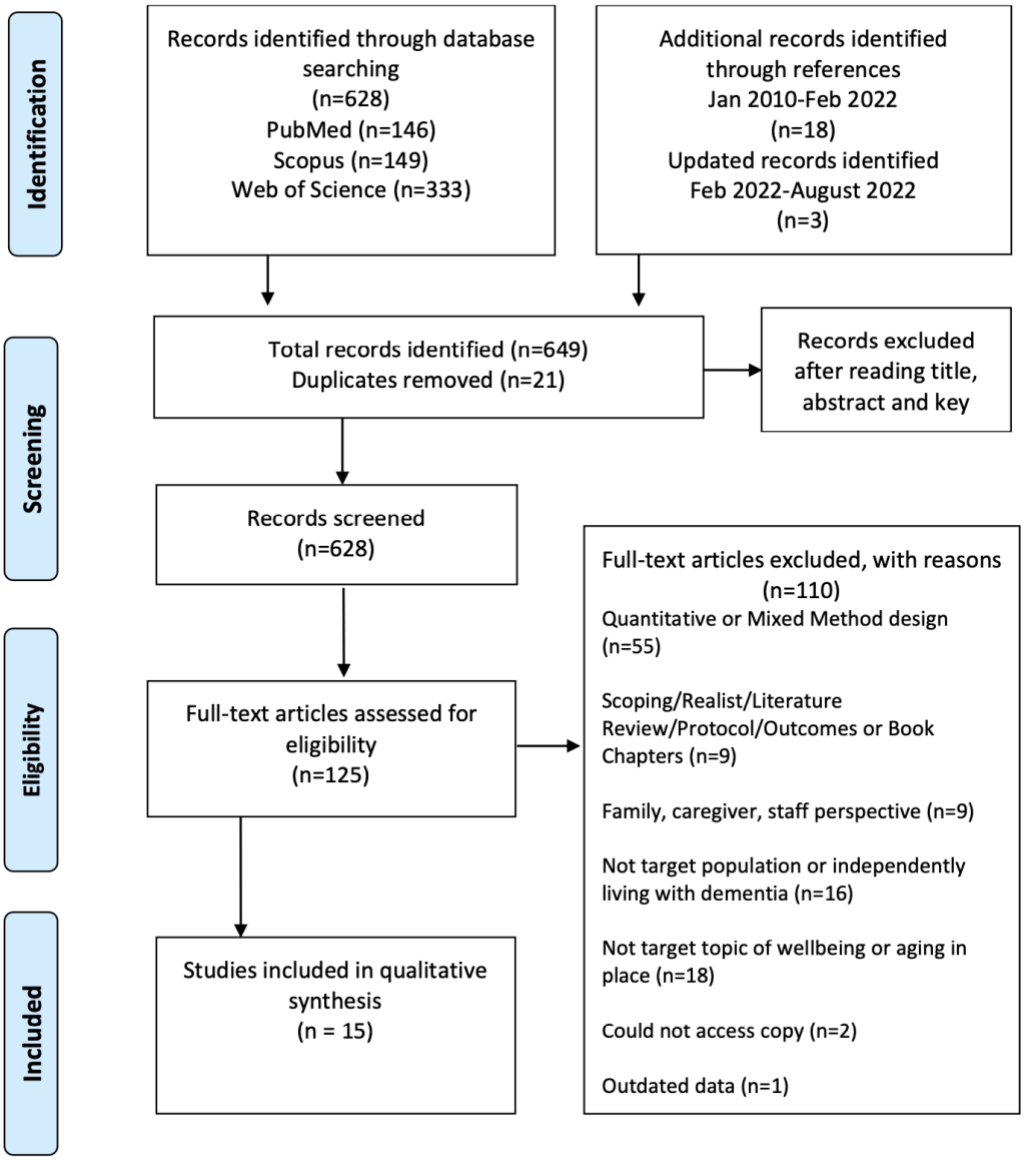

Figure 2-1. PRISMA diagram of study selection and exclusion.

(Credit: Adopted from Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097)

2.3.4 Quality Appraisal

The role in quality appraisal in qualitative synthesis influences the outcome of the review (Long et al., 2020). This evaluation leads the way to unfolding integrity and trustworthiness for both the literature review and the author. Since all the included studies were qualitative, the Critical Appraisal Skills programme checklist (CASP) was used to assess the methodological quality of the articles that met the inclusion criteria. This appraisal tool consists of ten questions regarding methodological quality that can be answered with "Yes", "Can't tell", or "No" answers.

The questions are designed to appraise each included article in the literature review and assess whether each has an appropriate study design, a sufficient recruitment strategy and sample size, minimal potential for biases, reliable data analysis outcomes, and reports a precise account of the findings. For the appraisal in this review, each answer was given a value as follows: "Yes" = two points, "Can't tell" = one point, and a "No" = zero points. All papers received a total value between zero (low quality) and twenty points (high quality), with low quality scoring between 0-8 points, moderate being 9-16 points, and high-quality scoring between 17-20 points.

The included studies assessed using the CASP were deemed to be of moderate or high quality, where four papers rated as moderate: (Clarke et al., 2016); (Kelson et al., 2017); (Lloyd et al., 2015), and (Olsson et al., 2013). Eleven papers rated high (Clark et al., 2020); (Li et al., 2019); (Mattos et al., 2017); (Odzakovic et al., 2019); (Odzakovic et al., 2020); (Phinney et al., 2016); (Seetharaman et al., 2020); (Ward et al., 2018); (Biglieri et al., 2021); (Sturge et al., 2021), and (Ward et al., 2021). Twelve out of fifteen studies were rated as lower quality due to the insufficient discussion or lack of clarity regarding the relationship between researcher and participant, a critical aspect or qualitative research methodology as outlined by the CASP: (Clark et al., 2020); (Clarke et al., 2016); (Lloyd et al., 2015); (Odzakovic et al., 2019); (Odzakovic et al., 2020); (Olsson et al., 2013); (Phinney et al., 2016); (Seetharaman et al., 2020); (Ward et al., 2018); (Biglieri et al., 2021); (Sturge et al., 2021), and (Ward et al., 2021). Furthermore, it is worth noting

that eight out of fifteen papers presented sufficient rigor in their data analysis: (Clark et al., 2020); (Odzakovic et al., 2019); (Odzakovic et al., 2020); (Phinney et al., 2016); (Ward et al., 2018); (Biglieri et al., 2021); (Sturge et al., 2021), and (Ward et al., 2021). These studies followed a well-defined approach to the organisation and interpretation of the data. The methodological quality scores of the 15 studies included in this review ranged from 13 to 19 out of a possible 20 points, as detailed in Table 3.

Table 3. CASP Qualitative Appraisal Tool

"Y" = yes, "CT" = can't tell and "N" = no															
Y=2; CT=1; N=0															
	(1) Clark et al., (2020)	(2) Clarke et al., (2016)	(3) Kelson et al., (2017)	(4) Li et al., (2021)	(5) Lloyd et al., (2015)	(6) Mattos et al., (2019)	(7) Odzakovic et al., (2019)	(8) Odzakovic et al., (2020)	(9) Olsson et al., (2013)	(10) Phinney et al., (2016)	(11) Seetharaman et al., (2020)	(12) Ward et al., (2018)	(13) Biglieri et al., (2021)	(14) Sturge et al., 2021	(15) Ward et al., (2021)
1. Was there a clear statement of the aims of the research?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2. Is a qualitative methodology appropriate?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	CT	Y	Y	Y	Y
3. Was the research design appropriate to address the aims of the research?	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
4. Was the recruitment strategy appropriate to the aims of the research?	y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5. Was the data collected in a way that addressed the research issue?	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
6. Has the relationship between the researcher and participant been adequately considered?	CT	CT	Y	Y	CT	Y	CT	CT	CT	CT	CT	CT	CT	CT	CT
7. Have ethical issues been taken into consideration?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
8. Was the data analysis sufficiently rigourous?	Y	N	N	CT	CT	N	Y	Y	CT	Y	N	Y	Y	Y	Y
9. Is there a clear statement of findings?	CT	CT	CT	Y	CT	CT	Y	Y	Y	Y	Y	Y	CT	Y	Y
10. How valuable is the research?	Y	Y	CT	Y	Y	Y	Y	Y	CT	Y	CT	Y	CT	Y	Y
Total:	18	16	16	19	17	17	19	19	13	19	15	19	18	18	19
Study Quality: Moderate or High	High	Moderate	Moderate	High	Moderate	High	High	High	Moderate	High	High	High	High	High	High

To ensure consistency and accuracy in the quality assessment process, a sample of five studies were independently reviewed by both the researcher and academic supervisor to check for inter-rater reliability. This collaborative process was essential for confirming that both the researcher and supervisor applied the evaluation criteria consistency. Any uncertainties were addressed through discussions during supervision meetings. There were no disagreements among the included studies which eased reaching consensus. Although no significant disagreements arose, these discussions clarified the application of the quality appraisal criteria, ensuring that the evaluations aligned with the expected methodological standards.

2.3.5 Data Extraction

The data extraction tool is a purposefully designed excel table of characteristics that was used to capture as much relevant data as possible. It includes all pertinent information needed for the analysis, as presented in Appendix 4.

2.3.6 Data Synthesis

Findings were synthesized using Thomas and Harden's (2008) thematic synthesis technique. This six-stage method includes: familiarization with the data, line-by-line coding of the text, development of descriptive categories, organising categories into themes, synthesizing the findings, and interpreting the results while evaluating the quality of the evidence. Given that this literature review is seeking to investigate participants' perspectives through an inductive approach, it is both suitable and necessary to work with a rich dataset. To achieve this, verbatim quotations from participants were included in the data extraction document. The analysis process began with a line-by-line colour-coding technique. This involved systematically reviewing the data and assigning a specific colour to individual segments of the text. Each colour represented a different category, allowing for a clear visual representation of the emerging patterns within the data. As the coding progressed, the process was continually refined through an iterative, back-and-forth approach. The data was strategically read and re-read to ensure that all relevant information was captured and

appropriately integrated into clusters of meaning. This careful, repeated examination of the data allowed the researcher to identify key findings, which formed the foundation for an in-depth exploration of the data. As the analysis progressed, the findings were grouped into categories that reflected similar concepts. This then gradually evolved into broader themes and subthemes. As this iterative coding process was worked out manually, it ultimately enabled the researcher to gain a clear, structured understanding of the data. This thoughtful process facilitated the development of a comprehensive interpretation of the data presented. A digital extraction table of key findings (see Appendix 4) was designed to include as a visual that links source to quotation.

2.4 Review Findings

In this section, the characteristics of the literature search results are presented followed by the analytical themes and subthemes.

2.4.1 Characteristics of Literature Search Results

Whilst the majority of the studies were conducted in the United Kingdom and Sweden, there was representation from The Netherlands, North America (United States and Canada), and Australia. Additionally, two papers written by Odzakovic et al. (2019, 2020) resulted in reporting an overlap with four participants. As both papers documented participants clearly, data extraction and synthesis findings were accomplished without duplication. While many studies focused specifically on the role of neighbourhoods as supportive environments to older adults living with dementia, other research explored the relationship between outdoor spaces and neighbourhood structure, emphasizing how outdoor interactions contribute to social and emotional wellbeing and enhanced the motivation to age in place. The majority of the studies employed qualitative methodologies framed by a social constructionist paradigm to explore the views and experiences of older adults. Common data collections included walking interviews, semi-structured interviews, home tours, network mapping, photo-voice and participant observations. Regarding the inclusion criteria for older adults living with dementia, most

studies arbitrarily defined this group of individuals aged 65 and above. However, as to not exclude participants diagnosed with young onset dementia, there was no age limit within the criteria selection. All participants were community-dwelling adults with the intention to age in place within their local neighbourhoods. While several studies explored the experiences of specific sub-groups, such as family, caregivers, or friends, this review focused on and analysed the perspectives of individuals diagnosed with dementia. Refer to Table 4 for a description of the characteristics of the final selected sources.

Table 4. Identified Themes and Supporting Literature

Name of themes & subthemes	**Rationale**	**Supporting Literature (Source Number)**
1. Neighbourhood Cohesion	Having opportunity to support ageing in place in the neighbourhood and in a community	(Clark et al., 2020) (Clarke et al., 2016) (Kelson et al., 2017) (Li et al., 2019) (Lloyd et al., 2015) (Mattos et al., 2017) (Odzakovic et al., 2019) (Odzakovic et al., 2020) (Olsson et al., 2013) (Phinney et al., 2016) (Ward et al., 2018) (Biglieri et al., 2021) (Sturge et al., 2021) (Ward et al., 2021)
1.1. Meaningful interactions	Importance of maintaining communication and casual interactions with others	(Clark et al., 2020) (Clarke et al., 2016) (Kelson et al., 2017) (Li et al., 2019) (Lloyd et al., 2015) (Odzakovic et al., 2019) (Olsson et al., 2013) (Phinney et al., 2016) (Ward et al., 2018) (Biglieri et al., 2021) (Sturge et al., 2021) (Ward et al., 2021)

1.2. Social reciprocity	Activities between families, neighbours, and local shops that promote reciprocity, which multiply the activities and enhances social relationships accordingly	(Clark et al., 2020) (Kelson et al., 2017) (Li et al., 2019) (Lloyd et al., 2015) (Mattos et al., 2017) (Odzakovic et al., 2019) (Odzakovic et al., 2020) (Phinney et al., 2016) (Ward et al., 2018) (Biglieri et al., 2021) (Sturge et al., 2021) (Ward et al., 2021)
1.3. Social inclusion	Ensuring opportunity to share activities and feel included with others	(Kelson et al., 2017) (Li et al., 2019) (Mattos et al., 2017) (Odzakovic et al., 2019) (Odzakovic et al., 2020) (Phinney et al., 2016) (Biglieri et al., 2021) (Sturge et al., 2021)
2. Neighbourhood Structure	Age-friendly and interaction promoting places to age with dementia	(Clark et al., 2020) (Clarke et al., 2016) (Kelson et al., 2017) (Li et al., 2019) (Lloyd et al., 2015) (Mattos et al., 2017) (Odzakovic et al., 2019) (Odzakovic et al., 2020) (Olsson et al., 2013) (Seetharaman et al., 2020) (Ward et al., 2018) (Sturge et al., 2021) (Ward et al., 2021)
2.1. Homes to neighbourhood	Community-facing spaces and secure and safe places to promote wellbeing	(Clark et al., 2020) (Clarke et al., 2016) (Li et al., 2019) (Lloyd et al., 2015) (Mattos et al., 2017) (Odzakovic et al., 2019) (Sturge et al., 2021)

2.2. Outdoor spaces and built environments	Physical spaces aimed to improve physical and mental wellbeing	(Clark et al., 2020) (Li et al., 2019) (Lloyd et al., 2015) (Odzakovic et al., 2019) (Odzakovic et al., 2020) (Olsson et al., 2013) (Seetharaman et al., 2020) (Ward et al., 2018) (Biglieri et al., 2021) (Sturge et al., 2021) (Ward et al., 2021)
2.3. Navigation and wayfinding	Having the ability to move around neighbourhood and community with a sense of confidence	(Clark et al., 2020) (Kelson et al., 2017) (Odzakovic et al., 2020) (Olsson et al., 2013) (Seetharaman et al., 2020) (Biglieri et al., 2021) (Sturge et al., 2021)
3. Neighbourhood Influence	Ability to maintain a positive balance between person and neighbourhood through understanding and sense of belonging	(Clark et al., 2020) (Clarke et al., 2016) (Kelson et al., 2017) (Li et al., 2019) (Mattos et al., 2017) (Odzakovic et al., 2019) (Odzakovic et al., 2020) (Olsson et al., 2013) (Phinney et al., 2016) (Seetharaman et al., 2020) (Ward et al., 2018) (Biglieri et al., 2021) (Sturge et al., 2021) (Ward et al., 2021)
3.1. Safety and security	Maintaining a sense of independence and security in the home and neighbourhood and having the ability to gain ease with the intention to age in place	(Clark et al., 2020) (Clarke et al., 2016) (Kelson et al., 2017) (Li et al., 2019) (Mattos et al., 2017) (Seetharaman et al., 2020) (Ward et al., 2018) (Biglieri et al., 2021) (Sturge et al., 2021) (Ward et al., 2021)

3.2. Social citizenship	Being able to actively interact as a citizen and foster a sense of identity and meaning	(Clark et al., 2020) (Clarke et al., 2016) (Kelson et al., 2017) (Li et al., 2019) (Odzakovic et al., 2019) (Odzakovic et al., 2020) (Olsson et al., 2013) (Phinney et al., 2016) (Ward et al., 2018) (Sturge et al., 2021) (Ward et al., 2021)
3.3. Public awareness	Preventing isolation and reducing stigma surrounding living with dementia	(Clarke et al., 2016) (Kelson et al., 2017) (Li et al., 2019) (Odzakovic et al., 2020) (Olsson et al., 2013) (Phinney et al., 2016) (Ward et al., 2018) (Biglieri et al., 2021) (Sturge et al., 2021) (Ward et al., 2021)

2.4.2 Analytical Themes

The thematic analysis, based on the identified themes/sub-themes in Table 4, resulted in three main themes and nine subthemes. Each is displayed in Figure 2-2. This figure provides an overview of the results and maps the paper contribution to each subtheme. These major themes and their subthemes are discussed below, illustrated in participant accounts. In line with the focus of this review being on the participant's experiences and perspectives, these are given high priority in the presentation of the findings. Selected quotes are included in the findings and omissions within quotes are indicated by an ellipsis.

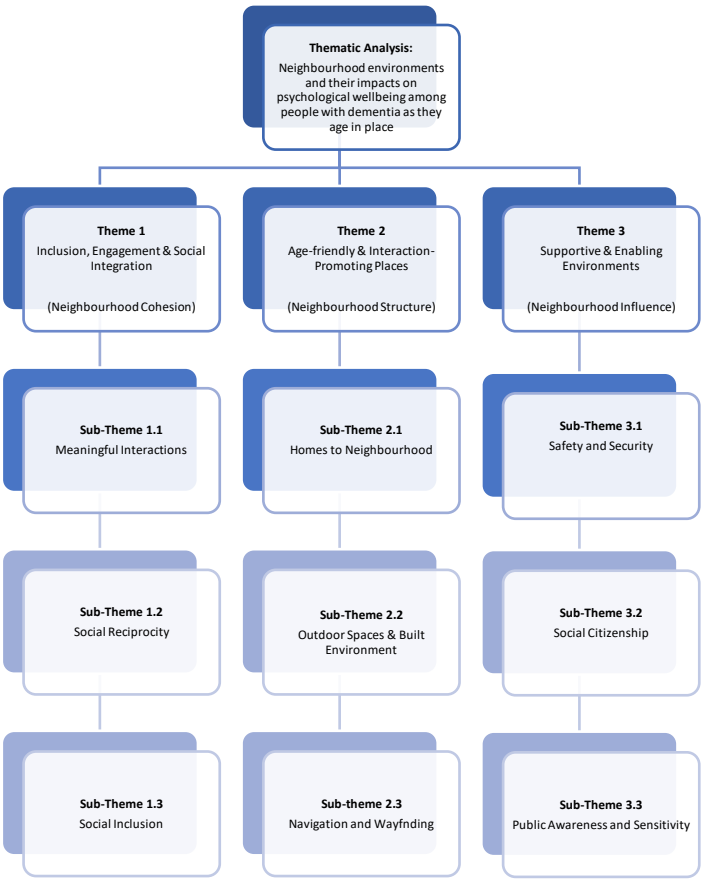

Figure 2-2. Thematic analysis map showing themes and sub-themes

2.4.3 Theme 1: Neighbourhood Cohesion: Inclusion, Engagement and Social Integration

Across many studies, a number of findings converged on the perception that people with dementia believed that they were influenced socially and emotionally based upon the interactions they encountered as they stepped outside of their front door. People living with dementia expressed the need for inclusion, engagement, and social integration.

This theme is broken down into three subthemes addressing meaningful interactions, social reciprocity, and social inclusion.

Subtheme 1.1: Meaningful Interactions

Common to many participants throughout 10 of the 15 included studies was the desire to maintain meaningful interactions throughout their days and within their neighbourhood environments. Meaningful interactions are interpersonal exchanges, whether verbal or non-verbal, that bring about a sense of connection, belonging, and emotional wellbeing. These interactions can occur both in person or remotely, regardless of their formality. Engaging in meaningful interactions provided emotional support and fostered a sense of inclusion and engagement with their environment, which contributed to the perceived ability to age in place for as long as possible.

Participants valued simple acts of communication. Answering a phone call from a family member or friend, a causal 'hello' from the neighbour, or simply a spontaneous wave or smile given as gesture while walking to on a path or when sitting on a park bench proved an important component of lifting spirits and creating a sense of belonging for the person with dementia. Engaging in meaningful interactions provided emotional support and fostered a sense of inclusion and engagement with their environment. One participant's experience illustrates this sentiment:

"In summer, this long summer, then it's almost a small meeting point for those of us who are retired. It's our pleasure, we're counting cars here. I can sit for a while and sometimes there is nobody to talk with, sometimes there is someone that I can talk with." (Odzakovic et al., 2020)

Meaningful interactions were not exclusive to face-to-face encounters. Talking with a family member via Facebook or email also provided considerable value. The availability of loved ones to interact with remotely was cherished by participants, reinforcing the role of technology in fostering meaningful connections. This is echoed in the following comment:

"My daughters and sons are all on there [Facebook], my sister and her kids, and I speak to them sometimes, sometimes I just look and see what's on there and who's on there". (Li et al., 2019)

Additionally, another participant derived joy from interacting with animals, such as during a neighbourhood walk. One shared the following:

Participant: "They…you know…respond to me….

Interviewer: "Because they're smart, they know…"

Participant: "They are, more than people." (Phinney et al., 2016)

These types of meaningful interactions, whether human or animal, provide essential support and connection and reinforce the value of meaningful exchanges in enhancing overall wellbeing.

Subtheme 1.2: Social Reciprocity

Social reciprocity was valued by participants and considered an essential element of their interactions. Reciprocity involved an exchange between family members, neighbours, or familiar faces while out in the community, such as a grocery store, park or café. This dynamic was perceived as an important part of maintaining social engagement. As one participant explained:

"[The people who live] next door are brilliant. I might not see them from one day to the next, but my daughter has got their phone number and they take my [rubbish] bins out and bring them back for me whenever they need emptying." (Clark et al., 2020

Social reciprocity was not only limited to in-person exchanges but also extended to remote interactions. One participant, for example, described staying connected with friends and family using technology, even across long distances:

"I suppose the biggest person that is a support to me is a girl called [name]. And she's my best friend and I talk to her every day. She texts me in between times, she WhatsApp's me…They live in Dubai. So yes, it's not easy to have coffee with [her] but we talk every day and if she's worried about me she'll organise a haircut for me, I just turn up at the hairdressers and it's already been paid." (Clark et al., 2020)

These instances underscore the reciprocal nature of social connections, whether they are through exchanges with neighbours or through technological means that allow for consistent, supportive communication despite physical distance barriers.

Subtheme 1.3: Social Inclusion

Social Inclusion was an important aspect of participants' experiences, with many describing interactions where they felt accepted and valued. Participation in local clubs and committees within the neighbourhood was particularly meaningful for people living with dementia. Activities such as garden and book clubs were seen as beneficial, providing not only a sense of inclusion and acceptance. Additionally, dancing and walking groups were highly valued for their social benefits, helping foster a greater sense of community and connection.

Engaging in social activities was confirmed to be of great importance, positively impacting self-esteem. As one participant shared:

"I go to a group that Philip [son]…he knew the fella that ran it…I was only there last week. They had a dancing session last week when I went. It is good for your brain, and they're all very friendly." (Odzakovic et al., 2019)

Another example of social inclusion involves walking the neighbourhood in a group designed specifically for individuals with young onset dementia. Participating in this activity provided individuals not only with a leisure activity but also the opportunity to actively contributing to their community. As one participant shared an interaction that took place as the group walked past a bus terminal:

"*As we walked past the bus terminal there were several people (sitting or standing) asking for change. T was right beside me when a youngish looking dishevelled man approached her, asking for money. She handed him what she had, the remaining part of her ice cream cone. The man gratefully received it. She looked at me and I said how nice it was of her, and she smiled and walked on*."

This engagement was crucial in combating isolation and potential depressive emotions, emphasizing the significant role that social inclusion plays in the overall psychological wellbeing of people living with dementia. It not only provides practical benefits but also offers emotional and psychological support, strengthens connections, and reduces the risk of social isolation.

2.4.4 Theme 2: Neighbourhood Structure: Age-friendly and interaction promoting places

The neighbourhood structure represented the second main theme. This relates to the importance of age-friendly neighbourhood physical and sensory aspects that impact wellbeing and places that promote social interactions. The importance of sounds, life and visual connections enabled people living with dementia to feel connected to their neighbourhood and home simultaneously, whether that be a sitting in the comfort of their home looking out a window overlooking a school yard, sitting outside on a bench waiting for a stranger to have a seat, or meditating in a garden enjoying the quiet as people walk by. The geographical boundary was seen in a fluid sense, changing from one space to another. The commonality was the sense of belonging and interactions promoting promise of a rewarding day. This theme is broken down into three subthemes: homes to neighbourhood, outdoor spaces and built environment, and navigation and wayfinding.

Subtheme 2.1: Homes to Neighbourhood

Homes were perceived as a place of comfort and a window to the world for many participants at some point within their daily living routine. A simple window, for example, signified a view that represented life, action, and movement from the comfort of home. For one participant, a window became a symbolic connection to the broader neighbourhood:

"Look what a nice view I have. And I can see everyone who goes to the day care centre. But I can also see those who are walking and shopping it may seem a bit curious." (Odzakovic et al., 2019)

This connection between home and neighbourhood highlights the importance of feeling involved, even while remaining inside. Additionally, the act of engaging with the outside environment, such as gardening, allowed a participant to experience a sense of normalcy despite the challenges of dementia. One participant shared:

"I'm able to get out and about and still do most of the, sort of, jobs that I would normally do around the house – the gardening. So I'm not really aware of I [dementia] all the time…But most of the time I feel okay, and I'm not really aware that I'm losing my memory. I know I'm losing my memory, but I don't feel like it." (Kelson et al., 2017)

Such outdoor activities not only supported a sense of wellbeing but also strengthened the link between the home and community. Long-term residence in the same location seems to deepen feelings of attachment and bolster a sense of belonging. One participant expressed that this makes living more manageable, as shared:

"I feel connected because I've always lived here. I belong here. This is part of me. […] You know where everything is." (Sturge et al., 2021)

This sense of stability and continuity further nurtures a sense of security and belonging, both important aspects for maintaining a sense of identity and wellbeing.

Subtheme 2.2: Outdoor Spaces and Built Environment

Participants described their local outdoor spaces and built environment as important places they wished to stay as long as possible. Neighbourhood walkways, parks, and natural preserves were particularly valued, as they offered both physical activity and opportunities for social interactions. A human encounter while walking, for example, created a sense of caring for others as described below:

"There's a lot of nice, lot of people out. Older than me and younger than me that they're walking their dogs or their kids and I get to say hello to somebody. That's a human. I do

talk to my dogs, but they don't tell me anything back. Good listeners." (Biglieri et al., 2021)

This emphasizes how outdoor spaces are not just places for physical activity, but also areas for social engagement, which contribute to a sense of community and support. Similarly, another participant's connection to their leafy neighbourhood was highlighted:

"I just love the look of the place. The people are nice. I just feel at home. I enjoy getting out and about and do a lot of walking, getting outside. I seem to feel better with myself…I love trees." (Lloyd et al., 2015)

The positive impact of these outdoor spaces cannot be under-estimated as they offer both physical benefits, such as walking and fresh air, and emotional benefits, like a sense of belonging and connection. The simple act of sitting on a well-placed bench outside a grocery store provided an opportunity for interaction and reflection, as one participant stated:

"A young man like this always comes to [the supermarket]. I often meet him and then we sit down on a bench for a while, but I cannot think of his name anymore." (Sturge et al., 2021)

This interaction highlights how outdoor spaces, especially those within easy reach, offer opportunities for connection and a sense of presence in the community.

Subtheme 2.3: Navigation and Wayfinding

A supportive environment involves navigation and wayfinding tools to help support persons living with dementia improve their orientation and finding the way from point to point within the neighbourhood environment. Participants reported that a lack of clear wayfinding markers led to disorientation, which can cause stress and confusion. As one participant described:

"One of the worst things for me is, because my memory can go…, we can walk along and it can just go off. And there's been times when I've gone into town and then I've had to phone [husband] and say, what bus do I get home?" (Clark et al., 2020)

However, physical landmarks in the environment, such as public art, can act as useful guides. One participant noted:

"I like the fact that the disc is glass and that's something that's attractive to me. I would remember to use Public Art 3 [PA3] a landmark in terms of navigating my way around." (Lloyd et al., 2015)

Geographical landmarks and public arts are valuable built environmental features hold both meaning and function for the person living with dementia. The structures and visual features aid in recognizing the outdoor surroundings and help navigate the compass from one location to another.

"I know that I am going to turn left here at the traffic light, cross the bridge and all the way back, then left and then I am already on the path to go to the hospital." (Sturge et al., 2021)

This illustrates how familiar landmarks, even small ones, can enhance confidence in navigating the neighbourhood. Such structures also offer emotional resonance, connecting participants to meaningful places and memories. One participant shared:

"Time is passing by…and it's passing so fast! I'm getting older and I'm also declining and Heritage Structure 3 [HS3] just reminds me that I need to cherish every single minute that I've got left." (Seetharaman et al., 2020)

These landmarks serve as both practical tools for orientation and are symbolic for remembering places, helping individuals maintain a sense of identity and place. Additionally, recognizing familiar places can evoke personal memories, providing emotional comfort, as stated below:

"We have a church there, you see up there to the clock yard, where he lives, he (former working colleague) has an overview of the neighbourhood. I know most people who are in the cemetery who have lived…and worked with me." (Odzakovic et al., 2020)

This connection to the past, facilitated by landmarks, highlights how built features can enrich the lived experience of individuals with dementia by fostering a sense of continuity and belonging.

2.4.5 Theme 3: Neighbourhood Influence: Supportive and Enabling Environments

The neighbourhood influence represented the third major theme among people living with dementia as they age in place. This relates to the importance of supportive and enabling environments. Safety, security, social citizenship, public awareness, and sensitivity to reduce stigma felt among people living with dementia, all represent positive attributes to ageing in place for the person living with dementia.

This neighbourhood influence theme is broken down to three subthemes addressing safety and security, social citizenship, and public awareness towards dementia.

Subtheme 3.1 Safety and Security

The concern for personal safety and security was discussed in most studies. While rural dwellers were generally satisfied with ageing in place, the distance from urban centres raised concerns about the availability of help when needed. Safety and security were expressed as significant needs for both urban and rural community-dwelling residents, highlighting how geographical factors can influence the perceived vulnerability of older adults living with dementia. For example, one participant expressed concern about being far away from family support:

"We don't have any kids around here to help us with. That's our problem, see?" (Clark et al., 2020)

This statement emphasizes the vulnerability of rural residents, where the absence of family support can create feeling of insecurity. This lack of immediate family support can contribute to feelings of isolation, which can, in turn, affect one's overall wellbeing and sense of security.

In contrast, another rural participant spoke positively about the supportive nature of their community:

"All of us on this road are…real friendly and help each other." (Mattos et al., 2017)

This reflects how strong community ties can form a social safety net that lessens safety concerns. This sense of mutual availability of help and care within a neighbourhood can create a sense of protection, where individuals rely on each other for both practical and emotional support. Positive neighbourhood dynamics such as these are crucial for creating a sense of security and belonging.

Neighbourhood interactions also played a critical role in promoting safety. One participant described how their neighbours acted as informal guardians, looking out for one another:

Participant: "The other tenants in here all look after and keep an eye out for each other. Now, it was another tenant that actually shouted for me…Yeah, Roger."

Interviewer: "…who actually stopped you from going out?"

Participant: "Roger. Because he knew there was something wrong…, which obviously I then went out. But they all look out for each other, so it's more of a safety net." (Ward et al., 2018)

This demonstrates how neighbours can act as both social and physical safeguards. The social connection reinforces a sense of safety, where individuals feel they are not alone, even if family members are not nearby.

Safety also extended to the comfort of the home environment. One participant expressed how simply having a safe space, even while lying in bed, contributed to their sense of security. They shared:

Interviewer: "But you're still continuing your day, just doing it from bed."

Participant: "I'm just doing it lying down. And my bedroom you've seen has a big window so you're getting natural light. …But I just know that I'm safe, my door's locked and all's well with the world." (Ward et al., 2018)

This quotation illustrates how a secure and familiar environment contributes to comfort for individuals with dementia. It also displays the physical security of the home and how it plays a crucial role in the overall sense of wellbeing, as it provides a stable foundation to day-to-day life.

Finally, safety and security were also echoed in the context of positive interactions with the local shops. One participant recalled a reassuring exchange with a shopkeeper:

"I went into the local shop. I go there for a paper…I said, I'm going to tell you that I've been diagnosed with dementia. 'Oh God', she says, 'That's a shame. Well', she says, 'I'll have a talk with the [staff] and just tell them to look after you". (Clark et al., 2020)

This encounter underscores how community acceptance and support contribute to a feeling of safety. It is not only physical protection that contributes to safety, but also the knowledge that others are looking out for one's wellbeing. This sense of emotional reassurance strengthens the psychological wellbeing of older adults, fostering a sense of acceptance and belonging in their community.

Subtheme 3.2: Social Citizenship

Social citizenship plays a key role in maintaining a sense of belonging and self-worth in later life. The desire to remain an active citizen is central to preserving dignity, as participants emphasized the importance of engaging in meaningful activities. One participant stated,

"I need to know that I can do things I did before." (Olsson et al., 2013)

This statement reflects a need for the need for continuity of personal identity through active roles, which is fundamental in social citizenship. By maintaining participation in activities that affirm their roles within the society, individuals ensure their continued engagement as valued members of the community, reinforcing their dignity and sense of belonging.

Similarly, another person highlighted the value of outdoor activities:

"As long as I can be outside and do things, I'll have an identity." (Olsson et al., 2013)

This underscores how physical and social engagement contributes to a sense of purpose and belonging. Maintaining these activities not only affirms individual activity but also reinforces the importance of social citizenship in maintaining a community connection.

However, the desire to remain connected and engaged is sometimes challenged by a change in public image and everyday social interactions. One participant spoke of concern about being treated unfairly by a social group he had participated in for many years, which led to a growing sense of detachment. One participant expressed concern about this shift:

Interviewer: So, people you'd played with for a long time weren't supportive?

Participant: Long time yeah……. played there 18 years." (Ward et al., 2021)

Another responded creatively to these social changes. This participant shares how they reframed negative perceptions to maintain social identity:

"I must admit I've been known now in the town: 'Oh, you know that lady with the purple hair' which is preferable to 'Oh you know that lady with dementia." (Ward et al., 2021)

This strategy reflects a proactive approach to navigating shifting identities and the need to retain dignity and social citizenship despite evolving social dynamics.

Subtheme 3.3: Public Awareness and Sensitivity to Reduce Stigma Towards People Living with Dementia

People living with dementia interact with the public as soon as they step outside their front door. For some participants, there were anxieties expressed about what others might think or how they should act when approached by familiar or unfamiliar people. One participant expresses this fear of judgement, saying:

"But I am a lot quieter than I was. And I know that. Because I don't want to go out and make an idiot of myself, say something and it's wrong." (Clarke et al., 2016)

This quotation reflects the participant's fear of making mistakes in social situations that may result in social withdrawal, reinforcing isolation. The participant's anxiety illustrates how public perceptions of dementia can hinder normal social engagement.

In contrast, another participant described how their daily routine, including being around people and walking regularly, has had positive effects, despite societal stigma:

"I go out almost every day because my doctor has said that being around people, having same routines every day and walking is good for my brain…I take control over myself and then, and it has got much better. But when you've got Alzheimer's, everyone thinks that one is just destroyed, which is completely wrong. (Odzakovic et al., 2020)

These contrasting experiences highlight that while stigma can lead to feeling of shame, fostering a more understanding society can help individuals with dementia maintain their wellbeing and continue to engage with their communities.

2.5 Discussion

This review has shown how neighbourhood environments impact people living with dementia. It sheds light on and enhances our understanding of the importance of neighbourhood cohesion, structure, and influence. Through a systematic exploration of the literature, this study provides a clearer understanding of how the neighbourhood environment interacts with and facilitates psychosocial wellbeing outcomes as people living with dementia age in place within their community.

The themes drawn from this review enabled the author to synthesize the narrative from the selected papers and explain in detail how the neighbourhood impacts the wellbeing of people living with dementia. Through participants' accounts, such insights are relevant across various contexts, from the simplicity of sitting by a window in the comfort of one's home to casually taking a stroll through nearby walkways or parks. The environment clearly has an impact on wellbeing for those ageing in place with dementia.

Critical themes emerged as significant opportunities that can be harnessed through age-friendly neighbourhood living. Inclusion through engagement and social integration is one such opportunity, voiced by study participants as highly valued and desired (Odzakovic et al., 2019). By carefully designing living communities to facilitate and stimulate meaningful interactions and social reciprocity, social integration can be achieved and sustained (Lloyd et al., 2015).

Neighbourhood design, both in terms of living spaces and outdoor areas that promote interaction with others and with nature, also emerged as a key theme supporting ageing in place and enhancing quality of life for people living with dementia. Simple design elements, such as the strategic positioning of publicly facing home windows or a well-placed park bench, were shown to positively impact psychological wellbeing (Clark et al., 2020). Wayfinding and safe navigation, such as signage guiding residents to the community bus station or indicating walkways leading to a nature preserve, were also relevant in promoting a sense of safety and independence (Seetharaman et al., 2020). Through careful neighbourhood design, the means and goals of ageing in place can be successfully supported, implemented, and evaluated.

Other dimensions of neighbourhood influence also emerged, addressing issues of scale by embracing a resource-based view of neighbourhoods and what can be achieved through them. Supportive environments that promote social citizenship fostered a sense of identity and belonging among many participants (Phinney et al., 2016). Additionally, the need to counter and eradicate dementia-related stigma emerged as a critical goal for individuals ageing in place. Facilitating community-wide engagement and interaction among all residents was a consistent theme throughout this review (Ward et al., 2018). Community resources must be leveraged to promote public awareness, reduce dementia stigma, and strengthen existing neighbourhood structures (Ward et al., 2018).

2.6 Review Strengths and Limitations

This review includes people living with dementia across all age groups, taking into consideration young-onset dementia to later stages. Accuracy and trustworthiness in both the interpretation and synthesis of the findings were prioritized throughout the process. The Critical Appraisal Skills Programme (CASP) checklist was used to assess the methodological quality of the studies, ensuring that only studies meeting high-quality standards were included. To ensure methodological rigor, the results were reviewed and refined through regular discussions with an academic supervisor.

Thematic synthesis, guided by Thomas and Harden's (2008) approach, was used to analyse and integrate qualitative data, allowing for a deeper understanding of the participants' experiences. Quotations directly spoken by individuals living with dementia were included, maintaining transparency and trustworthiness throughout the review. By using an interpretive method (Silverman & Patterson, 2021), underlying themes were identified, allowing the evidence to be organised into a thematic structure that reflects the experiences of the individuals living with dementia. This was a data-driven approach that provided a range of perspectives from multiple qualitative studies.

Despite these strengths, there are limitations to consider. The studies were limited to six geographical regions: Australia, Canada, Sweden, The Netherlands, United Kingdom, and the United States. Whilst the findings may not apply universally to all cultural or regional contexts; qualitative research aims not to represent but to gain an understanding of the depth of experiences in specific settings. The diversity of societal attitudes toward dementia and differences in healthcare systems across regions suggest that further research in varied contexts could enhance the transferability of the findings.

Another limitation is the small number of studies included (fifteen studies). Whilst this is consistent for emerging research, the small sample size limits the diversity of experiences captured and restricts the generalizability of the findings. Future research should aim to further explore the role of neighbourhood characteristics in supporting people with dementia, particularly across diverse settings, and include larger, more representative samples.

In considering further literature, several reviews have examined the relationship between dementia, neighbourhoods, and the built or social environment. While these provide valuable contributions, they also highlight limitations. For example, Gan et al. (2022) offered a scoping review of dementia-friendly neighbourhoods and the built environment, which was useful for informing urban planning, but provided less attention to the lived experiences and wellbeing of people living with dementia. Also, Li et al. (2021) presented a realist review of qualitative studies on neighbourhoods and dementia, though their analysis offered limited synthesis of the specific features of how neighbourhood life shapes wellbeing. Another scoping review authored by Sturge et al. (2021) identified key elements of the social and built environment that support wellbeing at home, but its broad scope combined social and physical dimensions in a way that did not capture the interpretive depth of neighbourhood pieces. More recently, Craig et al. (2024) explored dementia-friendly communities through a realist lens, while Mangili et al. (2023) reviewed the impact of the built environment on health outcomes. Both of these reviews highlight the value of community and design interventions, but their focus remained on the policy frameworks and service perspectives rather than on the subjective voices of people living with dementia.

Furthermore, it is also notable that these existing reviews draw almost exclusively from research undertaken in urban and suburban contexts, leaving rural experiences of dementia largely unexamined. This absence reflects an evidence gap identified in this research study's literature review, where the realities of those living in rural environments are underexplored despite their challenges and opportunities. This review builds on and extends these prior contributions, while also laying the foundation for future research that more fully incorporates rural perspectives.

2.7 Review Conclusion

As the global population continues to age rapidly, advancements in understanding dementia and the concept of age in place offer valuable opportunities to shape the future of older adults, both those ageing healthily and those living with dementia. Moving forward, ageing research should prioritize optimizing healthy ageing while also addressing the needs of individuals experiencing cognitive decline, ensuring they can live with dignity within the comfort of their homes, neighbourhoods, and communities.

This literature review has provided a comprehensive overview of existing academic literature on the wellbeing associated with living in a neighbourhood environment for those affected by dementia. Key themes related to the meanings, concerns, facilitators, and barriers were identified, offering insights into societal perspectives on how to better support individuals living with dementia. The analysis of the data, grounded in the experiences and viewpoints of those living with dementia, highlights the importance of including their voices to inform future research. Additionally, the literature review reveals a significant gap in research focused on rural areas. This gap suggests that individuals living in rural areas may lack opportunities to share their experiences, thereby limiting the overall body of knowledge in this area. This literature review reinforces the need for further exploration is evident. The following chapter will present the methods and methodology employed to investigate the impact of living in rural, age in place communities on the psychological wellbeing of older adults living with dementia.

Chapter 3: Methods and Methodology

This study adopts a participatory approach to exploring how participants experience and interpret their neighbourhood, community, and personal wellbeing. In this chapter, the study's aims, objectives, and participation criteria are outlined. The research design and its underlying philosophical framework are presented. Next, a detailed account of the participant recruitment process and their characteristics is provided. Finally, the data collection methods, specifically interviews and social network mapping, and conclude with an analysis of the data are presented.

3.1 Study Aims, Objectives and Criteria

To address the challenges faced by this ageing population, the purpose of this research study is to explore how people living with dementia in rural areas perceive, interact, and engage with their neighbourhood and community as they age in place as well as the impacts of neighbourhood and community on their psychological wellbeing.

The aim of this study is to understand the perspective of community dwelling residents who live with dementia on how their environments impact their psychological wellbeing as they age in place. More specifically, the objectives of the study are as follows:

1. Explore the barriers and facilitators for adults living with dementia in conducting daily living activities as they age in place within small rural communities.
2. Understand the characteristics of the neighbourhood environment in such rural communities from multiple perspectives including social reciprocity and connectivity, and in terms of community resources.

3.2 Philosophical Approach

This research design adopts an interpretative framework that emphasizes the lived experiences and perspectives of participants, aligning with a qualitative paradigm that

seeks to understand how individuals make sense of their world (Bazeley, 2013). The study follows an inductive approach, meaning that the themes and insights emerged directly from participants' responses rather than being predetermined. This method allows for a rich investigation of participants' subjective experiences, ensuring that diverse and inclusive perspectives are captured.

At the core of this approach is social constructivism, which guided the researcher in considering how individuals with dementia make sense of experiences within the environment. According to this paradigm, meaning and perception of experiences is constructed through interactions with others and the environment, shaping how people view the world (Creswell, 2013). This lens is particularly valuable for understanding the experiences with older adults living with dementia, who are navigating not only cognitive changes but also evolving social relationships and community dynamics.

The influence of family values, community support, and access to healthcare services plays a pivotal role in shaping the experiences of older adults with dementia, especially within rural settings. These cultural and contextual factors are critical in understanding how participants perceive and make sense of their own ageing process (Kane & Kane, 2001). This study recognizes that experiences are shaped by both cultural and contextual factors, and these experiences must be explored to accurately interpret the participants' perspectives. By actively involving participants in the research process, this study strived to reflect the participants' lived experiences and foster a study grounded in empathy, comfort, and openness (Creswell, 2013).

The researcher has a moral obligation to think about and appropriately apply epistemological and ontological considerations, which are like an undercurrent that flows and instinctively shapes the theoretical and methodological process of the researcher's approach while investigating the research question within a qualitative

realm. The epistemological stance (the nature of knowledge) and the ontological assumptions (the nature of reality) played a core role in shaping the study's methodology, guided the study and profoundly impacted how interview questions were posed, data collected, and how the findings were interpreted. These philosophical positions held an integral force to every phase of this research study. In this qualitative research design epistemology and ontology served as the foundational frameworks that shaped every methodological choice considered and chosen. Critical considerations and personal insight were central to this research and was established before the groundwork of this study began.

Given this participant population, ethical considerations were woven into every stage of the research design. The chosen methods allowed for an exploration of the lived experiences all the while maintaining personal dignity.

3.2.1 Positionality Statement

In conducting this study, it is important to recognize the researcher's positionality and how her personal background and experiences shaped the research process. As an insider to the rural community in which the study took place, the researcher shared the same cultural, social, and environmental context as the participants. Being born and raised in the community significantly influenced the researcher's approach to data collection, particularly in building rapport and gaining participants' trust. Familiarity with the community values and cultural expectations enabled engagement with participants that was both comfortable and respectful, encouraging each participant to share their lived experiences and perspectives (Wigginton & Setchell, 2016).

However, the insider status also introduced potential biases. The researcher's deep connection to the community may have shaped the framing and interpretation of participants' narratives (Mishler, 1991). Familiarity with local norms and traditions risked overlooking aspects of the participants' narratives, such as generational conflicts or

unspoken community assumptions - that might be more visible to an outsider (Qu & Dumay, 2011). To address this, the researcher maintained a reflexive journal after each interview to critically examine personal assumptions, emotional responses, and emerging interpretations (Moustakas, 1994). This journaling process helped identify moments when insider knowledge may have influenced meanings, allowing for a more conscious and deliberate analysis.

While the researcher shared a cultural background with the participants, other aspects of identity, such as differences in education and age created potential gaps. The researcher's academic training and role could have introduced a power dynamic, especially since many participants had limited formal education (Qu & Dumay, 2011). The researcher remained mindful of these gaps and consciously worked to ensure that her educational background did not overshadow the interview process. Open-ended questioning and non-directive interview techniques were employed to reduce assumptions and allow participants to guide the conversation (Bryman, 2016).

Despite sharing a background, the researcher occupied a position of authority that may have influenced how participants chose to share their lived experiences. Participants might have emphasized socially acceptable responses or withheld sensitive details (Raheim et al., 2016). To mitigate this, the researcher created an environment that emphasized trust and confidentiality, making it clear that all perspectives were welcome and valued.

Ultimately, the study was shaped by both the researcher's insider status and her personal and professional development throughout the research process. Acknowledging these dynamics promotes transparency and insight into how her background affected the study's design, implementation, and interpretation. Through critical reflexivity and self-awareness, the researcher sought to minimize bias and ensure

the study authentically and accurately reflected the voices and realities of each participant.

3.2.2 Ethical Considerations

Ethical considerations are central to this study due to the sensitive nature of the research topic and the vulnerability of the participant group. Established ethical guidelines for qualitative research were rigorously followed, including obtaining informed consent, ensuring confidentiality, and taking proactive steps to minimize potential emotional distress. Participants were fully informed about the study's purpose, their right to withdraw at any time, and how their data would be used and protected. Recognizing that people living with dementia may experience changing decision-making abilities, consent was understood as an ongoing process rather than a single agreement. Following Dewing's (2008) approach to process consent, willingness and capacity were discussed and revisited at each interview, and sometimes within the same interview. The researcher intentionally spoke in plain language throughout the interview process, observing both verbal and non-verbal signs of understanding, and re-explained the directions or interview questions where needed. On occasion where capacity appeared to change, the researcher paused, clarified the purpose, and sought renewed consent before continuing.

Participant wellbeing was prioritized throughout the research process. Interview settings were chosen by the participant to ensure a sense of familiarity and ease. The researcher remained attentive to both verbal and non-verbal cues that might signal discomfort or stress and adapted the process accordingly. This iterative approach to consent safeguarded autonomy, ensured that participation was voluntary and informed, and aligned with the ethical principles of respect and dignity for persons living with dementia. A commitment to ethical transparency and respectful engagement helped safeguard dignity and build trust, enabling participants to share openly and honestly.

This ethical foundation not only protected the participants but also enhanced the authenticity and integrity of the study. By grounding the research study in a sincere commitment to ethical practice, the study was able to authentically represent the lived experiences of older adults ageing in place with dementia in a rural environment while ensuring rigorous and respectful qualitative inquiry.

Ethical approval for this study was granted by Lancaster University Faculty of Health and Medicine Research Ethics Committee (Reference: FHM-2022-0903-RECR-2). A copy of the approval letter is provided in Appendix 12.

3.3 Research Design

Research design, as defined by Bryman (2016), provides the framework for generating evidence that enables the researcher to answer the research question. To explore and understand the experiences of participants in this study, data was collected and analyzed using an iterative qualitative design method framed by a participatory approach. Participatory research is an inclusive and collaborative process that actively engage participants as active contributors to the research process, rather than view them as simply subjects of a study (Israel et al., 1998). This is an approach to conducting research with, rather than on, participants Cornwall & Jewkes, 1995). In some research designs, participants are deeply involved at multiple stages of the research process, including co-designing questions, methods, and analysis (Cornwall & Jewkes, 1995). While participatory research forms vary, the common goal is to enable participants to play a more active role in shaping the knowledge produced within the research study.

In this study, the researcher adopted a participatory approach that emphasizes inclusion, flexibility, and responsiveness, incorporating creative and flexible methods. Following the principles outlined by Campbell, Dowlen and Fleetwood-Smith (2023), this research approach sought to ensure that people living with dementia were meaningfully

engaged in the research process in ways that reflected their physical and emotional capacities, comfort levels, and preferences. From this perspective, the research methods for this study were selected not only for analytical potential, but also for their ability to ensure participants' voices were recognized and valued (Vaughn & Jacquez, 2020). Rather than expecting participants to conform to a fixed research structure, methods were adapted to accommodate individual needs. For example, participants are given the choice of whether they or the researcher (guided by their direction) take photographs, and interviews are conducted in familiar, comfortable environments of their choosing. This responsive and flexible research approach ensured that this study upheld ethical sensitivity and supported genuine participation, consistent with participatory research that prioritizes empowerment and respect (Cornwall & Jewkes, 1995).

Building on this participatory approach, the following outlines how these guiding principles informed the structure and sequencing of this research design. The participatory ethos influenced not only the selection of qualitative methods (semi-structured interviews, photovoice, and social network mapping), but also how these methods were adapted to accommodate each participants' preferences and abilities. The study design drew upon participatory principles in both the selection and adaptation of methods, employing creative and multi-method approaches to ensure that methodological decisions remained true to the lived realities of participants.This approach aimed to lower barriers to participation and create opportunities for participants to express their lived experiences in ways that were comfortable, flexible, and empowering.

This study also follows an inductive and interpretative research design, allowing themes and insights to emerge naturally from participants' lived experiences rather than being shaped by preconceived categories. This bottom-up approach enabled an authentic representation of participants' voices and realities (Ritchie et al., 2013). The research design prioritizes the subjective meaning individuals assign to their experiences and aligns with an interpretivist paradigm (Bazeley, 2013).

The interviews focus on the participants' home environments, neighbourhoods, and social connections, incorporating a comprehensive framework to explore both the built and social aspects of place. To gain a holistic view of the experiences of older adults living with dementia in rural settings, the study employed semi-structured interviews, photovoice, and social network mapping. These methods formed a process of methodological triangulation, providing layered insights into how individuals make sense of their environments and relationships.

Photovoice, a participatory research method described by Wang & Burris (1997), enabled participants to capture and discuss their lived experiences through photographs, enriching the narrative around their perception of the environment. The incorporation of photography not only enhanced the interpretative framework but also encouraged participants to reflect on and explain the meaning of objects and spaces in their surroundings. For participants who preferred, the researcher took the photographs on their behalf and with their guidance, ensuring inclusion regardless of their ability or confidence with photography.

Social network mapping is used as a methodological tool to visualize the participant's community connections. As outlined by Wasserman and Faust (1994), this technique helps reflect the structure of social dynamics and support systems by mapping interpersonal relationships and interactions. Together, these three methods provide a triangulated, in-depth perspective on how personal experiences intersect with broader social dynamics for individuals living with dementia in a rural community. This multi-method approach supports the understanding of both internal cognition and external social environments, revealing how individuals' identities and sense of belonging are sustained within the communities in which they age in place.

As this study is exploratory in nature, allowing the data to guide the analysis enhances the credibility of the qualitative findings. The research approach taken within this study focuses on the authentic voices and experiences of participants, facilitating a deeper understanding of context and nuance that might be overlooked if using a more rigid

qualitative research design. By allowing the data to guide the analysis, the researcher interpreted and analysed the data, uncovering themes and insights that contributed to a richer interpretation of the research question. Reflexivity remained central throughout the process. The researcher engaged in continuous reflection to ensure personal biases did not influence interpretation, maintaining awareness of how background knowledge and assumptions could shape both data collection and analysis (Palaganas et al., 2017).

This interpretative design model (Bryman, 2016) contributed to a deeper understanding of how people living with dementia make sense of their neighbourhood and community through lived experiences. Firmly rooted in interpretivism, this study prioritizes the subjective meanings and interpretations that individuals assign to their experiences (Bazeley, 2013). Semi-structured interviews allowed participants to express their thoughts and feelings in their own words, fostering a setting in which rich, nuanced narratives could emerge. The incorporation of photography further enhanced this interpretative framework by encouraging participants to reflect on and explain the significance of specific objects in their environment. Additionally, social network mapping provided a visual representation of the participants' relationships and connections within their community, offering insights into how social ties shape their experiences and promote a sense of belonging. Together, these three methods created a layered, interrelated exploration of how individuals with dementia construct meaning from their surroundings, reinforcing the importance of context and personal experience within qualitative research.

Recruitment, data collection, storage, and handling were conducted in accordance with the ethics protocol approved within the Ethics Application submitted to carry out this research (Appendix 12).

3.4 Participant Criteria, Setting, Recruitment and Characteristics

Participants were selected based on the following inclusion criteria: persons who either self-identify or have been diagnosed with dementia and are ageing in place within a rural community-dwelling environment, and are able to provide informed, written consent. Additionally, due to the rurality and areas of sparse populations, no age limits were set for this study. This allowed for the inclusion of people with young onset of dementia. The research study excluded individuals residing in care homes or nursing homes, as the focus is on the psychological wellbeing of persons ageing in place within a community environment. Including individuals residing in care homes or nursing homes would dilute the focus, as their living conditions, circumstances, social dynamics and support structures differ significantly from those ageing in place within the community setting. Participants who are moving out of the area, have severe mobility or communication difficulties, or are not able to consent for themselves to take part in this study were also excluded. Table 5 summarizes the inclusion and exclusion criteria.

Table 5. Inclusion and Exclusion Criteria

Inclusion criteria	**Exclusion criteria**
Adults who self-identify or are diagnosed as living with dementia	Adults living in long-term care setting, care homes, nursing homes, or age-segregated housing
Community dwelling adults living in rural environments	Adults who are planning to move out of area
Able to provide informed consent	Adults who have severe mobility or communication difficulties, and those who may not be able to consent

This research takes place in a rural farming region in west-central Texas, in the south-central United States. Texas is the country's second largest state, bordering Mexico to the south and the Gulf of Mexico to the southeast. The study area is characterized by

wide open farmland, low rolling plains, and expansive skies typical of rural West Texas. Agriculture has long defined both the landscape and rhythm of the community life. Cotton is the most visible crop with fields turning bright white at fall harvest time, while wheat, hay and cattle ranching contribute to the patchwork of fields and pastures. In this rural environment, where agricultural work, long-standing traditions, and the close-knit nature of small farming communities shape daily life, residents face unique challenges ageing in place with dementia. These characteristics provide essential context for understanding the recruitment strategy in this rural community.

The unique challenges of ageing in place in rural communities are influenced by a variety of factors including limited access to health care, social services, and transportation issues. In areas with higher poverty rates, these challenges are compounded, making it particularly difficult for older adults, especially those living with dementia, to ageing in place within their community, a small farming community in Texas (United States of America), is characterized by these difficulties. Ageing in place is often the only affordable option available. To provide a clearer understanding of the context, Table 6 presents relevant demographic and socioeconomic data obtained from the United States Census Bureau (CDC, 2020). This table highlights the community's specific characteristics, which are essential for contextualising the research findings and understanding the real-world challenges faced by these participants.

Table 6. Census data relevant to the study area

People (Census)		
	Population	10,000 (2020 data)
	Persons > 65 years	21%
	Female/Male ratio	49/51

	Races	59.8% White, 2.6% Black or African American, 1.8% American Indians, 1.3% Asians, and 35.4% Hispanic
	Households (families)	3,900
Geography (Census)		
	Total area	1000 square miles
	Population	10 people per square mile
Other Data (Census)		
	Computer at home	82.5%
	Broadband at home	72.1%
	Median income	$45,000
	% below poverty line	14.3%

Recruitment began after ethical approval was secured by Lancaster University, Ethics Committee reference number FHM-2022-0903-RECR-2 (Appendix 12). The researcher aimed to recruit between 10 to 15 participants to ensure depth and variation in the data, which is consistent with qualitative research using purposive sampling (Campbell et al., 2020). The recruitment process resulted in fifteen potential participants, of whom twelve participants met inclusion criteria and were recruited. The three individuals who chose to not participate provided the following reasons: one cited a pending health treatment and could not commit to the time requirements; another had experienced a fall and was unable to meet the study's time commitments due to healthcare therapy; the third participant declined to participate without providing a specific reason.

Participants were identified through local community organisations and regional healthcare providers that offer programmes and services for individuals living dementia. Local general practitioner (GP) practices supported recruitment by placing participant

information sheets (Appendix 7) at their reception area and displaying study flyers (Appendix 6) on an events bulletin board located in the clinic waiting areas.

To broaden outreach, the researcher collaborated with the North Central Alzheimer's Association, an organization serving over 10,000 individuals diagnosed with dementia across fourteen surrounding counties. An Education and Family Care Specialist from the Association shared the study information via email and distributed flyers (Appendix 6) to potential participants following the researcher's presentation at a dementia-related seminar. The seminar, hosted by Area Agency on Ageing, was attended by approximately 100 individuals, including people living with dementia and their caregivers (spouses, family, and friends).

To reach out to individuals who are more geographically isolated, particularly those with limited access to community services and healthcare providers, the researcher placed flyers (Appendix 6) in visible public locations such as local shops, grocery stores, petrol stations, places of worship, and rural post offices. Each flyer included the researcher's contact information, encouraging interested individuals to get in touch for further details. These initial inquiries provided an opportunity for the researcher to explain the study in greater depth and to answer questions beyond what was presented in the printed materials.

In addition to these formal recruitment strategies, informal community networks played a crucial role in participant engagement. The rural community in which the research takes place is tightly connected through familiarity and social ties, and several individuals who participated in the study were familiar with the researcher's background through long-standing community relationships and mutual acquaintances across the study region. While not explicitly planned, this familiarity helped establish trust and rapport – critical elements when recruiting individuals from close-knit rural populations

(Brockman et al., 2023). These connections were approached with transparency and care, ensuring ethical engagement and participant autonomy throughout the process.

Once participants expressed interest, the researcher contacted the individual by phone to provide an overview of the study and arrange an initial home visit. During this visit, the researcher introduced herself, explained the study, read aloud the participant information sheet (Appendix 7), and addressed any questions regarding the study's aims, time commitment, and availability. Participants were given a minimum of 48 hours to review the participant information sheet before deciding whether to take part. This allowed ample time for reflection and ask additional questions.

Upon agreement to participate, a follow-up meeting was scheduled at the participant's home. At this meeting, the researcher discussed the information sheet, addressing each point in detail and explaining the consent form (Appendix 8). Once the researcher discussed confidentiality and the consent form was signed, a demographic form (Appendix 9) was introduced to gather relevant background information.

Questions that informed the demographics:

- *Gender, age at interview, ethnicity, educational status*
- *Current living situation*
- *How long they have lived in neighbourhood or community*
- *Benefits and concerns regarding living situation*
- *Volunteer or organisational activities they participate in*
- *Distance and times/week they travel for social services*
- *Self-identify or have dementia diagnosis*
- *Emergency contact name and number*

The process of recruiting participants and gathering demographic information was essential for ensuring a comfortable and productive interview experience. Additionally, as this was a small community, the opportunity to visit and informally talk with the participant contributed to building rapport and creating an open and supportive environment would be especially significant when working with older adults living with dementia.

The demographic questionnaire served multiple purposes in the process. First, it provided a structured method for collecting the essential background information. Second, and perhaps more importantly, it acted as a conversation starter. It was specifically designed to be an uncomplicated and straightforward conversation starter relevant to the research, giving the opportunity for participants to feel more at ease with my presence and encouraging a comfortable, engaging atmosphere during the interview process. Given the sensitive nature of the study, building trust within a comfortable environment was critical.

Although this approach may not be common in all research studies, it was particularly necessary for this population. Establishing a friendly environment and comfortable atmosphere was crucial for obtaining in-depth insights into their lived experiences. Without this connection, it would have been extremely challenging to proceed with the interviews and gather meaningful data.

3.5 Data Collection

A qualitative research design takes into consideration the framework as noted above when deciding on the data collection process. This study design uses three qualitative methods of data collection to understand the impact of living in rural age in place communities on the psychological wellbeing of adults living with dementia. Using a participatory and visual methods research approach throughout this project, the researcher met with participants and conducted semi-structured interviews.

Data collection included reflection interviews conducted in and around the outside of the house and neighbourhood (Odzakovic et al., 2020), photovoice to capture the lived experiences through visual means (Dooley et al., 2021), and social network mapping (Campbell et al., 2019) to examine both informal and formal supports. The tri-fold methods were chosen for their ability to provide an in-depth understanding of the participants' lived experiences and are in alignment with the social constructivism framework, as discussed in Chapter 1. By incorporating photovoice and social network mapping, the study not only captures the participants' perceptions of the built environment, but also provides a visual representation of relevant topics, concerns, advantages, and values that are central to their experiences. This method also allows participants to express personal and emotional connections to their surroundings, offering a deeper understanding of the factors that influence their psychological wellbeing. Further details and how these methods were integrated into the study are presented in Sections 3.6 (Neighbourhood Reflection Interview), 3.7 (Photovoice in Community Setting), and 3.8 (Social Network Mapping).

To ensure the interviews were conducted at a time when participants were most alert and engaged, careful consideration was given to scheduling them during their preferred times of day. This consideration was particularly important as participants were keenly aware of their optimal time and wanted to ensure they could contribute effectively to the interviews. As a result, they played an active role in selecting the preferred location and time for the interviews. Most participants preferred to interview at their house in the early morning hours. Eight individuals opted for morning interviews, and four requested interviews in the early afternoon. Accommodating interview times allowed participants to be at their most attentive, which enhanced the quality of the data and accuracy of their reflections.

Flexibility in the interview length and scheduling was crucial for accommodating the participants' needs. Each interview was planned to ensure comfort and the researcher's ability to read subtle cues given by each participant was key. Each interview was designed to allow participants to complete the sessions in one, two, or three settings, as the researcher sensed the importance of flexibility and explained that each participant's comfort level was essential factors with each interview. Being adaptable allowed the researcher to create a supportive environment throughout the interview process. Prior to the interview, approximately ten to fifteen minutes was spent engaging in an informal conversation, often about the weather, other times about the current events, and sometimes about small happenings in their lives. This approach not only created a supportive, non-pressured environment but also offered the researcher time to assess the general mood before each interview. Both the researcher and the participant appreciated the flexibility to engage in brief, informal interactions—such as a quick visit, a greeting, a discussion about rescheduling, or an immediate commencement of the session—as needed.

Recognizing that fatigue and anxiety are common among older adults, particularly given the age range of the participants (aged 77 to 99), the researcher approached each interview prioritizing a constant awareness of both verbal and nonverbal signs. As suggested by Duffey & Darley (2000), research indicates that lowering of the voice, repeated phrases, or disconnect between question and answer were all signs of fatigue. According to Mason & Branthwaite (2020), a fidgeting hand or constant tapping of a pen could be construed as a sign of anxiety. When observed, the researcher always offered the choice of taking a break, continuing at a slower pace, stopping the interview completely or returning later. Being respectful, considerate, and observant of the participant's needs was a learning curve that continued to improve throughout the data collection process. Furthermore, positionality played a key role in facilitating this flexible interview approach. The researcher was keenly aware of the dynamics between herself and the participants and was mindful of fostering a respectful and empathetic

atmosphere. Reflexivity helped ensure that the participants' comfort remained a priority.

With consent, all interviews were audio-recorded to accurately capture the participants' verbal expressions, including their regional dialect and cultural nuances. This approach is particularly important in the rural context of this study, where language plays a central role in expressing identity, sustaining community ties, and fostering a sense of belonging (Weil, 2017). They were also anonymized to ensure confidentiality and transcribed manually into text using word documents. The documents were stored on a password-protected computer with an encrypted disk. Additionally, paper copies of the data are stored in a secure locked cabinet owned by the researcher. A reflection document (Appendix 11) was maintained to highlight and summarize the details surrounding each interview in an organised document. It is important to note that before the initial interview it was clearly communicated that participation was completely voluntary and confidential. This was reiterated at the beginning of each interview. The first part of the interviews covered neighbourhood reflection questions, which included questions regarding the perceived benefits and challenges regarding living in the neighbourhood or community. After completing the neighbourhood reflection interview questions, the researcher provided the participants with the option to continue with additional components to the interview process. These included Photovoice, followed by Social Network Mapping. If the participant agreed, the interview proceeded. However, if the participant expressed fatigue, arrangements were made to reschedule photovoice and social network mapping. As a result, interviews were conducted across one to three sessions, depending on the participant's preference, availability and endurance. The flowchart provided below illustrates the sequence and connection between the different interview processes. Refer to Figure 3-1 below.

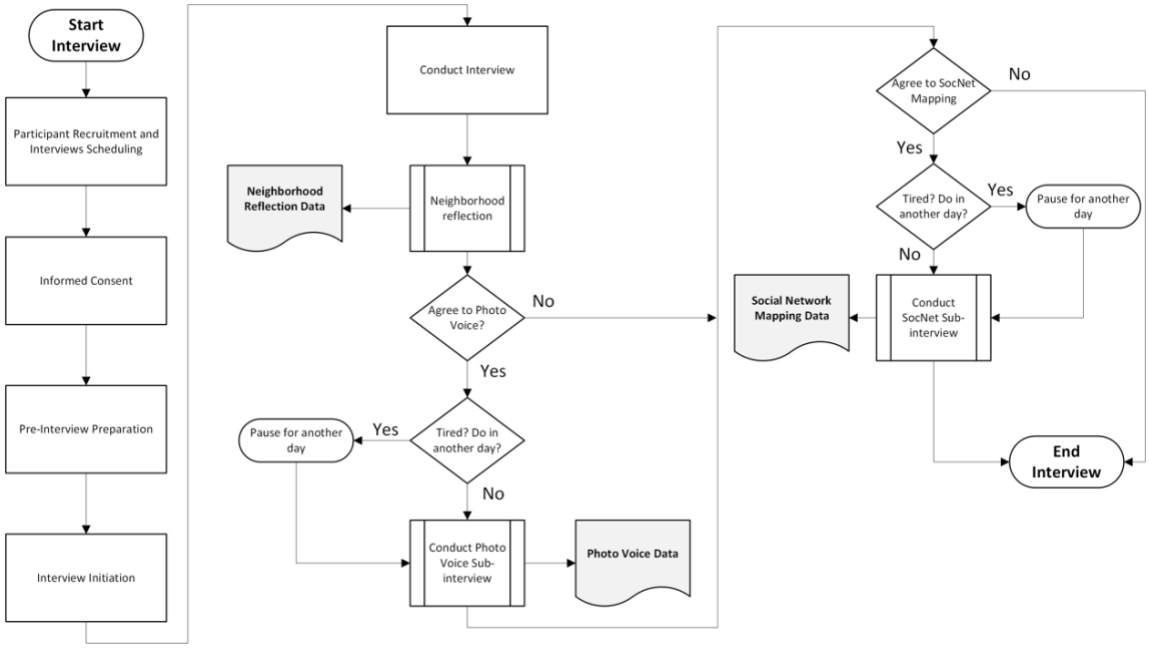

Figure 3-1. Flowchart of the Interview and Data Collection Process

Below, the structure and composition of the three data collection methods – the neighbourhood reflection interview, photovoice, and social network mapping. These methods were used together to provide a comprehensive understanding of the participant's life-experiences and perceptions, employing a triangulation approach to ensure a richer, more holistic view of the data by integrating multiple sources and perspectives (Leech & Onwuegbuzie, 2007).

3.6 Neighbourhood Reflection Interview

This semi-structured interview consisted of a wide range of questions regarding the perceived benefits as well as challenges of living in a rural neighbourhood or community. The questions included describing a typical day and identifying meaningful places the participant visits, all with the purpose of gaining a deeper understanding of how living at home affects daily activities and wellbeing. This interview was termed a reflective

interview because it invited participants not only to describe their current environment but also reflect on their lived experiences, emotional connections, and memories associated with their home and community over time. This reflective element was central to the interview, encouraging introspection and personal meaning-making about place, belong, and transitions.

The interview began inside the participant's home and ended with a mobile component - a walk within the participant's immediate neighbourhood or a community location that was regarded as significant to the participant. A chosen location could be inside or outside of the home (patio, garden), a particular place that holds personal meaning, or a setting tied to routine activities (e.g., coffee shop, grocery store, park). Since participants were residents in a small rural community with limited outside activity options, they often took this opportunity to show the researcher both the inside and outside of their home. While many chose to remain indoors for the interview, others preferred to walk through the garden or neighbourhood. This variability in choice was respected, as the researcher prioritised the participants' comfort and autonomy.

During the outdoor portion, participants reflected on their experiences of living in the area over the years. The mobile aspect of this interview gave them an opportunity to visually express the significance of their surroundings, sharing memories, noting changes, and discussing both positive and challenging aspects of their neighbourhood. This reflection deepened the understanding of how their physical space and social environment shaped their experience of ageing in place with dementia.

Upon completion of the neighbourhood reflection interview, participants were given the option to continue with subsequent data collection methods – the photovoice and social network mapping exercises - to pause and schedule additional sessions, or to end the process altogether. Should they choose to continue, the methods were conducted as planned; however, if participants expressed fatigue, arrangements were made to

reschedule the remaining components. As a result, the data collection process was held across one to three sessions, depending on each participant's availability and endurance. Some participants opted to conclude after the initial session, foregoing the subsequent methods, while others chose to proceed based on their preference.

3.7 Photovoice in Community Setting

In this session, the researcher engaged in a participatory approach that incorporated visual methods (Wiersma, 2011) which discussed the photographs taken or shared, and where the researcher focused to investigate further the relevant research question with focus on benefits and challenges of rurality. The first aim was to capture the meaningful things or places that help/hinder them. The second aim was to capture what excites them about the neighbourhood or community and a third aim being what worries them about ageing in place.

This research method is not uncommon in dementia research (Watchman et al., 2020). It allows participants to express complex ideas using visual communication rather than articulation, which might be difficult for individuals with cognitive challenges (Genoi & Dupuis, 2013). Furthermore, no specific skill set was required to engage with this method, as it focuses on subjective experiences and emotional connections to their environment, rather than technical abilities.

Participants were initially invited to take photographs of objects or places that represented the benefits, challenges, and supports of rural living (Appendix 10). However, to accommodate participants' comfort and preferences, the procedure specified in the protocol was adapted. Participants either shared existing photos or requested that the researcher take photographs in and around their homes on their behalf, with consent for photo analysis. The researcher provided her phone camera and guided the participants throughout the process, ensuring it remained a participatory activity in which the participants directed which photos were captured.

The photography, guided by the participant and taken by the researcher, captured aspects of their home environments and neighbourhoods that evoked feelings of ease, joy, concern, and a sense of history within their life stories. Family photos, religious icons placed throughout the home, paintings that were reminders of nature, a hobby area, and often a pretty view out of the living room or kitchen window were common amongst many participants. The participant and researcher discussed the importance and significance of the photographed objects, which was included in the analysis.

3.8 Social Network Mapping

Social network mapping is a visual participatory method used to explore the structure and dynamics of an individual's formal and informal social connections (Campbell et al., 2019). It typically involves participants using pen and paper to identify and visually represent key people in their lives, capturing the nature and depth of these relationships in a personalized, hand-drawn format. In this study, participants created their own social network maps under the researcher's guidance. This technique offers insight into the practical and emotional support an individual receives and visually illustrates how these social connections influence an individual's ability to age in place, particularly relevant in rural communities where informal support structures may be limited.

The social network mapping served as both a visual creation and conversational tool that encouraged participants to reflect on and articulate the role others play in their lives. The social network mapping session was conducted in the participants' homes, with the aim of exploring the social connections that contribute to the psychological wellbeing among adults living with dementia in rural, age in place communities.

By visualizing their social networks, participants could express and reflect on the practical, emotional, and informational support they receive, and how these connections, in turn, influence their ability to age in place. Given the rural nature of the study setting, where formal services are limited, this method is a particularly relevant

tool used to explore and identify how informal and community-based networks contribute in supporting and sustaining ageing in place with dementia.

The mapping process began with the researcher guiding the participants through a series of open-ended, reflective questions. These questions were designed to facilitate a natural conversation and prompt participants to describe their social environments. These included:

- *Why don't we start with the people you know?*
- *Who are they?*
- *How do you know them?*
- *How often do you see them?*
- *What about people like neighbours or social groups?*

These prompts helped participants identify key individuals – such as family, friends, neighbours, or community members – who play meaningful roles in their lives. The researcher then followed up with additional questions to clarify who these individuals were, how they were known, the types of support they provided, and how often the participant interacted with them. This process encouraged participants to reflect on the significance, consistency, and availability of their social supports. Together, these reflections guided the creation of a detailed, visual representation of each participant's support network.

While social network mapping provides valuable insights, it is also important to acknowledge its potential limitations, particularly when working with individuals with dementia. Cognitive decline may affect memory and recall, which may lead to incomplete social network maps (Roth et al., 2021). Furthermore, network maps may oversimplify complex or emotionally significant relationships, (Cohen et al., 1994) and may not fully capture evolving support dynamics.

Despite these challenges, social network mapping offers considerable value in rural settings. It enables participants to reflect on their social networks and the emotional,

practical, and informational resources they receive. This method also helps to identify both strengths and potential gaps in their support networks, insights that are particularly important in this rural community where informal, neighbourhood and family-based networks often compensate for limited formal services. Overall, the application of social network mapping in this study served as a powerful participatory tool, deepening the understanding of how both formal and informal social dynamics shape the experience of ageing in place with dementia.

Importantly, the social network mapping exercise was implemented in a flexible, participant-led manner. Each participant's comfort level and preferences were carefully considered. While some participants felt confident drawing their own social network maps, others preferred that the researcher complete the drawing for them under their direction. Requests for assistance often stemmed from concerns about making mistakes or difficulties with handwriting. This adaptable and collaborative approach ensured that the mapping process remained inclusive, accessible, and reflective of each participants' individual needs.

3.9 Data Analysis

Using qualitative methods, the researcher employed a participatory, data-driven analysis with an inductive approach, guided by a thematic coding framework. A reflexive thematic analysis (Braun & Clarke, 2006) was applied across all data sources, including the neighbourhood reflection interviews, photovoice sessions, and social network mapping exercises. This triangulation approach (Leech & Onwuegbuzie, 2007) ensured a comprehensive understanding of the participants' experiences by integrating multiple data sources and perspectives, which enhanced the depth and credibility of the findings. Throughout the analysis, the researcher actively engaged in reflexivity, acknowledging and examining how personal experiences, background, and assumptions could shape interpretations. This reflective stance ensured that the analysis remained grounded in

the participants' perspectives, rather than being influenced by the researcher's own interpretations.

The reflexive thematic analysis followed Braun & Clarke's (2006) six-stage method:

1) Familiarizing with the data

All interviews were audio recorded and lasted an average of 53 minutes each. The recordings were played multiple times before the transcription began to enhance familiarity and ensure accuracy. Given the presence of a strong regional dialect and heavy southern accent, certain phrases were occasionally difficult to interpret. The researcher frequently revisited the recordings and, when necessary, sought clarification from participants before proceeding with transcription. This interpretive process (Silverman & Patterson, 2021) supported a deeper understanding of the data and ensured the meanings were fully understood and accurately conveyed from the participants' perspective.

2) Generating initial codes

Following the familiarization process and once confident in the accuracy of the recordings, manual transcription was conducted. Each interviews took an average of over 10 hours to transcribe, resulting in a dataset in total of 178 pages across three interview types: neighbourhood reflection, photovoice, and social network mapping. Upon completion of each transcript, the recordings were revisited to cross-check accuracy and to incorporate significant nonverbal communications—such as pauses, laughter, sighs, and changes in vocal tone—which were crucial for interpreting the participants' intended meanings.

Line-by-line coding was then conducted to develop descriptive themes and preliminary thematic insights. Coding was performed using manual tools such as highlighters, coloured pens, and post-it notes. This inductive and organic process allowed codes to be identified and assigned in the text, linking each to the research question. The researcher worked systematically through each individual transcript, consistently adopting a

reflexive stance by revisiting codes and reflecting on how personal interpretations may have shaped analytical decisions. Codes were not counted, and themes were not predetermined, enabling a more flexible and emergent approach to the data analysis. To ensure consistency and accuracy, the researcher revisited the emerging codes across multiple sessions, reflecting on how her personal interpretations might have influenced the coding decisions. This iterative process allowed for the refinement of codes and ensured that all codes remained firmly rooted in the participants' experiences.

Examples of commonly used codes included: grateful, support, giving, transportation, lonely, carefree, and nature, among others. These codes served as the foundation for identifying broader thematic patterns.

3) Searching for themes

After the initial coding, patterns were examined and grouped into broader subthemes based on commonalities. The researcher clustered similar codes and examined their relationships, enabling the researcher to begin developing a thematic framework where sub-themes were further grouped into main themes.

4) Reviewing themes

Emerging themes were then reviewed for consistency and understandability both within and across the dataset. This involved a critical re-evaluation of the data to make certain that each theme was supported by sufficient evidence and that the themes collectively reflected the overall narrative of the participants' experiences.

5) Defining and naming themes

Once the themes and subthemes were established, they were clearly defined and named to reflect the underlying meaning of each category. Each theme was further refined to capture the participants' perspectives in a concise and analytically meaningful way.

6) Writing the report

The final phase involves writing the findings. Themes and subthemes were articulated through narrative descriptions and supported by representative quotations from participants. These findings are presented in the Findings chapter (Chapter 4) below, where each theme is explored in relation to the research question guiding this study.

Chapter 4: Findings

This chapter presents an analysis of the data collected through neighbourhood reflection interviews, photovoice sessions, and social network mapping exercises. These methods were used to explore the environment and social interactions that participants value as they age in place with dementia. The semi-structured interviews provided insight into the participants' lived- experiences, while the photographs offered a visual representation of the spaces that are valued in their daily lives. In addition, the social network mapping exercise, which revealed the structure of the support systems, shed light on the interplay between personal reflection and social relationships.

4.1 Introduction to the Findings

Data was collected in the Autumn of 2022 from twelve older adults who live in the rural geographic region of West Texas, USA. Ten of the twelve participants were life-long residents of the community, one participant moved into the community four years prior, and one held family ties and relocated back to the community at retirement.

Participants range in age from 77 to 99 years old. Four participants identified as male and eight were women. Using culturally appropriate pseudonyms, Table 7 presents an overview of the research participants according to the degree of rurality in their living environments. These settings range from very rural areas, distant from the town centre with few surrounding dwellings, to medium rural locations on the town's outskirts, to lightly rural areas situated closer to the town centre with a few nearby dwellings. The length of time participants lived in their neighbourhoods also varied, ranging from two years to over 73 years. Throughout the data collection process, all participants mentioned having family members living in the area and maintained frequent social contacts with their friends and neighbours. Table 7 provides a summary of these key characteristics.

Table 7. Characteristics of research participants

Coded Name	Gender	Age	Living Arrangement (Alone/With Someone)	Formal or Informal Care	Approximate years living in the neighbourhood	Geographical Setting
[1] Alice	Female	92	Alone	Informal care from son	70 years	Very rural
[2] Clara	Female	92	Alone	Formal home care 5x/week for meal delivery	75 years	Medium rural
[3] Darian	Male	84	Lives with spouse	Informal care from spouse	32 years	Light rural
[4] Evelyn	Female	83	Alone	Informal care from daughter	30 years	Light rural
[5] Frank	Male	90	Alone	Formal care 5x/week for meal delivery	47 years	Light rural
[6] Iris	Female	77	Alone	No regular care	2 years	Light rural
[7] Jack	Male	88	Alone	Formal care for meal delivery 5x week; informal care from daughter	10 years	Light rural

[8] Jane	Female	86	Alone	No regular care	60 years	Very rural
[9] Julia	Female	89	Alone	Formal care 5x week: food delivery and house cleaning	24 years	Light rural
[10] Kate	Female	88	Alone	No regular care	55 years	Very rural
[11] Nanay	Female	87	Alone	Informal care from two sons	28 years	Very rural
[12] Noreen	Female	99	With son	Informal care from son	70 years	Very rural

In addition to participants' key characteristics, Table 8 provides basic descriptive and contextual aspects of the data collected from participants, indicating which types of activities or interviews they engaged in, the locations where interviews took place, and the number of photos collected during photovoice activities.

Table 8: Participant Interview Participation Dataset

Coded Name	Neighbourhood Reflection Location	Social Network Mapping Participation (Drawn by)	Photovoice	Photos Collected
[1] Alice	Kitchen	Yes (Researcher)	No	0
[2] Clara	Living room and front yard	Yes (Participant)	Yes	7
[3] Darian	Kitchen	No	No	0
[4] Evelyn	Bedroom	No	Yes	2

[5] Frank	Kitchen, backyard, and neighbourhood walk	Yes (Researcher)	Yes	12
[6] Iris	Living room	Yes (Participant)	No	0
[7] Jack	Living room	No	Yes	2
[8] Jane	Home, garden and pasture	Yes (Participant)	Yes	7
[9] Julia	Living room	No	Yes	5
[10] Kate	Living room	Yes (Participant)	Yes	7
[11] Nanay	Kitchen and garden	No	Yes	6
[12] Noreen	Bedroom	No	Yes	16

4.2 Overview of Themes and Subthemes

The analysis of the semi-structured interview transcripts revealed an emphasis by respondents on the decision to live in a community that supports personal growth and wellbeing. The findings shed light on the lived experiences of people living with dementia in their neighbourhoods. The thematic analysis resulted in identifying three main themes: Living Environment, Community Ties and Networking, and Life Lessons. The Living Environment theme (Theme 1) comprised three subthemes: 1) Sense of neighbourhood, 2) Nature and outdoor spaces, and 3) Hobbies and learning. The Community Ties and Networking theme (Theme 2) comprised two subthemes: 1) Support of family, friends, and neighbours, and 2) Support services and social integration. The Life Lessons theme (Theme 3) comprised three subthemes: 1) Acceptance and belonging, 2) Role transitions, and 3) Letting go. The three themes and their corresponding subthemes are shown in Figure 4-1.

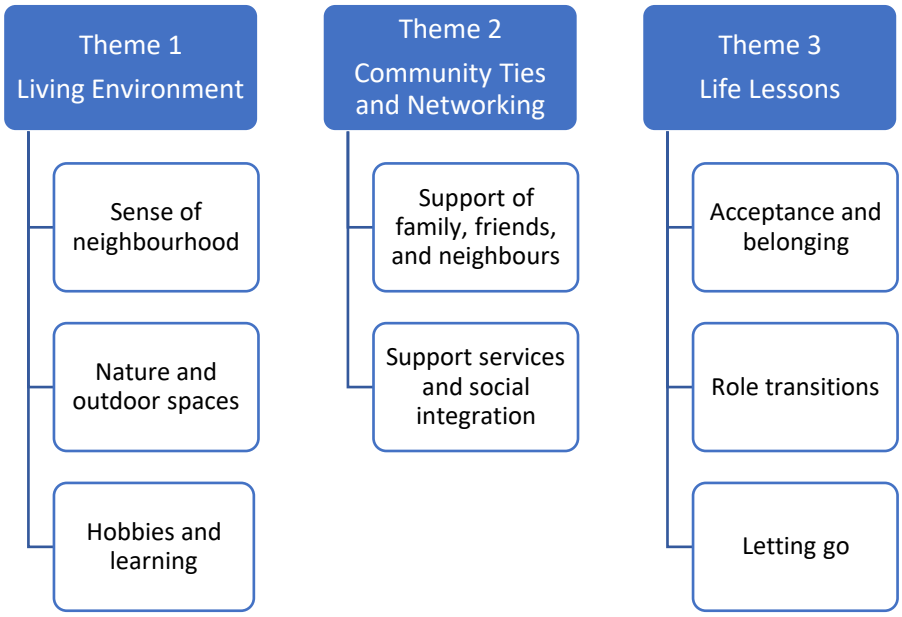

Figure 4-1. Thematic analysis map showing themes and subthemes

Themes and their subthemes are described in the following sections. In line with the focus of this analysis being on the participant's experiences and perspectives, participant quotes, identified in italics, and photos taken during interviews are included as supportive illustrations.

4.3 Theme 1: Living Environment

The theme of 'living environment' emerged from every participant's desire to age in place within a rural community that (1) fosters a strong connection to their sense of neighbourhood, (2) provides access to nature and outdoor spaces, and (3) supports personal wellbeing through opportunities to maintain personal hobbies and continue learning. Ageing in place was often highly valued as a source of independence, freedom, and privacy, contributing to a sense of pride and personal achievement.

4.3.1 Subtheme 1.1: Sense of Neighbourhood

Participants' views on their neighbourhood and community were shaped not only by location of their homes but also by the emotional connection to those places. Rurality seemed to influence how each defined the boundaries of their neighbourhood. Five participants lived in very rural settings (a location miles away from the town centre, and with barely any surrounding dwellings), whereas six participants lived in lightly rural settings (a location on the outskirt of the town centre, and with a few surrounding dwellings), and one participant lived in a setting that can be described as medium rural. This diversity in perspective reflects not just the geographical environment, but also the individual meanings participants attached to these spaces. For participants in very rural settings, neighbourhood was often defined in terms of distance or visual proximity. These participants tended to view their neighbourhoods in distance – sometimes through miles, sometimes only as far as the eye could see, and sometimes only as far as they could comfortably travel. One participant explained this perspective as follows:

(Nanay) Well, there are no borders. My neighbour is your mother and father. They live, what a mile, two miles away? The neighbourhood is all the area that I feel comfortable in driving to.

For Nanay, the idea of her neighbourhood was not restricted to the physical boundary or even the number of people living around her. It was more about her comfort zone, the area she felt familiar with. The lack of clearly defined borders reflects her view and connection to the space, suggesting a sense of emotional attachment that transcends boundaries.

Similarly, Kate, who lives in a very rural area, expressed a strong preference for living in the country, as she felt living closer to a city centre would be too crowded for her liking.

(Kate) No. In fact, I think I would feel very crowded. I grew up in ……. But now, after living all of a married life out here, I think I would feel too crowded living with neighbours too

close, because I know I can look out, and I can see, and I even keep- This may sound strange, but I keep binoculars. If there's anything that I think I want to see a little bit better…And the highway is, I think, about 2 miles that way. I can see all the big white trucks.

Kate's perspective illustrates how her connection to her neighbourhood is tied not only to the physical aspect (the open land area) but also a sense of control and observation. Her use of binoculars to observe her surroundings whilst maintaining a sense of separation from more populated areas, indicates a preference for privacy and a controlled sense of space.

Windows were another feature of the home that connected private lives to public spaces. This feature was not something simply to look through but providing an opportunity of a link for those who could no longer physically participate in this space. Jane, for example, stated the following as she looked out her craft room window (see Figure 4-2) to an expansive outdoor view filled with cattle, pastures, and dotted houses scattered throughout the view:

Figure 4-2: Jane's window

(Jane) But I see them through the window. But it's… it's… they're pretty…but it's not one of them go to things every day.

For participants like Nanay, Kate, and Jane, their rural surroundings were central to their sense of neighbourhood. Their defined neighbourhood was not just a physical place but an emotional space as well. Comfort and familiarity played a significant role in how they are navigating ageing in place within their environment.

While participants in more rural settings viewed their neighbourhood in terms of vast views or emotional attachments to their land, those participants living in a more lightly rural setting often experienced a slightly different and more defined sense of neighbourhood. The closer proximity to neighbours sometimes led to a more structured sense of community, where boundaries were shaped not only by a physical distance but also social interactions. These participants also valued privacy, but their sense of connection was tied to the interactions of those living in closer proximity to them. For example, another participant, Jack, who lives in a more traditional neighbourhood within the outskirts of town, held a different perspective regarding his neighbours and neighbourhood. Jack expressed that his home was simply a place to live. He held little personal attachment to his dwelling or his neighbours around him:

(Jack) Too many people are close to you. It don't… it don't bother me, and fact being, I can't even tell you one of them's names. But one down there I'm supposed to know. She … (talking stops).

Jack's reflection did not give off a sense of attachment or belonging to those living nearby. Instead, he gave off a sense of detachment and indifference as he distanced himself from the social aspects of his environment.

Another participant, Frank, adds another perspective to this view of neighbourhood as he held a more pragmatic stance. Frank lives in a similar light rural setting but has a

more nostalgic attachment to his previous home, which he considers to "feel truly at home" with. He explains below:

(Frank) But I mean I like living here. But like I say, this is a nice home, a lot nicer home than what I had, but that was home down there to me and my mother liked it. [Name removed] Street, and I liked down there. That was home to me. This has never been home to me. Never. I mean this has never been home to me. Never felt like it was. Because…I've never had any neighbours here that I had anything to do with. You know, I got neighbours and we wave at one another but…but I don't…

This quote reveals a complexity of Frank's relationship with his current living situation. Despite his current home being "nicer," his strong sense of attachment to his previous house on [named removed] Street highlights a deeper emotional connection to the place he lived at with his mother. Despite having friendly neighbours and occasional interactions, such as waving, there is a notable lack of meaningful social engagement and a feeling of disconnect. This absence appears to be a key factor in his inability to feel at home.

The repeated emphasis on "has never been home to me" and "never felt like it was" underscores an emotional significance to his feelings and perception. This indicates that Frank's sense of belonging is not grounded in his physical environment, but in the emotional connections formed over time.

For Frank, this quotation displays that a sense of neighbourhood extends far beyond physical surroundings and underscores the importance of social bonds in defining what makes a place feel like home. His experience also highlights the significant role interpersonal relationships and neighbourhood engagement play in fostering a sense of belonging and promoting a sense of positive psychological wellbeing.

4.3.2 Subtheme 1.2: Nature and Outdoor Spaces

For many participants, nature and outdoor spaces were a significant factor in promoting their psychological wellbeing, offering a sense of peace, reflection and a connection to

their environment. Eight out of the twelve participants described how time spent observing nature or enjoying outdoor spaces helped maintain a positive outlook. Nature, for these participants, provided a space for reflection, relaxation, and a connection to their environment. It was not only a physical space, but an emotional one as well.

For instance, Nanay expressed a clear preference for spending time with outside work to inside activities. She felt that being outside brought a sense of peace and was a way to maintain her positive sense of psychological wellbeing. She shared the following:

(Nanay) I am still interested in in doing outside work. In fact, I prefer outside work to inside work…But I can come in the house, and I say, ohhhhhh, this house, you know. A 35-acre field wasn't daunting, but the inside of a house can just make me depressed.

This sense of connection to the natural environment suggests that outdoor spaces were an integral part of Nanay's ability to maintain a positive sense of psychological wellbeing. She contrasts the vast open space of a 35-acre field with the confines of her house, highlighting how her emotional state is deeply affected by her environment. The outdoors, particularly her work on the land, brings out a sense of comfort and ease, while her indoor environment feels depressing and confined in comparison.

Alice, too, finds a sense of positive psychological wellbeing in nature, but in a different way. She expressed that she would shake off the blues by taking a walk outside to clear her mind:

(Alice) Well, you just stay in the house. Well, I do, but I don't like it. (whispers) I like to be outside. That's the best place… And, when I had the blues, I'd just take off walking on the place. I'd go to the creek, I'd just walk around, just looking at everything.

Nature offered an emotional escape. Walking outside, especially by the creek, allowed her to reset her mood and reconnect with nature. These outdoor spaces were not only physical landscapes, but also served as an emotional reset button to help her cope with life's challenges.

Darian's connection with nature is shaped by him being a life-long farmer. Having grown up on a farm, the outdoors has always been an integral part of how he identifies as a person. He describes below how he still finds joy being outdoors, regardless of his age.

(Darian) I grew up on a farm so, you know…I mean I…it gets in your blood, you know. And I miss not being able to do….but I can't….so. I did plough this summer. I run the tractor.

(Darian) I really enjoyed it, you know. I'm real careful and have enough smarts…I know better than to do this or that, you know, if you can't do it you don't do it. But, if I'm on a tractor I'm on top of the world. It's just, you know, it's just part of being…whenever you grew up being on a farm you just…it's in your blood, you know. You enjoy it.

Through Darian's passion in describing farming, one can see the solace and sense of tranquillity it brings him. Being outdoors and farming, for him, isn't just work, it is an essential part of who he is as a person. The joy he finds being on a tractor underscores how nature and outdoor work are inter-related and bind around his sense of purpose and fulfilment. Even as he acknowledges limitations, he still draws immense satisfaction from being outdoors.

Jane, too, finds peace in outdoor spaces, especially with her cattle (Figure 4-3). They provide her with a sense of comfort and pride. She stated:

(Jane) So, that's one of my things I like to do is get the sunshine while I'm at it. Fresh air, watch my cattle.

Figure 4-3: Jane's cattle

She previously had beloved chickens she would sing to every morning. Despite the unpredictable dangers of living in this rural area, like bobcats that would sometimes threaten her other animals, the outdoor environment still brought out a positive psychological connection to her wellbeing. Of all the animals that had come and gone from her life, Jane's cattle (Figure 4-3) were her source of pride and comfort, which further emphasizes the importance on the outdoor connection. Being outside is not simply a backdrop for Jane, it is an active, comforting part of her daily routine that created a sense of belonging.

4.3.3 Subtheme 1.3: Hobbies and Learning

Engaging in meaningful activities provided participants living with dementia important opportunities to stay connected with themselves, their homes, and others in the community. Many participants expressed satisfaction with their living situations and

looked forward to their future endeavours. For Jane, Julia, Kate, Noreen and Iris, simply being at home brought joy and comfort. For Nanay, getting out and about was essential for maintaining a sense of connection and fulfilment. These activities played a significant role in supporting the participants' psychological wellbeing and contributed to their ability to age in place by enabling them to engage with their environment and remain active within their community.

Maintaining hobbies, such as listening to an audiobook, watching TV to keep up with the news, or working on personal projects, were viewed as meaningful tasks that contributed to a positive sense of wellbeing. For example, Jane found comfort and purpose in a variety of activities. She enjoyed watching her favourite TV shows to editing local books written by the local historical group or even quilting or patching worn clothing. Jane expressed the following:

(Jane) I have special TV shows I like to watch. I like to work at my computer editing our books. I like to sew a little bit with quilting, or whatever, patching…or whatever needs to be.

These activities allowed Jane to maintain a sense of structure and accomplishment, underscoring how even simple, routine tasks can contribute to one's sense of self-worth and purpose.

Julia, similarly, valued staying informed about events, seeing it as more than just a way to pass time. It was a meaningful activity that helped her feel connected to the outside world. As she expresses:

(Julia) I watch a lot of news just to keep up with what's going on in the world.

For Julia, this activity of staying informed was a key part of her broader sense of engagement in her life. She also found joy listening to "talking books," another hobby that she valued.

(Julia) And another one that helps me is my talking books. I just……. I have never been bored. And I guess I know my faith helps me. Absolutely. And I watch TV all the time. I watch a lot of news.

Through technology, Julia stayed engaged with her surroundings and maintained her psychological wellbeing. She also used Google as a tool to navigate audio books, play music inside and outside the house, or ask questions she would like to learn more about. As she described:

(Julia) And I have my Google. One on the inside, and I have one on the outside. I played music all the time. And any time I want to know something like if they're talking about a country like where they had the World Soccer Cup, you know? I like to learn, and I ask them things all the time.

In addition to activities like watching TV or listening to audiobooks, engaging in crossword puzzles also served as a meaningful hobby for some participants. For example, Noreen found enjoyment in solving crossword puzzles (see Figure 4-4).

(Noreen) My grandniece bought me this (crossword puzzle) … it's hard to find the words, so…you know, my mentality (laughing). Well, it's something to do.

Figure 4-4: Noreen's crossword puzzle

This activity offered Noreen a way to pass her time within the home, which was particularly important as she navigates ageing in place with dementia. Maintaining mental stimulation through tasks like crossword puzzles helps preserve her cognitive function by applying problem-solving, memory recall, and critical thinking skills. Engaging in this activity provides Noreen with a sense of achievement, which is an important aspect for maintaining self-esteem and confidence. Also, the mental engagement fosters a sense of purpose, which is essential for combating isolation and promoting a positive outlook. These combined cognitive and psychological benefits contributing to her overall psychological wellbeing, supporting her ability to age in place.

As one walks into Kate's house, her artwork is displayed throughout her living spaces (see Figure 4-5). Creating artwork served not only as a source of enjoyment but also a meaningful way to engage with her environment. This personal touch reflects the

significance of her hobby, which she describes as a source of relaxation, as she described below.

(Kate) My hobby has been to watercolour…It's very relaxing. And I don't do it enough, and I haven't done any recently. But I need to.

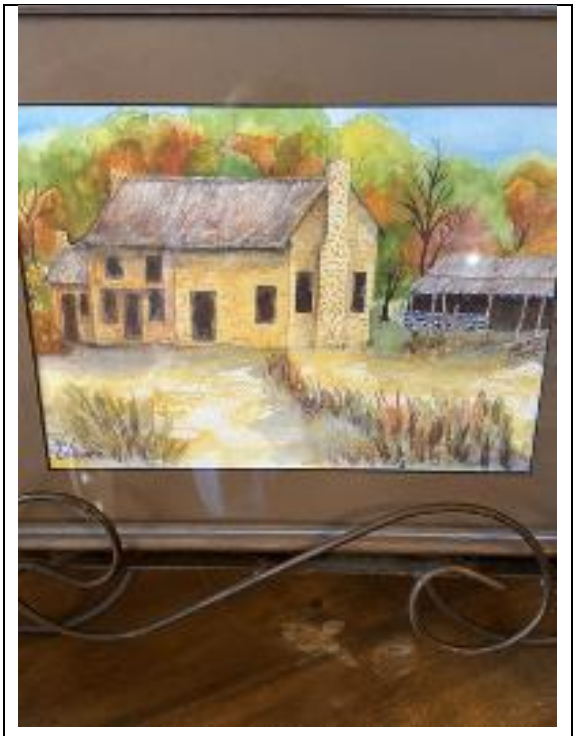

Figure 4-5: Kate's artwork

Tasks such as paying bills, writing letters to friends, and sending out addressed holiday cards were more than just everyday chores for Frank; they were a continuation of a life-long hobby connected to his past work at the downtown theatre, reflecting routines and skills he developed over the years. As he aged, concerns that his handwriting had become illegible led him to use his typewriter (see Figure 4-6), which allowed him to maintain a sense of dignity and independence. The typewriter became a tool not only for completing these tasks, but for sustaining a connection to his identity.

As Frank shared:

(Frank) Oh yeah. It writes and squirls. Real pretty. Here let me show you…It's prettier than my handwriting… I never did write real pretty but that's what I had at theatre when I was manager. I always…and I ended up with it…I do it for everything. Anything I do for uh…What I do….pay bills with my checks and everything. I type with them…Oh yeah, and it probably blows their mind!

Figure 4-6: Frank's typewriter

Rather than showing a loss of control, this adjustment shows how Frank adapted to changes in his abilities by focusing on what he could still do and finding a practical way to stay independent - an example of compensating for change and consistent with the Selection, Optimization, and Compensation model (Baltes & Baltes, 1990). These tasks,

linked to his past experiences, helped Frank maintain a sense of purpose and self-worth, supporting his psychological wellbeing as he continued to age in place.

Iris, the youngest participant, expressed a sense of sadness when thinking of her current inability to engage in her hobby of gardening due to health and mobility challenges. As she shared:

(Iris) I'm perfectly happy with my home, and hopefully by next spring I can……. I love to garden and plant flowers and everything. But lately I've just had such a hard time.

Gardening represented not only an enjoyable activity but also a way to connect to her home and self, which is essential for maintaining psychological wellbeing. When mobility issues began preventing her from engaging in this activity, it highlights the emotional aspect of losing access to meaningful activities, underscoring the importance of supporting such activities for those ageing in place with dementia.

The social network mapping figure (Figure 4-7) illustrates Iris's relationship with gardening and emphasizes how this hobby was interwoven into her daily life and psychological wellbeing. It was not simply about planting flowers, but how gardening allowed her to engage in meaningfully in her outside environment.

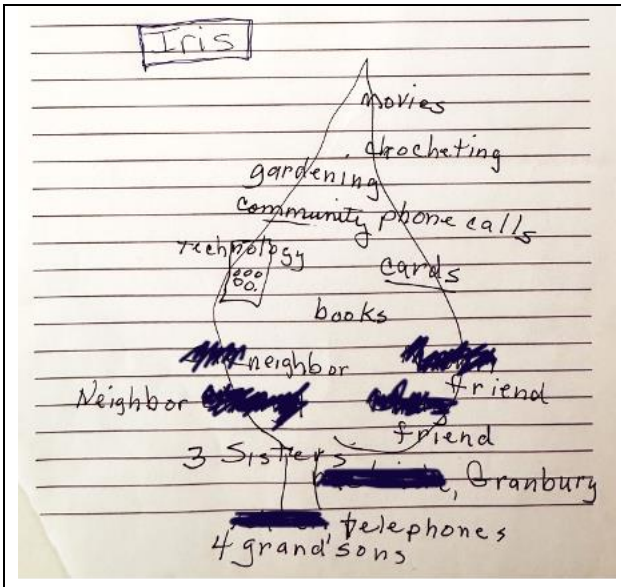

Figure 4-7: Iris' Social Network Mapping drawn by Iris

Iris's sadness reveals the emotional toll physical and mental tolls can take, as they disrupt the activities and hobbies that provide a sense of purpose.

The garden swing (Figure 4-8) placed beside Nanay's side door held special significance for her. While she did not mention it specifically, (yet asked to me to take a picture), it was more than an outside sitting area. This old, worn-out swing symbolized the anticipation of visits from family, friends, and neighbours – a meaningful source of social connection. This seemingly modest swing situated by her visiting door reflected the importance of maintaining relationships and a sense of belonging.

Figure 4-8: Nanay's garden swing

4.4 Theme 2: Community Ties and Social Networking

Community ties and networking emerged as another central them in the participants' experiences of ageing in place with dementia in rural environments. Across all rural settings, support networks such as family, friends, vigilant neighbours, and the connection among long-time friends were valued. Additionally, faith and church involvement were significant elements that contributed to the participants' sense of belonging and emotional support. These networks provided the participants not only a sense of security but also reinforced their psychological wellbeing. The importance of being involved and appreciated by others was consistently reported by those living in the country as well as those residing closer to the city centre. A strong sense of belonging to a community and accessing valuable resources also played a crucial role in easing the challenge of ageing in place with dementia. Across all participants, the value

of social networks in fostering support emphasized the importance of involvement and an appreciation of others.

4.4.1 Subtheme 2.1: Support of Family, Friends, and Neighbours

Family, friends, and most neighbours were the adhesive that held together the ability to age in place as displayed in the social networking maps (Appendix 12). Often referred to as the 'lifeline' for those living alone, particularly for those living in more rural areas away from city services and close neighbours, this social network emitted comfort and independence to the participants. Family ties and friendships, often maintained over a lifetime, unquestionably enabled participants living with dementia to age in place.

Alice, for example, describes her son as being not only helpful but essential in the physical aspects of her daily life, such as providing transportation, but also in offering the emotional support that enables her to maintain a sense of independence and connection. While his presence was considered a blessing, it was also sometimes viewed as an annoyance to Alice, as she took great pride in maintaining independence and doing things her own way. Her son provided transportation, encouragement to stay socially active, and the support that made it possible for Alice to she could not live independently, as she stated below:

(Alice) He does everything for me. He brings me things; he takes me places… He sees that I go to church on Sunday morning. He will call on Saturday and say I'll come and pick you up. And he does, and he takes me to church. And I said, this week I said, (son's name), I don't know if I can sing in the choir…….oh yes you are.

Although Alice maintains a deep sense of independence, her son's presence is crucial, underscoring the support she requires to age in place and remain connected to her community. This balance of support is represented in her social networking map (Figure 4-9), where her son is placed at the centre with a heart, acting as core components between his mother and the connections she depends on. The social support map captures the key relationships in Alice's life, highlighting the strong role of family (son and grandson), faith (church every week) and hobbies (gardening, embroidering, and

quilting), in sustaining her ability to age in place while also enhancing her psychological wellbeing. These supports help her maintain independence, emotional health (faith), and creative activities, all of which are critical for individuals living with dementia.

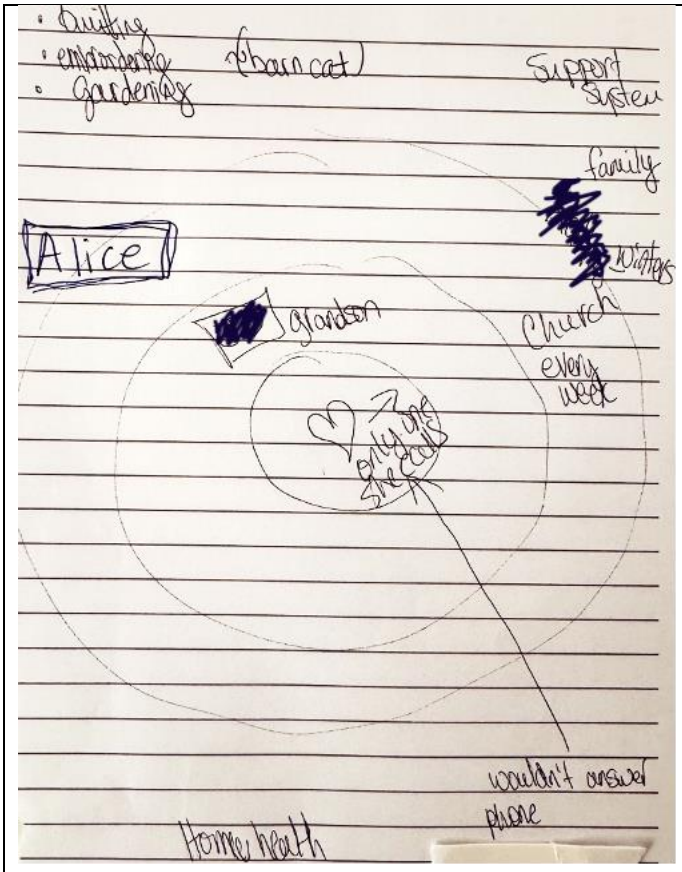

Figure 4-9: Alice's Social Network Mapping drawn by researcher

In addition to close interpersonal ties, spiritual life and church involvement also emerged as central forms of support for many participants. Friends and family, and the reciprocal dynamics within these relationships, were identified as being foundational in helping participants maintain a degree of independence while ageing in place. In addition to these close social ties, the social network mapping revealed that faith also played an important role in participants' lives. Many described their belief in God as a source of meaning and purpose, contributing to a sense of fulfilment and reducing fear

of death. Church was frequently placed within the centre of their map, alongside family and friends, indicating its centrality in their support systems. One participant, for example, made a concerted effort to build new relationships through church functions, which became a meaningful source of support after the loss of a loved one. This new connection helped enhance her outlook and reinforce her sense of belonging during a difficult time. While faith-based networks offered spiritual and social support, the role of family in the day-to-day care was equally important in participants' ability to age in place.

Family support and the act of looking after one another were seen time and time again during the interviews. Embedded in the narratives of Darian and Janee, the importance knowing that family assistance was readily available provided a great sense of comfort. The elimination of concerns about basic needs such as transportation to doctor appointments or practical tasks like taking out the trash bins to the street was not only appreciated but also enabled each participant to maintain their independence at home.

For Darian, the help provided by his son was seen as a gesture of love, rather than an act of duty, as he described:

(Darian) If I need anything, of course, her son…..if we need something my kids are right there. Yeah…oh yeah…..so…..you know, I'm not worried about that.

Similarly, Jane described the support she received from her son:

(Jane) He calls me to see if I need anything, and he's good. Okay, take out my boxes, my trash, he's good to help me move things around.

Transportation was a notable concern for many participants, but it was often addressed within this close-knit rural community. With support from family, friends, and

neighbours, participants were able to access essential services such as doctor appointments and grocery shopping. Whether the assistance was free or involved sharing the cost of gas and time, this support helped participants maintain ageing in place. For those still driving, the fear of losing their driver's licence remained a key concern.

Frank, for example, expressed his fear of losing his driver's licence and the impact it would have on his ability to remain in his home:

Frank) But I don't…no…I'm afraid if I had a wreck I'd lose my driver's licence. See as old as I am…That's the thing with getting old you see…But I get somebody. I pay them and they go in their car and I buy their gasoline and everything. But…Oh no. I don't drive, I mean, because I don't want to lose my licence. If I have a wreck they take my driver's licence away from me…I wouldn't like that. I'd have to sell to get out of this house…That's my biggest fear, yes…Oh, I could live here in my home, but I wouldn't want to live in this house if I couldn't drive.

The importance of transportation is also reflected in Franks's social network map (Figure 4-10), which highlights life-long friends in the centre, a distant cousin he does not want to bother, followed by faith and transportation.

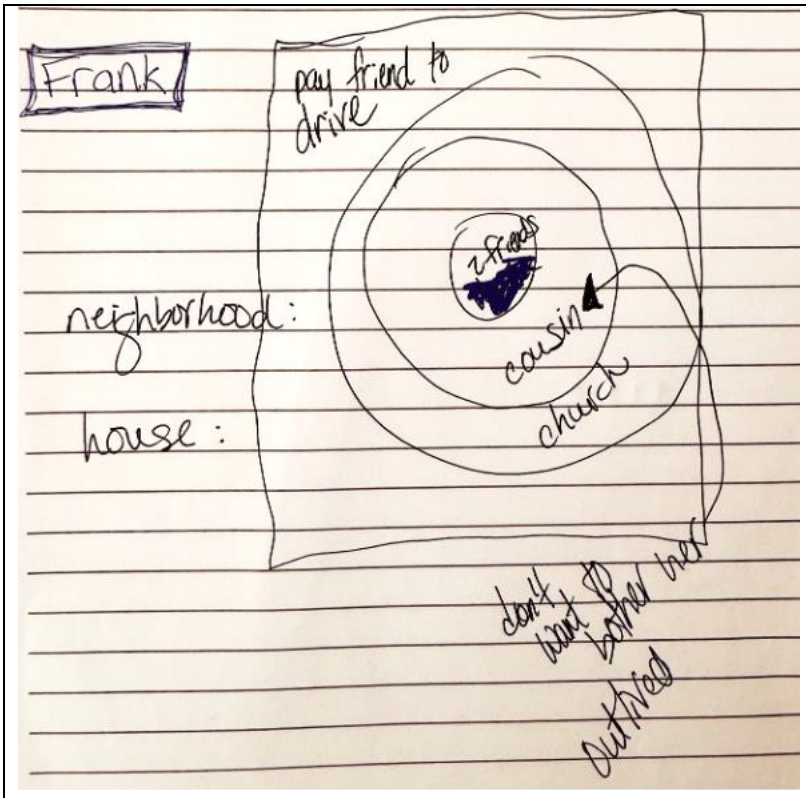

Figure 4-10: Frank's Social Network Mapping drawn by researcher

Clara, who lives alone and does not drive, depends on her family, who support her by taking off work and driving her to the doctor's office:

(Clara) I go to the doctors and my son usually takes me. He takes off work and takes me, and then some…my niece from...takes me to some, and uh…I have my stepdaughter…I showed you her picture. She does lots for me.

Kate, who lives alone and does not drive, relies on her sister-in-law to take her to bible study, the grocery store, and to see friends and family, as highlighted in her social network map (Figure 4-11) below.

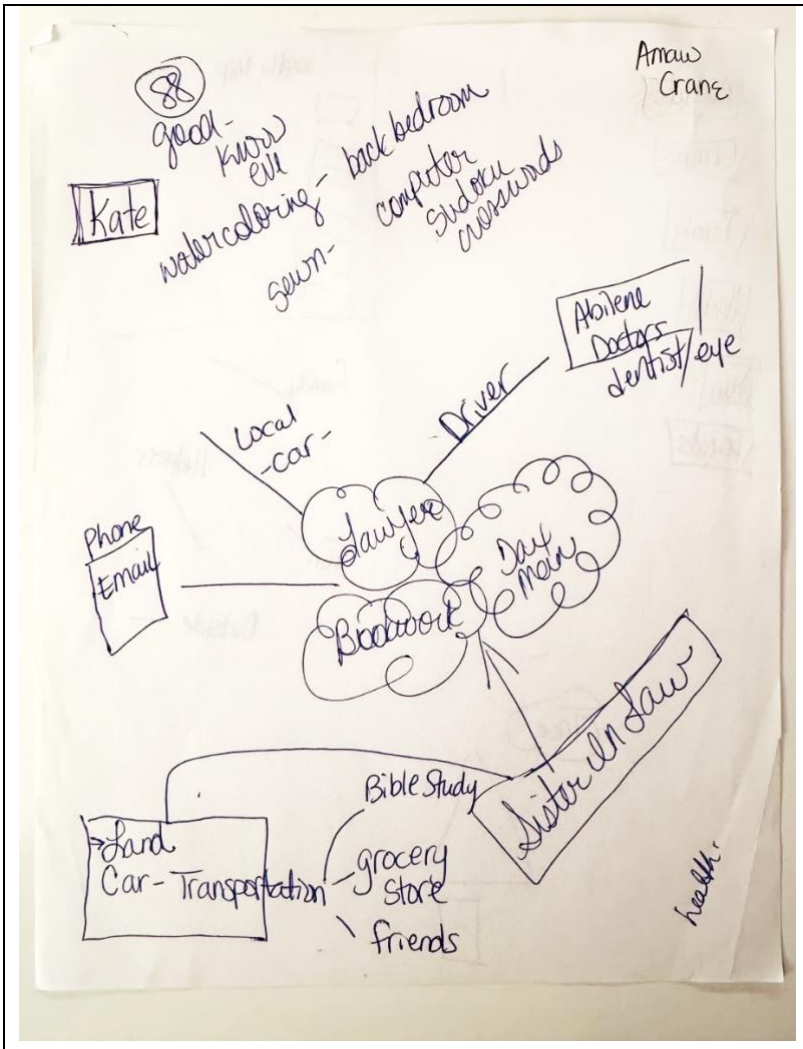

Figure 4-11: Kate's Social Network Mapping drawn by researcher

For one participant with more serious healthcare needs, the support of family became more essential when ageing in place with dementia. Family members were not only practical caregivers but also committed in supporting Nanay's wellbeing. The constant support from family members helped Nanay feel cared for, reducing stress and reinforcing a sense of safety at home, which created a sense of emotional security and relief for participants. As Nanay describes:

(Nanay) But anyway, with Bill checking on me, and if I'm sick, Char and Bill just taking complete control, and they even spent the night at my house to make sure that I got my breathing treatment every 4 hours, you know, and so forth. That keeps me here at home, you know.

This level of support not only facilitated Nanay's ability to remain in her own home but also alleviated any anxiety related to her health, offering both physical and emotional support.

For one participant who had moved away to pursue a better job market and return to the community at retirement, she found connecting to social activities seemed easier than retiring and living in a larger city populated with many people. She also expressed that in smaller communities, making friends and forming connections, as explained below:

(Iris) People are so friendly, and, you know mostly, and you know, I just ummmm, I just had a lot of the big city life, and you don't make friends that easily, except at church. You know, I met some at church, but other than that, it's difficult. Yeah, just don't make friends. It's kind of impersonal.

The sense of belonging in a small town, where friends and neighbours are in close proximity, provided Iris with emotional support, reducing feelings of loneliness and creating a positive sense of belonging.

(Iris) I have a real good friend just down the street, and a friend across town that we play cards a lot. This is just, it's just a good place to live.

(iris) [Friend] lives back there, and if I ever need anything they'd come at a moment's notice.

Another participant, Julia, also made the decision to move to a smaller town in her later years, echoed the same sentiment as Isis. She stated the following:

(Julia) So it's too late for me to move somewhere else and make friends to get established and everything. And if you move where your children are, they have their life, you know. And I really need my own friends, my own activities, and everything like that.

(Julia) Well, their friendship is number one. And they're concerned for me, you know. They'll call me the people that can't come over, or don't come over.

The connections Julia valued in this rural community were not only about proximity, but also about the emotional benefits of shared experiences and a sense of caring for one another. These newly developed relationships played a significant role in her ability to age in place, without the feelings of loneliness or isolation.

Technology such as phones or iPads became useful tools for communicating with and maintaining relationship for participants with family or friends living far away. Jack, for example, used regular calls with his girlfriend to stay connected despite the distance:

(Jack) I call my girlfriend. (laughing)…Well, there's something very unusual if we, one or the other of us, don't call the other every day… Well, we call…we will…Well, we might miss a day now and then. Yeah. But anyway, and uh…she told me about her teeth. She had some rotted off teeth. She's got eight gone and she can't chew.

This communication was an important part of Jack's routine, reinforcing the sense of social support and minimizing the feelings of isolation and loneliness.

Other participants expressed how they cared for others in their everyday lives. There was a strong sense of looking after one another, whether that be family, friend, or neighbour. Some actions and thoughtful gestures included baking goods to give to

others as a kind gesture of appreciation, volunteering services such as sewing for a family in need or editing historical documents for the local historical society [Jane, Clara, Darian, Iris, Nanay, Alice, and Julia]. Lazing around was viewed as a waste of time and not an option for many. These reciprocal behaviours allowed participants an opportunity to engage in thoughtful actions that benefited others, providing not only a sense of personal satisfaction but also a deepened sense of purpose. Having a clear sense of purpose is closely linked to psychological wellbeing, particularly as it supports positive emotions, reinforces self-worth, and contributes to feelings of fulfilment. As Clara suggests below,

(Clara) It made me feel good cause I knew if I did it that they would appreciate it, and they did. So that's…that's why I do things. That's why I have always done things.

This sense of purpose not only enhances psychological wellbeing but also strengthens social bonds, creating a greater sense of community and belonging, all of which are essential for emotional support and wellbeing in later life.

4.4.2 Subtheme 2.2: Support Services and Social Integration

The relationship between the participants and service providers went beyond the typical business dynamic; it was often viewed more as a friendship, one helping another, where both mutually socially benefitted. By utilizing service providers and gaining positive social connections, ageing in place was a reality and not a burden, as Julia states below.

(Julia) She's awesome. And she's a lot of company, and she's a blessing, too, because I have action with other people with somebody else because I just stay in here at home…I have fun communicating with her. If I didn't have her…(long pause) she's very important in my life. If I didn't have her, I'd be missing something.

For Julia, the companionship and emotional support provided by her service provider was crucial in reducing feelings of isolation and enhanced her overall psychological wellbeing by helping her feel supported and socially connected in her daily life.

Another formal service was the daily food delivery coordinated by local churches through the efforts of community volunteers. This service not only helped meet the participants' physical needs but also facilitated social integration by encouraging positive interactions between participants and volunteers. This was two-fold in benefitting both the community and those who received the service. Jack and Clara both acknowledged the positive impact of these services:

(Jack) They bring me Meals on Wheels, and I'll put it up in like a microwave or refrigerator and I'll probably eat breakfast, but I haven't eat breakfast today.

Kate shared how important it was to her to be seen and treated with dignity by her formal service provide, reinforcing the significance of the human connection in healthcare:

(Kate) So now she goes, and the great thing about what a nice person she is, is she treats me, when we go to an appointment, it's like she took her mother. She'll listen and ask questions, and when we make appointments, she takes a picture of my appointment cards…I feel loved and cared for.

Feeling valued and seen by her service provider helped Kate feel cared for as a person, not just a patient. At times, participants would strategically use social interactions to create support for themselves, highlighting how these social skills offered a sense of resilience and helped them navigate situations where they needed support:

Kate may choose to create social attentions to her benefit, as described below:

(Kate) But if I get lost or need help, I stand there and look real pitiful. Somebody will come and help me.

While light-hearted, this is an example of the importance of social interactions in everyday life-situations, helping participants feel a sense of control and connection.

4.5 Theme 3: Life Lessons

The third theme that many participants discussed during the interviews concerns the life lessons they acquired through simply living life. Acceptance and belonging were recurring concepts. Many participants, born and raised in the same area (sometimes even current home), found comfort and pride in the strong sense of connection to their family, friends, and community. These long-standing relationships and familiar surroundings provided a deep sense of belonging. Many participants reflected on the emotional complexity of outliving close friends and family members – expressing sadness at these losses, yet also a quiet gratitude for their continued life and ability to remain part of their community. While participants often lived alone, participants did not view solitude negatively. On the contrary, living alone was valued as a source of independence and freedom. Role transitions, particularly for those who had experienced outliving their family and friends, were often approached with grace, gratitude, and a sense of acceptance, and resiliency. This sense of belonging and acceptance, along with their ability to adapt to changes, appeared to be at the core of the participants' psychological wellbeing.

4.5.1 Subtheme 3.1: Acceptance and Belonging

Many participants mentioned the importance of being accepted as an individual and being grateful for a sense of belonging in a community. They stressed the importance of being comfortable in their personal space and being surrounded by family and friends.

After living in his house for over 60 years, Darian expressed how deeply connected he felt ageing in his home, stating the following:

(Darian) I…I feel comfortable you know. I mean…I always have. I mean…to me…you know. If I have a home, you know, you have a home, you know. And I wouldn't move for

nothing. That's just the way I am, you know. I don't have no desire to go anywhere else or move or nothing.

For Alice, also born and raised in the community in which she still resides, the acknowledgement of being remembered by a student she taught many years prior made her feel valued and connected to her community. She expressed pride in being acknowledged for the impact she had made, as if she had made a difference in someone's world. It provided her with a sense of importance in the life of her student:

(Alice) But do you know that she still knows me (student from years ago)? Right. And she would…she could call me by her name. When her father died, I went to his funeral, and she would call me by my name. She remembered me…And my grandson, he said, grandma, we can't even go down the street that somebody doesn't know you.

Similarly, Iris, who made the decision later in life to move back to a rural area where she once belonged and lived, connecting with old friends and being socially engaged was a sought opportunity, as stated below:

(Iris) so I came back here where I knew a lot of people from when my kids were growing up. (Iris, moving back) So, I had old friends from when the kids were growing up. So it was…..it was just a lot of…..ummm, that's what drew me is that you know that I had a lot of people here that I knew.

Julia also emphasized the need to develop social relationships and seek community and social support. Belonging in a friend group and maintaining her own social network, aside from living close to family, was emphasized:

(Julia) So it's too late for me to move somewhere else and make friends to get established and everything. And if you move where your children are, they have their life, you know. And I really need my own friends, my own activities, and everything like that. It was easier for me to make friends in a small town.

However, acceptance and belonging were at times seen as a challenge in social engagements. Consequently, understanding that life isn't easy at times ultimately leads to letting go and not worrying about others' actions and reactions.

(Clara) I don't understand it either… Life is life, and you know we're all here and it's nice to be…. be needed and wanted and helpful, but…it's not easy…So I just don't worry about it anymore.

Noreen expressed a similar sentiment:

(Noreen) You know, tomorrow I'll be here, the day after, hopefully. What I mean, you just accept life.

4.5.2 Subtheme 3.2: Role Transitions

Role transitions were a common experience. Some welcomed and accepted these shifts and viewed them as welcoming opportunities to transfer responsibilities and undertakings to others. Some even embraced a more relaxed phase of ageing. Others had a more difficult time facing the challenge of adjusting to new realities, making it a point of contention bridging capabilities from previous times with the realities of today. The reframing of responsibilities and maintaining a sense of independence and worth were explored within the interviews. In many cases, role transitions impacted participants' relationships and sense of independence, creating positivity upon their interactions within their social networks. For others, the role transitions were a reminder of what reality once was and now is.

Nanay, for example, embraced her role transition. She looked upon her life transitions as a time to step back from responsibilities se once held and allow others to step in. She found joy in simply being a guest and letting others host celebrations as she took on less

responsibilities than previous years. This transition allowed her the opportunity to enjoy the company of her loved ones without pressures of being in charge:

(Nanay) Use to, I was in charge of the meal. I mean, and everybody came to my house. Now they invite me to their house (clapping). Are you understanding me?...I have turned those chores over and enjoyed every minute. It's so nice to go. And (daughter-in-law), she doesn't even have me help her with any…I don't set the table. I don't even do anything. I just visit with her.

Similarly, Nanay had also just lost her elder dog and was thrilled when her daughter-in-law asked her to help dog-sit when at work. She felt it was not too much of a responsibility on her part, as she could touch base with her family each morning, enjoy some animal-company during the day, exchange dog for another visit late afternoon, and enjoy a quiet house that involved no responsibility in feeding or caring for another living being at night. This offered her a chance to maintain a light role of caregiving without the full responsibility of ownership responsibilities:

(Nanay) So this this was me helping her, and now I'm older, and she helps me, and it works.

This balance of giving and receiving care was a source of satisfaction and emotional fulfilment, enabling Nanay to maintain a sense of connection and purpose.

Alice, on the other hand, reflected on how ageing had affected her independence on a more physical and emotional level. For example, Alice felt her independence was slipping away and mourned the loss of abilities and activities she once enjoyed (shopping, laundry, gardening), as explained below.

(Alice) Cause it slows me down. I still don't get to do what I wanted to. I like to go shopping with David, or with the girls, we use to do that all the time and do my laundry and hang it out on the line, and I love to garden, and…I just like it when I can do for myself. I'm not doing for myself right now.

And from a more pragmatic point of view, Darian accepted this transition as being a factual and unavoidable part of life, as follows:

(Darian) As you get older you can't do little things anymore, you know. I can't get on a ladder…you know…my balance and all that. There's just things you can't do. That part of it, as far as your age, you know. There are things you can't do that you'd like to…but…

4.5.3 Subtheme 3.3: Letting Go

Beyond the importance of role transitions, participant's attentions were focused on reflections regarding once being a part of and then slowly drifting away from life-long family and friends as the life transition and social relationships changed over time. For some, the loss of close friends and family created an emotional void, but it also changed their perspective, where memories were cherished and a source of continued connection.

Having outlived many friends, Frank faced the emotional pain of their passing yet chose to remember the good times they shared. He accepted the life-challenges and maintained a personal desire to grow and remain engaged in life.

(Frank) See when you lose all your close friends, which I have, I just had parties and stuff. See, and I don't have that anymore. I've outlived all my close friends that I run around with. It's kinda sad…I mean…you know…

His bedroom was a haven of memorabilia, records, travel artifacts, photographs and paintings of times gone by. Though isolated from those who had passed, Frank did not deny the ageing process, rather, he held a realistic and positive outlook. As Frank passed by his record collection, he expressed sadness, though still acknowledging having a good life as he stated the following:

(Frank) I still listen to stuff, but I get sad when I play all those because I miss all my friends. We would go dancing and all that stuff and you know…I had a good life…yeah.

(Frank) But you know I don't put this stuff away because I still feel like I'm with them. When you're lonely, you know lonely, you know, and I get people say why don't you put that stuff away? And I say: This is my bedroom and I'll have the damn thing however I want it. Junky.

In contrast, Nanay took a more practical approach to letting go by decluttering her home. She did not want to leave mounds of 'life clippings' scattered throughout her house. Instead, she began decluttering her life basket by basket (Figure 4-12). This act of simplifying her surroundings was, for her, a simple way to ease the burden she would leave on her children while also gaining a sense of control over her surroundings:

(Nanay) I have them empty! I am so proud! That's what I've been doing is working on papers. I said, This. Is. Clutter. Nanay, you're going to get rid of all this clutter. I have worked a week. I have. I'm still down to one. Just that table is full, and when I get through with that, I will have done all five of those baskets.

(Nanay) Do you know what my kids would do if they came in this house and they saw, oh, five baskets of that? So, I'm doing it for them, and the things I have left will be very important.

Figure 4-12: Nanay's empty baskets

Along the line of more abstract thoughts, Alice and Jane expressed the importance of resignation and acceptance. By maintaining positive thoughts and tapping into life-long knowledge, letting go and moving on was not only attainable, but welcomed, as stated below.

(Alice) Uh huh. And everybody around, we would…my special friend was my same age. She died and I missed her. But I bet she's happy. That's what she wanted, and that's what I want.

Jane embraced the concept of letting go by passing on pieces of family history, transferring celebrations she once hosted to others, and enjoying watching her family and friends created their own life-stories. She expressed her importance in allowing the next generation to create their own life stories, as described below:

(Jane) I don't want it always to be about me. I want to pass a little bit of this along that they can establish their own homes with their own families, and I don't want everything

to be always here, cause they need to be making memories, too…It's the round, full circle of oh a good thing. A very good thing.

At the heart of Jane's social network map, she placed faith, family and friends at its core (Figure 4-13), underscoring the significance of these relationships in shaping her sense of identity and wellbeing. In addition to this, Jane wrote a booklet titled *My Story*, which is a personal remembrance of her life. Through both her reflections and actions, Jane exemplifies the value of letting go and encouraging others to create their own stories – a vital part of the ageing process and psychological wellbeing.

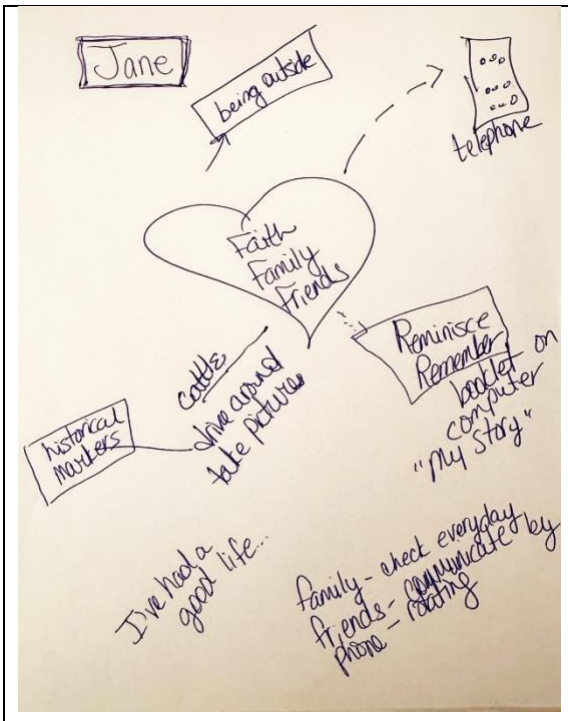

Figure 4-13: Jane's Social Network Mapping drawn by researcher

Chapter 5: Discussion

The purpose of this study was to explore, understand, and report on lived experiences and psychological wellbeing of those living with dementia in rural communities. The study presented an opportunity to explore older people's perceptions of ageing in place in their homes and neighbourhood and investigate relationships with their built and social environments. The research was directly structured to focus on the lived experiences and narratives of adults living with dementia within rural communities. Evidence demonstrated that participants ageing in place in rural environments lean on both the built and social environment to support personal wellbeing. Within the literature review in Chapter 2, it was found that neighbourhood cohesion, neighbourhood structure, and neighbourhood influences all impacted the psychological wellbeing among people with dementia as they age in place.

The discussions below address the research question, *"What is the impact of living in rural, age in place communities on the psychological wellbeing of older adults living with dementia?"* The three main themes arising from the analysis (as presented in Chapter 4) are discussed in the next few sections in detail to compare them and examine their relevancy within the context of existing literature. The discussion then progresses to how to build an exploration of sustainable support within the ecosystem, healthcare services, and formal support systems. This is then followed by a reflection of the overall study, including its limitations and successes.

5.1 Redefining the Neighbourhood

In the context of rurality, participants' responses describing the neighbourhood were often visual, shaped by what was within view of their homes. For some, the neighbourhood was perceived as a logical or abstract concept – measured in driving distances from key locations – while others viewed the neighbourhood as an expansive

area without clear boundaries. These findings suggest that, for some, a sense of place and belonging went beyond geography or proximity.

This aligns with the findings of Clark et. al (2020), Li et al. (2021), Odzakovic et al. (2020), Phinney et al. (2016), and Ward et al. (2018), who report that neighbourhoods are experienced as more than a structure of lined houses or walkable areas. Rather, they are constructed through supportive networks and meaningful social interactions. In this sense, the concept of neighbourhood reflected participants' lived experiences, emotional attachments, and their relationships rather than by fixed geographical boundaries. This interpretation connects closely with place attachment, which highlights the emotional connections and personal meanings individuals associate with the places where they lived and spend their time (Rowles, 1983; Wiles et al., 2012).

These findings reflect and expand upon the earlier work of Purcell & Lamb (1998), who explored how individuals in various environmental settings, including rural ones, conceptualize and interact with their neighbourhoods – often viewing them as expansive and less constrained by physical boundaries. Similarly, Wister et al., (2010) suggests that in rural areas, neighbourhoods are often perceived as promoting a strong sense of community and social cohesion among residents, emphasizing relationships and support networks. However, Luloff & Swanson's (1995) earlier research highlight that rural communities can vary significantly in their social dynamics and support systems, challenging the idea of uniform community cohesion across rural areas and underscoring the complexity and diversity within rural community life. It also echoes Rowles' (1993) argument that the meaning of place in later life is layered - rooted in personal history, embodied experiences, and daily routines – and that these layers are continually changing through interactions with the environment.

Participants in this current study inevitably defined their neighbourhoods not simply by geography, but through their relationships with others. Neighbourhoods were experienced as both places of residence and sites of interaction with neighbours, friends, family, service providers, shop clerks, and healthcare workers. These social

interactions played a crucial role in shaping their sense of community and wellbeing. Such connections exemplify how place attachment develops through social interactions and shared experiences, reinforcing both emotional security and a sense of identity within the community. This study's findings resonate with those of Glover et al., (2019) and emphasize that neighbourhoods are defined not only by their physical boundaries, but also by the social interactions and interpersonal relationships within them. Additionally, neighbourhoods were also shaped by everyday practices and gatherings that were central in the participants' lives such as attending religious services, participating in social community groups, or simply sitting outdoors and engaging with nature.

Li et al., (2021), in a study that aligns with the present findings, identified the neighbourhood composition for individuals living with dementia as threefold: 1.) a place to live; 2.) a product of their interactions with people, resources, and places over time; and 3.) a reflection and interpretation of their emotional attachment to a place. The narrative reflections and visual data (e.g., photography) in this study reinforce and extend these dimensions, highlighting that fixed boundaries and structures played a less significant role than lived experience and meaningful engagement.

~~A~~s this study's findings demonstrate, participants in rural communities reported greater satisfaction with their lives, attributing higher value to their surroundings and feeling more connected to their experiences and social relationships compared to participants living closer to a town centre. This supports key factors of psychological wellbeing, including life satisfaction and the sense of meaning and purpose that come from strong community ties and familiar environments (Afshar et al., 2017).

Contrasting findings from Henly & Brucker (2023) suggest that in the United States, individuals living with a disability in urban areas reported a higher life satisfaction than their rural counterparts. This discrepancy underscores the need for a more targeted investigation into how neighbourhood environments relate to psychological wellbeing,

particularly for people living with dementia. Additionally, and building upon this, as more individuals with dementia express a preference to age in place within familiar environments (Choi, 2022), understanding the interplay between neighbourhood context and wellbeing – across both rural and urban settings – is essential. This understanding is essential for developing inclusive and supportive built and social environments, informing holistic approaches to care, and ultimately enhancing quality of life.

5.2 Living Environment

The themes "Nature and Outdoor Spaces" and "Hobbies and Learning" that emerged from the interviews in the current study underscore the critical role these elements play in promoting the wellbeing of older adults living with dementia. Staying connected with nature and engaging in physical and mental activities directly contribute to emotional and psychological wellbeing, aligning with the existing research on the social determinants of health, which are non-medical factors that influence health outcomes. Mattos et al., (2019) examined how the perceived social factors, including engaging in physical and mental activities, impact the wellbeing of older adults living with early-stage cognitive impairment living in rural areas. Similarly, the findings of this study align with those of Mattos et al., (2019) as participants in this study also valued engaging in hobbies and outside activities as key contributors to their overall psychological wellbeing.

Considering life expectancy is often used as a broad indicator and measure of health, the participants in this study, whose average age was 88 (with four of them over 90), challenge the traditional notion of age being a limited factor for wellbeing. This study extends the findings of Mattos et al., (2019) by suggesting that engaging in hobbies and social activities, regardless of cognitive function or age, is beneficial for psychological wellbeing. While this study did not medically classify participants based on the stages of cognitive impairment, all participants were living independently, either alone or with a family member.

The psychological wellbeing of participants was also reflected in their perception of comfort and affinity to the outdoors. These factors were linked to both emotional wellbeing and a sense of life satisfaction. Comfort, especially in familiar settings such as the home or outdoor spaces, was consistently expressed by participants as being highly valued. Sitting on a bench, watching a sunrise or sunset, listening to a tractor plough the land, anticipating a migration of birds coming through the area, or simply enjoying the peaceful silence and breathing fresh air was associated with a positive sense of wellbeing. These moments lifted their spirits, alleviated feelings of sadness, and contributed to their emotional balance. This sense of comfort is associated with being in an environment that is quiet and predictable. This connection to nature seemed to lift spirits, mitigate feelings of melancholy, and provide fresh air that was essential to their wellbeing. This connection to nature seemed to give participants a sense of stability, predictability, and autonomy, all of which are foundational elements for maintaining psychological wellbeing in older adults (Clarke et al., 2016; Li et al., 2021; Lloyd et al., 2015; Mattos 2019 Ward et al., 2021).

However, the study also found that participants expressed feelings of depression upon returning home after social outings or simply coming inside their home after spending time in their outside spaces. This contrast between the engagement and social stimulation of the outdoors and the quiet nature of a rural home environment was attributed to heightened feelings of loneliness and social isolation. This in turn negatively impacted psychological wellbeing among participants. These feelings of loneliness were often expressed among the participants who were ageing in place alone, where some felt their home environment lacked the social interaction and engagement of the outdoor environment. As Cattan et al., (2005) and Chung et al., (2016) highlight, the lack of social interactions inside the home can heighten negative emotional responses, leading to a decline in life satisfaction. Additionally, as previously discussed, Mattos et al., (2019) suggests that a living environment that lacks supportive social networks and engaging activities may contribute to negative impacts upon wellbeing. The study's

findings suggest addressing both the home environment and community connection as an intervention to reduce social isolation and enhance psychological wellbeing.

5.3 Social Networks

The theme “Community Ties and Networking” emerged as a central factor in promoting the psychological wellbeing of older adults living with dementia in this rural area. Participants repeatedly emphasized the importance of social connections, particularly with close family, friends, and neighbours, as a key to supporting their ability to age in place. This was also noted as being a key to enhancing psychological wellbeing and lessening the feelings of isolation. For participants living in more rural areas where close neighbours and city services were often limited, these social exchanges were essential in mitigating feelings of social isolation and enhancing life satisfaction. Embedded in participants’ narratives was a sense of profound comfort and deep appreciation for their social connections and community ties, which they frequently refer to as a “lifeline” in their desire to maintain independence and age in place. A growing number of researchers including Clark et al. (2020), Clarke et al. (2016), Li et al. (2021), Mattos, et al. (2019), Odzakovic et al. (2020) and Ward et al. (2018) have all concluded that social networks within the lived environment hold a positive impact on those living with dementia and play a vital role in their psychological wellbeing. These social exchanges not only provide emotional support but also practical assistance. Study participants mentioned the importance of networking, though mainly with close friends or family, to fulfill everyday living needs such as transportation to grocery stores, pharmacies, and doctor appointments.

Participants highlighted the importance of networking with family, close friends and neighbours as crucial for ageing independently in place. This reliance on personal networks underscores the significant challenges faced by individuals with dementia, particularly in rural areas, where access to healthcare services and transportation is often limited (Alzheimer’s Association, 2019). Despite the critical role these personal

networks played, participants reported challenges in accessing broader community resources. Notably, all participants reported being unaware of and lacking access to Dementia Friendly America –a national initiative focused on enhancing community support for those with dementia. To address these gaps, targeted outreach initiatives are essential to complement existing social networks and improve overall support for those living with dementia.

Efforts to help individuals with dementia to age in place in rural areas have received attention from local governments across the U.S. For example, the Texas Department of State Health Services (DSHS) implemented a public health plan to guide healthcare providers in addressing the health and wellbeing needs of those living with dementia. As outlined in the "Texas State Plan for Alzheimer's Disease 2019-2023" report (DSHS, 2019), the State of Texas emphasizes the importance of fostering social exchanges. The plan outlines priorities for approximately 390,000 Texans living with dementia at the time of this research study and highlights recommended goals and action strategies. Specifically, the plan addresses strategies to combat stigma, improve public awareness, and enhance community engagement. The report provides a guiding roadmap for healthcare officials, social agencies, and community service providers, focusing on key enablers for partnerships and engagement. These efforts are aimed at improving access to resources, educational materials, and overall support for individuals with dementia, aligning directly with the findings of this study.

Gracefully accepting emotional and physical support from a friend or family member was generally more acceptable than asking or accepting assistance from a lesser-known individual. In this rural setting, participants often relied heavily on their close-knit social networks, family, friends, and neighbours, for both emotional and practical support. These strong, social networks can play a crucial role in providing support and maintaining dignity for individuals with dementia, as formal services were less accessible in this rural

area. A key characteristic observed in each participant was that dementia was subtly referred to as a transition or challenge; none of the participants directly mentioned the condition itself. This may reflect the resilience on close social networks to help manage living with dementia without openly labeling it, a strategy that allows individuals to avoid stigma while maintaining their social role within the community (Clarke et al, 2016). Although there is a common misconception in thinking that dementia is merely a part of the ageing process (Cahill et al., 2015), the participants did not relate their age to their diagnoses. This may have been due, in part, to the strong social networks in rural areas, where individuals with dementia may fear the social consequences of being seen as different or dependent upon formal care (Wiersma & Denton, 2016). These social networks may also mitigate perceived stigma (participants may think people view them differently for having dementia), actual stigma (feeling discredited in social interactions), or issues with personal acceptance, by providing support in ways that preserve autonomy and dignity (Swaffer, 2014). In rural areas, where formal dementia services are often scarce, these informal support networks become even more vital, but they can also create tension around personal acceptance, as individuals may struggle with the idea of relying on others in a rural community where self-sufficiency is highly valued (Gergen & Gergen, 2000).

The findings of this study are supported by substantial theoretical literature on community ties and networking, particularly the Socioemotional Selectivity Theory (SES), proposed by Carstensen in 1995 and discussed in Chapter 1. According to SES, as adults age, they become more selective in prioritizing emotionally fulfilling relationships. Carstensen et al. (2000) indicated that as adults age, personal support systems become more selective and tend to shrink, with older adults placing greater emphasis on avoiding negative influences. In other words, older adults tend to have fewer social circles and tend to create their social circles more intentionally. They focus on relationships to include those who bring about positive emotions all the while deliberately avoiding those who induce stress or negativity.

The Socioemotional Selectivity (SES) Theory aligns with the findings from this study, particularly in the way individuals with dementia navigate their social relationships. As dementia progresses, maintaining social connections can become increasingly challenging. However, the participants in this study demonstrated a clear reliance on familiar social networks, primarily family, friends, and neighbours, to provide both practical assistance and emotional support. These social exchanges with family and friends were not only emotionally fulfilling but also critical in meeting the practical needs such as daily care. This finding not only corroborates SES, suggesting that, as cognitive decline progresses, individuals may continue to prioritize relationships that provide comfort, support, and emotional security, but also extends its application to rural settings, where social networks are even more critical due to geographical isolation and limited access to formal care services (Carstensen, 1995; Clarke et al., 2016).

Furthermore, this current study highlights a crucial aspect of SES that has not been sufficiently explored in existing literature – how individuals living with dementia adapt their social networks as their condition progresses, particularly within rural environments. As individuals become more dependent on select social circles, it is necessary to explore how loved ones, and close-knit social networks can adapt to these changes, ensuring that the support system remains both sustainable and effective. This aligns with the work of Odzakovic et al. (2020), who argues that informal support network adaptations are central to successful ageing in place within the environment. This finding contributes to moving beyond deficit-based narratives of dementia by highlighting the strengths and capabilities of individuals living with dementia. Rather than portraying people with dementia solely in terms of loss or decline, this study illustrates their retained ability in maintaining emotionally meaningful relationships, and the adaptive capacity of their social environments to provide support in ways that preserve their wellbeing.

Ultimately, understanding the motivations behind ageing in place in a rural community is vital for recognizing its implications on psychological wellbeing. Participants overwhelmingly reported that community engagement, along with social and emotional support, plays a crucial role in shaping the health outcomes of older adults living with dementia in rural settings. These findings build on the work of Mattos et al. (2019), who emphasized the importance of addressing both social and medical factors when discussing the overall health and wellbeing of individuals living with dementia. By enhancing social networks and creating supportive environments, rural communities can provide meaningful solutions that improve the quality of life for older adults. The insights provided by this study offer a deeper understanding of how rural social networks are leveraged for those ageing in place with dementia and contributes to the ongoing discourse on the role of community-based services in supporting ageing in place for individuals living with dementia. (Smalls et al., 2023).

5.4 Attachments, Acceptance and Belonging

Another key observation that emerged from this study is the way participants described their emotional bonds with familiar environments, particularly their homes and neighbourhoods, reflecting what is often referred to as place attachment. Rather than attachment in the interpersonal sense, this attachment refers to the deep emotional connection individuals form with meaningful places over time. Reflecting on their lives, participants expressed how the structures and places they knew so well provided a profound sense of comfort, stability, and continuity in their lives, which directly contributed to their psychological wellbeing.

In the context of the Ecology of Ageing Theory (Lawton & Nahemow, 1973), emotional bonds between people and their surroundings are a key part of how well individuals fit with their environment. These attachments go beyond practical support, turning places into sources of memory, identity, and stability that help people cope as their abilities decline (Wahl & Oswald, 2012). Rowles (1983) and Rowles & Bernard (2013) describe

this sense of “insideness” - a deep belonging that develops through repeated engagement with familiar settings. From this perspective, place attachment represents the emotional and symbolic dimension of the Ecology of Ageing, linking environmental context to the lived experience of ageing in familiar surroundings.

In this study, eight of the twelve participants had lived in the same home for decades, beginning married life and raising children there. Their long-term residence illustrates how stable, meaningful environments sustain continuity, identity, and psychological wellbeing, helping individuals with dementia maintain a sense of self even as cognitive abilities change.

This sense of emotional security and belonging tied to their attachment to place concurs with Giuliani (2003), who found that place attachment creates a positive emotional bond between a person and a particular place or meaningful environment, enhancing their overall wellbeing. For participants, familiar places and people were seen as a source of comfort and emotional stability – a critical factor in maintaining psychological resilience and reducing feelings of isolation, which is often linked to negative mental health outcomes. These findings are further supported by Li et al., (2021), Odzakovic et al., (2020) and Ward et al., (2021), who also emphasize the connection between place attachment and psychological wellbeing in older adults.

This theoretical perspective also acknowledges that rural older adults are not only influenced by their environment, but they also play a significant role in shaping their community networks, (Keating et al., 2008). Participants reflected on how changes in their social networks due to the loss of longtime friends or neighbours presented both challenges and opportunities. For example, as neighbours and neighbourhoods changed over time, some participants experienced challenging role transitions and the loss of familiar social ties. However, others found ways to make new connections that helped them maintain their emotional wellbeing.

5.5 An Ecosystem for Successful Ageing in Place

Family and friends were seen as a foundational ecosystem that were expressed within each interview as being a vital resource for having the ability to age in place. Clark et al. (2020), Li et al. (2021), Mattos et al. (2019), Odzakovic et al. (2020), and Ward et al. (2021), all identified in the literature review (see Chapter 2), found that people living with dementia in suburban neighbourhoods were mindful of family and friends. Social support was also identified within the current study. Social encounters formed a sense of feeling cared for and connected to the rural community.

Social support was identified by mapping participants' ties to a wider network of individuals revealed that the interconnections of friendship, family and neighbourhood connections. Life-long friendships and new friendships evolved through informal introductions with neighbours, attending a church organisation, and on occasion, asking assistance within the local health care provider. Organically, this network provided assistance and support thereafter.

The literature review presented in Chapter 2 highlighted the significance of reciprocity and community building as an integral piece to those living with dementia. In this study, social exchanges of help and support proved to be a central point in maintaining an ability to age in place. The act of social exchanges was also highly fostered and seen as a continuous give and take community behaviour. Reciprocity as revealed in this study included family, friends, and/or neighbours offering support, such as simply taking out the trash each week, bringing over food and personal supplies, and driving to the local doctor's office. The positive impact of reciprocity dynamics is supported by the same recent research by Biglieri & Dean (2021), Sturge et al. (2021), and Ward (2021), where reciprocity was seen to strengthen relationships with friends and neighbours through exchanges of support.

Technology was often sought to remotely interact with social networks. Individuals within the current study, and especially those residing in relatively isolated areas, often incorporated some digital technology throughout their day. Phone calls, texts, or emails were often used to routinely connect virtually. This digital outreach allowed not only a continuation of social relationships, but a sense of comfort to both the sender and receiver. In similarity to this present study, and according to Hülür & MacDonald (2020), this digitalization upon social technology usage positively impacts social relationships and wellbeing among older adults.

The role of faith in participants' lives can be interpreted as part of a broader ecosystem that extends beyond immediate practical assistance. Unlike friends and family, whose roles often involve practical and emotional support, faith offered an internal framework through which participants made sense of ageing and cognitive decline. This spiritual dimension appeared to heighten emotional resilience and foster a sense of purpose, particularly during times of uncertainty. The emphasis on familiar routines and meaningful places observed in this study resonates with Wiersma & Denton (2016) and Brannelly & Bartlett's (2019) findings, which highlight the importance of routines and familiar spaces.

Beyond routine alone, church involvement also served as a tool to community inclusion and a sense of identity. Attending services, participating in church-based events, and maintaining attendance in these spaces created opportunities for reciprocal recognition, being remembered, seen, and valued. This aligns with Bartlett's (2022) work on inclusive (social) citizenship, which emphasizes that access to everyday community spaces enables people living with dementia to maintain a sense of inclusion, recognition, and social participation. In this study's rural context, these interactions are particularly meaningful, as they bridged the challenges of dementia with opportunities for connection and social belonging. Rather than focusing solely on memory loss, participants' engagement with

religious spaces illustrated how spirituality and social structures can sustain a sense of self and community involvement later in life.

5.6 Healthcare Services and Formal Support Systems

Rural communities often face significant challenges in accessing dementia-specific medical care and formal support systems, which can create challenges for individuals living with dementia who need specialized care and services. However, many participants felt that the small, tight-knit nature of the community helped to create a supportive environment for those ageing in place with dementia, compensating for the limited access to formal care. With most residents having known each other for many years, these longstanding relationships fostered empathy and understanding, which were key themes expressed during the interviews. This is consistent with the findings of Mattos et al. (2019), who demonstrated that communities with strong social ties and a tradition of helping one another often provide emotional and practical support. This is especially beneficial for those ageing in place with dementia. Furthermore, while formal healthcare services were limited, the strong sense of community within this research area offered a form of informal care that that positively supported the wellbeing of its residents. This aligns with research on the benefits of place attachment and community cohesion for those living with dementia (Keady et al., 2012; Phinney & Moody, 2011), suggesting that informal networks found within this rural community are crucial for maintaining psychological wellbeing and supporting those ageing in place with dementia.

A review by Szymczynska et al. (2011) identified 10 studies that report on several barriers to accessing quality healthcare clinics in rural areas including limited availability of long-distance transportation services, financial constraints, and lack of specialized health care. These same issues were discussed within this study's semi-structured interviews and drawn out within the social network mapping view. However, the findings differ from the literature reviewed in Szymczynska et al. (2011), as this study's participants revealed how reciprocal assistance was often exchanged when challenges

arose. For example, participants who were uncomfortable driving in the dark or long distances for groceries or doctor appointments often relied on friends or family to step in, who assisted willingly and graciously. This informal network of support demonstrates resilience commonly observed in rural settings, where close-knit residents in rural settings often rely on social ties to mitigate barriers to healthcare access. In this study, participants shared examples of how reciprocal assistance was exchanged within their social networks, such as relying on family and friends for rides to appointments or grocery shopping. These findings align with the research by Chi & Han (2012), which highlights the unique challenges rural communities face in assessing healthcare, but also the ways in which informal support networks provide a form of care in the absence of specialized services. Studies have emphasized the psychological wellbeing benefits of these strong social networks, which are crucial in supporting the wellbeing of individuals living with dementia (Mattos et al., 2019; Keady et al., 2012).

5.7 Quality Assurance

An inductive analytical approach (Bryman, 2016) regarding the relationship between the theory and research aim guided this study. Taking an interpretative view grounded in knowledge that is based on understanding through observation and reflection (Bryman, 2016), this qualitative research study began as an open narrative that developed over time through open-ended questions and lived reflections. This qualitative research design utilized a three-tier approach for data collection including semi-structured interviews, photovoice, and social network mapping. Given the flexible and organic nature of qualitative research, this study followed four trustworthiness criteria to ensure rigor: credibility, dependability, confirmability, and transferability (Lincoln & Guba, 2007). Collectively, these four criteria – credibility, dependability, confirmability, and transferability – interact to form a comprehensive framework for ensuring trustworthiness of this qualitative study.

5.7.1 Credibility

Credibility refers to the accuracy and trustworthiness of the findings (Ahmed, 2024). Ensuring credibility of this research study demanded aligning the methodology with the research question (Ahmed,2024). As this study involves an interpretivist position (Silverman & Patterson, 2021), maintaining the balances between accurately portraying the participant's meaning against the researcher's interpretation, along with the ability to clearly communicate exactly how this played out within the findings was a challenging goal. The main strategy used to establish the integrity and credibility of the data included an ongoing cross-checking of findings between audio-recordings, social networking maps, and photographs to the transcripts. This triangulation approach across different data sources – audio recordings, social network maps, and photographs – allowed the researcher to reliably validate interpretations, increasing the consistency and accuracy of the analysis. To accurately portray the experiences and viewpoints given within statements during the interview process, the researcher employed two integrity assurance techniques. First, participant feedback on the researcher's interpretation of their statements was imperative for credibility assurance. Transcripts were shared with participants for their feedback and were asked if the researcher's interpretations accurately reflected their lived experiences. This process allowed for clarifying any potential misunderstandings and ensuring that participants felt their perspectives were fairly represented in the study. When discrepancies arose, modifications were made within the coding to ensure the participants voices were accurately captured and represented correctly, enhancing the credibility of the findings.

Environmental information from the interviews was also documented, providing useful contextualisations such as the use of indoor and outdoor spaces for hobbies. For example, craft rooms were noted and labelled as 'active hobby', a display of a stocked pantry filled with easy go-to-dinners as 'food savvy', and the presence of technology (landline phone, mobile phone or iPad on table) as potentially 'tech savvy'. These

contextual observations enriched the data, offering a more holistic view of the participants' daily lives and environments.

This approach also helped ensure accuracy in documenting the participants' experience, as the field notes were fresh and directly linked to the interaction between the researcher and participant. By capturing real-time observations, the researcher was able to provide a deeper layer of analysis, going beyond spoken words to reveal the emotional state and underlying meanings in the participant's responses. These field notes, as a complementary data source, contributed to the credibility and trustworthiness of the research, ensuring the findings were grounded in the full context of the participant's lived experience.

5.7.2 Dependability

Dependability refers to the consistency and replicability of the research findings under similar conditions (Haq et al., 2023). It also emphasizes the need for a clear approach to the research process, including justifying and tracking changes with decisions and actions. This was addressed through systematic documentation of all research activities, including recruitment, data collection, and analytical decisions as explained below.

The participant recruitment process was carefully planned and documented in the researcher's research protocol. Due to the rural context of the study, the recruitment aimed to reflect the geographical characteristics of the local population. However, this rural setting presented limitations targeting a diverse population, as racial, ethnic, and socioeconomic backgrounds were limited. Despite these challenges, the recruitment strategy remained consistent with the research protocol, ensuring the study accurately reflected the population.

The researcher maintained meticulous documentation related to the research process, such as participant recruitment, data collection methods, and qualitative analysis

procedures. This documentation allows for transparency on how this research progressed. The researcher documented these elements as both a personal learning experience and as assurance that any changes made were transparent and carefully justified. For example, adjustments to the interview process relating to photography were clearly written down, and the reasons for these changes were recorded and outlined in the research journal.

In addition to the methods discussed above, the dependability of the analysis was further enhanced by using the researcher's reflection notes within a research journal. Participant's accounts were described as closely as possible within these notes and were verified within the findings section ensuring that interpretations were both consistent and defensible.

5.7.3 Confirmability

Confirmability refers to how the findings of the research study reflect participants' experiences and not influenced by the researcher's biases, preconceptions or preferences (Lincoln & Guba, 1985). To ensure confirmability, the researcher took steps to remain objective throughout the research process. One key approach was manually transcribing the audio recordings of the interviews on a word document rather than using an automated transcription software. This allowed the researcher to maintain a close connection with the data. It also ensured the region-specific dialect, colloquialisms, and local slang were accurately captured and interpreted. For example, in this rural area, people speak with a distinct regional dialect, characterized by a heavy accent and local phrases or slang not commonly used in other parts of the U.S. One example is the word "holler," which in standard dictionaries means to shout or yell. In this rural area, however, "holler" is used to mean calling someone on the telephone or speaking with them at a later time. By accurately capturing these regional phrases, the researcher ensured that the meanings were correctly interpreted and not misrepresented, thereby enhancing the confirmability of the study's findings.

To further ensure confirmability, the researcher maintained detailed documentation throughout the research process. This included writing notes on key decisions made in various stages of this study. A colorful notebook was designated for the data collection methods (interviews, photography, and social network mapping), a blue spiral notebook was designated for coding choices, which included why specific codes were selected or revised. The researcher also maintained notes in another basic notebook regarding any adaptations made throughout the research process, particularly during the analysis phase. During this phase, documentation was made of any shifts in interpretation or coding decisions, such as when a code was merged, and the reasoning behind these changes. This practice not only drew the researcher deeper into the data, but it also ensured that all decisions related to the interpretation of the data was transparent and trackable.

Reflexivity was also an important aspect used to ensure confirmability. The researcher regularly reflected in a research journal on any personal biases or preconceptions that might have influenced the data interpretation. Such reflexive journaling provided insight into how these biases were identified, considered, and actively minimized during data analysis. By maintaining these reflective documents, the research aimed to ensure the findings remained focused on the participants' perspectives, rather than being shaped by personal viewpoints.

5.7.4 Transferability

Transferability refers to the how the findings of a study can be applied or generalized to other settings, particularly similar situations or contexts (Ahmed, 2024). Throughout the research process, the researcher took deliberate approaches to maintain transparency and ensure that the findings could be meaningfully applied to other rural communities, beyond just the immediate study area.

One important approach the researcher took to enhance transferability was to use detailed descriptions (Lincoln & Guba, 1985) of the study context. This helped provide a comprehensive view of the rural environment in which this study took place. These detailed descriptions allowed for a more comprehensive picture and a better understanding of the research environment and participants' experiences. By providing these contextual details of the geographical setting, regional dialects, and cultural norms, the researcher made it possible for other researchers to determine the applicability of the findings to other rural communities with similar characteristics.

Additionally, transparency and trustworthiness were enhanced in this study as the researcher utilized triangulation (by utilizing multiple sources including interviews, photographs, and social network maps) and writing observations in a reflective journal were critical in ensuring the data was not misunderstood or influenced by researcher biases. By maintaining detailed records of the research process, the researcher possessed a transparent track of decisions and justifications throughout this study. These types of reflections positively maintain the transparency of the research process, ensuring the study's finding s could be applied to similar rural contexts with confidence. Although member checking was limited, the transparency process, including recruitment protocols, coding justifications, and analytic decisions, strengthens the potential for findings to be transferable to similar settings.

By maintaining an open-ended inquiry and resisting interpretive shortcuts, the researcher allowed participants' experiences to emerge authentically. This approach supported the development of findings that may resonate with other rural communities sharing comparable social and environment characteristics.

5.8 Strengths and Limitations

This study used a combination of qualitative methods to explore the lived experiences of older adults with dementia in a rural environment. While the methodology offered rich

insights into the challenges and supports involved in ageing in place, several strengths and limitations need to be acknowledged to provide a balanced view of the findings.

The study incorporated a three-tier method within the data collection process, utilizing triangulation to integrate multiple methods. The use of triangulation, incorporating different methods, helps ensure a more thorough exploration of the participants' experiences, particularly when examining complex topics, such as ageing in place with dementia. Each method complements the others, providing a more well-rounded understanding of this research topic. By cross-checking the data from the interviews, photographs, and social network mapping, triangulation helps reduce potential biases inherent in any single method and enhances the credibility and trustworthiness of the findings (Altheide & Johnson, 1994).

Semi-structured home interviews allowed for open-ended questions tailored to each participant, creating thoughtful conversations on issues that were significant to them. In addition to audio transcription, participants' photos, taken during the interview, were analysed and used to illustrate key aspects of their ageing in place experience. Social network mapping was also employed to capture the dynamics of the participants' social connections, offering a deeper perspective on their support systems and community ties. Each method complimented the others, providing a well-rounded understanding of the research topic.

The use of photography as a data collection method posed several challenges, particularly when asking older adults with dementia to participate by taking the photographs themselves. Despite reassurances, some participants expressed concerns about not being able to "do it right," fearing they could compromise the study. As an alternative, several participants chose to share existing photo albums containing family photos, which they felt were meaningful and relevant to the research. To address privacy concerns and ethical considerations, it was agreed that the participant would direct the

researcher to take photos on their behalf. These photos captured scenes chosen by the participants that evoked happiness, sadness, or held personal significance, such as an empty basket, a hobby room, a window overlooking garden. Throughout the process, the researcher carefully addressed this data approach with each participant to ensure the process was handled with sensitivity, respecting participants' abilities, privacy, and concerns, while maintaining the integrity and quality of the research outcomes.

Social network mapping proved to be a valuable technique in understanding the social connections and support systems of the participants, which was particularly informative in this rural context where the community plays a key role in ageing in place. One strength of this method was its ability to provide a visual representation of the participants' support system, offering insight into key people and services contributing to their psychological wellbeing. However, there were challenges, particularly for participants experiencing advancing cognitive decline, though all retained the capacity to engage meaningfully within the scope of this research. Some participants expressed frustration during the mapping process as they struggled to identity names of those who supported them. This was particularly true for those more aware of their decline and feared they were "getting it wrong". However, participants with stronger, more stable networks, such as close family members and helpful neighbours, engaged more easily with this task. At the conclusion of the social network mapping process, many participants found that visualizing these connections gave them a sense of comfort and appreciation, reinforcing the support they were "blessed with".

One limitation of this study is the inclusion of both medically and self-diagnosed individuals living with dementia. This inclusion criteria was necessary because individuals in this rural community lacked access to medical facilities capable of providing formal cognitive and neurological tests for a dementia diagnosis. Interviews revealed that the burden of traveling long distances for such procedures made formal diagnosis impractical for some participants, leading them to rely on a self-diagnosis. While including both

medically and self-diagnosed participants introduces some variability in the diagnosis, as self-diagnosis may not always align with clinical assessments, it provides a valuable perspective on the experiences of individuals in underserved, rural populations. This study's approach helps capture a more comprehensive view of dementia in a rural community, although the accuracy of self-diagnosis relative to clinical standards is not always certain.

Additionally, as this research study was situated in a small Texas community, diversity posed a challenge. The rural population in Texas has a significantly higher percentage of white American men and women, most of whom were born and raised in the area. This lack of racial and ethnic diversity reflects the demographic composition of the region but limits the transferability of the findings of other rural communities. Although this limits broader applicability, the findings may be relevant and potentially transferable to a substantial portion of the rural American population. According to the Pew Research Centre (2018), 79% of rural Americans are white, compared to only 44% living in urban areas. Rural areas also have a lower percentage of racial and ethnic minorities, with Black individuals making up about 8% and Hispanics at around 7% of the population.

Nevertheless, this limitation in diversity suggests the need for further research in other rural geographical areas within the United States. Expanding the scope to include participants from diverse ethnic backgrounds could provide additional depth to the findings, ultimately strengthening the applicability of this research study to a wider rural population.

5.9 Reflections

Throughout this study, there were profound moments of connection with participants, whose stories of ageing in place with dementia were at times deeply moving. What began as an academic journey turned into a deeply personal journey of growth, learning, and reflection, as this process quickly highlighted the complexities involved in navigating

sensitive conversations. At times, the challenge seemed an overwhelming task. I found myself struggling to balance empathy with the professional distance required for effective research. Participants unexpectedly displayed a pendulum of emotions as they shared their heartbreak of losing loved ones or their sense of unease with their life-situation. Their stories triggered emotional responses, as if their pain was being experienced all over again in real time. These moments challenged me to reflect on how my personal feelings, biases, and assumptions were influencing our interactions.

As I reflect on these interviews, I realize my own emotional responses were unavoidable; at times, they also shaped the course of our conversations. I found myself empathizing with their life-stories, and my personal life experiences seemed to inform an understanding of their narratives. This ongoing reflection, which included a reflexive journal, helped me stay mindful of how these emotions may have shaped this research process.

A meaningful moment in the reflexive process occurred when participants expressed hesitation about taking photos themselves and preferred that I take photos on their behalf. This presented an opportunity to reconsider my role as a researcher and adapt my approach. I realized the importance of respecting participants' preference, which led me to shift the photo-taking process. Instead of insisting that participants take the photos themselves, I allowed them to direct the process, giving them control over what to capture and how. This flexibility relieved any stress or discomfort, resulting in a more meaningful data collection process. By offering this flexibility, I ensured that the participants felt respected while still achieving the goals of the study.

The practical challenges during data collection, such as the miscalculation of interview lengths, also prompted me to be flexible and adaptive in my approach. What, in my mind, should have been a thirty-minute allotment, in some cases the time spent on the interview concluded within an hour or sometimes two. For others experiencing more

pronounced dementia-related attributes, the interview was concluded after a mere ten minutes, in which a return visit was warranted. Quite often, a warm welcome into their personal home was common. In many interview visits, small-talk and refreshments were presented before the conversation turned into interview-mode. Recognizing these variations, I adjusted my interview style to ensure that each participant was comfortable and that the data collection remained meaningful.

Reaching into this rural area and acquiring participants presented a challenge in representing this population. Not one person considered participating until they understood my background. The fact of being an insider played a considerable role in gaining the trust and confidence with each participant, which ultimately aided in the generation of rich and complex conversational perspectives regarding the relationships to ageing in place within the environment and shared experiences of living with dementia. I believe it was my community connections and the fact I was born and raised in the same community that allowed the participants to feel comfortable enough to trust me with their vulnerabilities, listen to their achievements and concerns, and share with me their life experiences, not only in their personal spaces, but also with talking about their dementia, a subject they all would rather avoid.

Given the rural setting of this study, ethnic diversity, or the lack thereof, was a notable consideration. While there was no intention to exclude participants from different racial or ethnic backgrounds, the demographic homogeneity of the sample does limit the transferability of the findings for people living with dementia from more diverse cultural groups. In hindsight, a broader representation of participants would have enriched this study and offered a wider range of experiences and perspectives. Future research would benefit from including a more diverse population, which could offer a more rounded understanding of how dementia and ageing in place are experienced across different cultural contexts.

The process of reflexivity and adaptation has been a journey of personal growth and professional learning. Conducting interviews and listening to participants' life experiences resonated within my own life and personal choices, prompting unexpected reflections. Throughout this process, participants shared lessons, imparted wisdom, and candidly discussed the blessings and harsh realities of ageing with dementia, perspectives and experiences they had not previously voiced but felt compelled to express. I discovered that while initially reserved, participants enthusiastically shared their life experiences and narratives after they grew more comfortable with me and better understood the research purpose. This, I felt, demonstrated a commitment to honesty and personal depth in their contributions to our mutual learning and growth.

I have come to understand that research on dementia within a rural environment is not merely an academic pursuit but a deeply human endeavor. The journey has been shaped by the experiences and resilience of the participants. This process has reminded me of the importance of staying humble, reflexive, and open to the wisdom that participants share, sometimes in ways they themselves do not full recognize. I am also reminded that research around understanding dementia is never simply academic. It is deeply human, brought together through shared experiences of ageing, memory loss, and most importantly, resilience. This study, like all research is not a destination but rather a small contribution to the research journey.

Chapter 6: Conclusion

As more adults express a preference for ageing in place (AARP, 2021), it becomes increasingly important to understand their lived experiences, particularly for those living with dementia in rural areas where access to essential resources and support may be limited. As highlighted in Chapter 2, this study addresses a significant gap in the literature by exploring how rural environments in the U.S. impact the psychological wellbeing of older adults living with dementia who are ageing in place in a rural environment. This gap is particularly important given that rural areas are often underserved in terms of healthcare services and community resources, all of which can directly affect an individual's psychological wellbeing. According to the U.S. Census Bureau (2024), 4% (or 6.9 million) of US adults aged 65 and older are reported to having been diagnosed with dementia. According to another earlier U.S. Census Bureau report (2019), approximately 10.9 million Americans aged 65 and older resided in rural areas, accounting for about 23% of the older population in the US. The same Census report reveals that in rural areas, 17.5% of the population is aged 65 and older, compared to 13.8% in urban areas, which quantifies the desire to age in place in the U.S. This clearly indicates that the majority of US adults aged 65 and older and living with dementia are indeed living in rural areas. This study focuses specifically on the lived experiences and psychological wellbeing of older adults living with dementia in a rural Texas setting, contributing to the understanding of how neighbourhood settings, local community ties, and social relationships influence psychological wellbeing.

This qualitative, participatory, and reflexive study built upon a systematic review that explores the important role of neighbourhood environments and how they could promote psychological wellbeing for people living with dementia as they age in place. The review identified a gap in the available studies and data for populations living in rural areas in the US. The study explored the life experiences of adults living with dementia as they age in place within a rural community in Texas, USA. Under a Lancaster

University approved Ethics application, 12 participants were recruited and participated in several semi-structured interviews involving discussions reflecting upon their neighbourhood and rural community. Photovoice and social network mapping interviews were also conducted to deepen the understanding of the participants' lived experiences. Data collection, transcription, and storage were conducted according to the ethically approved protocol. Thomas and Harden's (2008) reflexive thematic analysis was conducted encompassing line-by-line coding of the transcribed text, descriptive theme development, and the generation of analytical themes and sub-themes.

The study identified three main findings regarding the impact of living in rural, age in place communities on the psychological wellbeing of older adults living with dementia. First, an attachment to place was found to be a significant factor. Participants reported a profound sense of support, safety, and belonging. Being a life-long resident within the community contributed to positive life views and reinforced a sense of support, belonging, and safety. These findings align with previous research highlighting how familiarity wih place and strong social ties foster positive wellbeing as one ages (Rowles, 1983; Wiles et al., 2012; Iecovich, 2014). This is also consistent with the Ecology of Ageing perspective, which emphasizes the dynamic fit between people and their physical and social environments (Lawton & Nahemow, 1973; Wahl et al., 2012), illustrating how environmental resources support wellbeing even among limitations.

Second, social relationships played a crucial role in enhancing overall psychological wellbeing. Both lifelong residents and newcomers to the rural community emphasized the importance of social networks in reducing isolation and improving life satisfaction. The establishment of supportive social networks was key, as echoed by Iris, a participant who made a conscious decision to relocate from a larger town to a smaller town and age in a community where she knew people and felt she had support to establish new friendships. These relationships were not simply sources of assistance but vital to maintaining identity, purpose, and emotional stability, which are key dimensions of

ageing in place that extend beyond independent living. These connections fostered a sense of belonging and promoted psychological wellbeing (Gardner, 2011; Wister et al., 2010). This selective response to emotionally meaningful ties reflects the Socioemotional Selectivity Theory (Carstensen, 1992), which explains how older adults prioritize supportive relationships that sustain emotional wellbeing, even in the context of cognitive decline.

Finally, resourcefulness and resilience were evident in the participants' ability to adapt to challenges. Through informal networks and mutual assistance, participants maintained independence despite potential limitations in formal support services. Acts of reciprocity, such as transportation provided by friends or a thoughtful gesture, often baked goods in exchange for help, underscored the resourcefulness and resilience of participants in adapting to their circumstances. These strategies are consistent with the principles of Selectivity, Optimization, and Compensation (Baltes & Baltes, 1990), illustrating how individuals adapt and compensate to maintain meaningful engagements and positive wellbeing despite cognitive decline or environmental limitations.

Despite the perceived challenges of living in rural area, such as limited resources and healthcare services (Miller et al., 2023), participants demonstrated remarkable resilience and adaptability. According to the Selection, Optimization and Compensation Theory, individuals with advanced dementia can maintain meaningful activities by selecting activities that are attainable, optimizing their available resources, and compensating for the cognitive losses by using strategies such as relying on family and friends for assistance (Baltes & Baltes, 1990). Together, these adaptive responses show that ageing in place is not only about maintaining independence but also about interdependence, drawing on friends, family and community connections and resilience to sustain wellbeing. Their ability to thrive in an environment that might be considered underserved highlights the importance of community support and the strength of local ties in fostering psychological wellbeing (Mattos et al., 2019). These findings also

highlight the importance of community attachment, social connections, and the resilience in promoting psychological wellbeing of older adults ageing in place with dementia in rural environments.

6.1 Implications of the Findings

The findings from this study have several important implications for both research and practice. First, the central role of community and social ties in enhancing the psychological wellbeing of older adults with dementia highlights the need for interventions that strengthen these connections. Community-based programmes, such as social clubs and volunteer networks, can play a vital role in promoting social engagement and combating social isolation, particularly in rural settings (Cattan et al., 2005; Chappell & Funk, 2010). These programs also provide supports as described in the Selective, Optimization, and Compensation principles by providing compensatory resources that enable older adults to maintain positive wellbeing despite cognitive decline or physical challenges.

In addition, policies aimed at improving the wellbeing of older adults in rural areas should be prioritized, with a particular focus on local infrastructure. Policymakers must consider making healthcare services, transportation, and social services more available and accessible, while also ensuring emergency assistance is tailored to the needs of individuals with dementia. These policies efforts can enhance the person-environment fit aspect of the Ecology of Ageing framework, by aligning environmental supports alongside individual needs. These efforts would also ensure that rural communities can better support their ageing population.

Finally, this study challenges the commonly held view that rural settings are inherently less suitable for ageing in place. The strong community bonds and adaptability observed in this study suggests that, with adequate support, rural areas can offer a nurturing environment for individuals with dementia. This resilience echoes the adaptive

selectivity highlighted by Socioemotional Selectivity Theory, showing that emotional focus and meaningful social connections can thrive even in environments with limited resources. This perspective encourages a more nuanced approach to rural ageing policies, one that recognizes both the strengths and needs of these communities. Policymakers, healthcare providers, and local governments should consider these findings when developing policies aimed at supporting adults ageing in place with dementia in rural areas.

6.2 Future Directions

This research provides a foundation for future studies into ageing with dementia in rural communities, with several promising areas for exploration. Expanding the geographic scope of this research within future studies could bring about a clearer understanding of how different rural communities across regions and cultures impact the experiences of individuals with dementia. Longitudinal studies could offer insights into how the psychological wellbeing of individuals evolves over time, especially as dementia progresses and individual needs change (Ward et al., 2021; Li et al., 2021). Future work could also examine and further strengthen how Selection, Optimization and Compensation, Socioemotional Selectivity Theory, and the Ecology of Ageing frameworks apply across dementia research, helping identify adaptive strategies that sustain wellbeing over time.

Investigations into the role of formal and informal caregiving networks are also needed. By understanding how family members, local healthcare providers, and community organisations collaborate to support individuals with dementia, will inform interventions that strengthen support systems for both caregivers and care recipients (Sturge et al., 2021). Further research guided by Ecology of Ageing and Selective, Optimization and Compensation frameworks could explore how these supports adjust to maintain a balance between the person-environment while sustaining meaningful engagement.

Lastly, research, policy, and local governments should prioritize enhancing the availability and accessibility of rural infrastructure to ensure public spaces, transportation, and healthcare facilities support people ageing in place with dementia (Ward et al., 2021; Oswald et al., 2007; Odzakovic et al., 2020). As older adults increasingly prefer to age in place, this desire to remain in familiar environments should be honoured and respected. For instance, providing reliable and accessible transportation options, adding clear signage, and establishing local peer support groups could help individuals maintain independence and social connections. Additionally, programmes designed to promote social engagement and facilitate the creation of local support networks could alleviate the isolation often experienced by individuals living with dementia in rural communities (Ward et al., 2018). The resilience demonstrated by participants in this study reinforces these points, highlighting that with the appropriate and carefully planned and appropriate support, individuals living with dementia can thrive in rural environments. Future initiatives could further build on this resilience, fostering more inclusive and adaptive communities that empower older adults to live safely and independently in their homes (Clark et al., 2020).

6.3 Concluding Thoughts

This study contributes to the growing body of research on ageing in place and dementia care, with a particular emphasis on rural communities. By highlighting the significance of place attachment, social relationships, and community resilience, the study demonstrates how these factors can significantly promote the psychological wellbeing of older adults living with dementia. Together, these findings illustrate the interplay between three theoretical perspectives: the Ecology of Ageing's focus on the person-environment fit, Selective, Optimization, and Compensation's emphasis on adaptive strategies, optimisation and compensation, and Socioemotional Selectivity Theory's view of emotional selectivity, all of which support wellbeing across ageing and dementia progression.

This research challenges the stereotype that rural areas are inadequate or unsuitable for ageing in place and underscores their potential to provide a supportive and secure environment for individuals facing dementia and reinforces that ageing in place encompasses far more than remaining in one's home. Ageing in place reflects identity, continuity, and the importance of meaningful connections with one's community. It also reinforces that adaptation (SOC), environmental harmony (Ecology of Ageing), and emotional selectivity (SST) remain essential even as cognitive abilities decline, offering theoretical grounding for practice and policy recommendations.

As the population of older adults with dementia grows, particularly in rural areas, it is crucial that research, policy, and practice collaborate and converge to create environments that not only support but also enhance their psychological wellbeing and dignity. To achieve this, a more inclusive approach is needed, one that recognizes the unique strengths of rural communities and integrates supportive practices that enable individuals with dementia to age in place with dignity and independence.

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Appendix 1: Search Strategy

Database & Search Date	Search Strategy	Number of hits
PubMed (February 2021)	Search: ((dementia[Title/Abstract]) AND (neighbourhood[Title/Abstract])) OR (outdoor spaces[Title/Abstract]) Filters: Abstract, Journal Article, from 2010/1/1 - 2020/1/1 ((("dementia"[Title/Abstract] AND "neighbourhood"[Title/Abstract]) OR "outdoor spaces"[Title/Abstract]) AND ((fha[Filter]) AND (journalarticle[Filter]) AND (2010/1/1:2020/1/1[pdat]))	146
Web of Science (February 2021)	TITLE: (dementia) AND TITLE: (neighbourhood) OR TOPIC: (outdoor spaces) AND TOPIC: (ageing in place) OR TOPIC: (independent living) AND TOPIC: (wellbeing) Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=2010-2021	333
Scopus (Feb 2021)	(TITLE-ABS-KEY (dementia) AND TITLE-ABS-KEY (neighbourhood)) AND PUBYEAR > 2009 AND (LIMIT-TO (PUBSTAGE , "final")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (SRCTYPE , "j")) AND (TITLE-ABS-KEY (dementia) AND TITLE-ABS-KEY (neighbourhood OR outdoor AND space) AND ALL (ageing AND in AND place OR ageing AND in AND place OR independent AND living))	125 24

Appendix 2: List of References from Search Strategy

Title	Year	Scopus	Pub Med	WoS	Add'l Refs
A socially prescribed community service for people living with dementia and family carers and its long-term effects on well-being	2021				
Features of the social and built environment that contribute to the well-being of people with dementia who live at home: A scoping review	2021	sc			
Individual and neighbourhood characteristics associated with neighbourhood walking among US older adults	2021	sc			
Prevalence and risk factors of the co-occurrence of physical frailty and cognitive impairment in Chinese community-dwelling older adults	2021	sc			
'It's our pleasure, we count cars here': An exploration of the 'neighbourhood-based connections' for people living alone with dementia	2021				ar
Transforming lived places into the connected neighbourhood: A longitudinal narrative study of five couples where one partner has an early diagnosis of dementia	2021				ar
O*verjoyed that I can go outside*': Using walking interviews to learn about the lived experience and meaning of neighbourhood for people living with dementia	2020				ar
Muddling along in the city: Framing the cityscape of dementia	2020				ar
'... This is my home and my neighbourhood with my very good and not so good memories': The story of autobiographical placemaking and a recent life with dementia	2020			duplicate	
Neighbourhood-based social capital and cognitive function among older adults in five low- and middle-income countries: Evidence from the World Health Organisation Study on Global AGEing and Adult Health	2020				

Impact of individual and neighbourhood dimensions of socioeconomic status on the prevalence of mild cognitive impairment over seven-year follow-up	2020				
Community participation in activities and places among older adults with and without dementia	2020				
The saliency of geographical landmarks for community navigation: A photovoice study with persons living with dementia	2020				
Psychological distress links perceived neighbourhood characteristics to longitudinal trajectories of cognitive health in older adulthood	2020				
Generational Distinctions on the Importance of Age-Friendly Community Features by Older Age Groups	2020		pm		
Age-friendly communities and perceived disconnectedness: the role of built environment and social engagement	2020		pm		
Prevalence and Associated Factors of Depression and Anxiety in Elderly Patients with Mild Cognitive Impairment in Community: a Cross-sectional Study	2020	sc			
Using Walking Interviews to Enhance Research Relations with People with Dementia: Methodological Insights From an Empirical Study Conducted in England	2020	sc			
The Urban Built Environment, Walking and Mental Health Outcomes Among Older Adults: A Pilot Study	2020			duplicate	
The Urban Built Environment, Walking and Mental Health Outcomes Among Older Adults: A Pilot Study	2020	sc			
Neighbourhood environment and dementia in older people from high-, middle- And low-income countries: Results from two population-based cohort studies	2020	sc			
What is important to people with dementia living at home? A set of core outcome items for use in the evaluation of non-pharmacological community-based health and social care interventions	2020	sc			
Neighbourhoods as relational places for people living with dementia	2020			duplicate	
Neighbourhoods as relational places for people living with dementia	2020	sc			

Age-friendly cities in the Netherlands: An explorative study of facilitators and hindrances in the built environment and ageism in design	2020			duplicate	
Age-friendly cities in the Netherlands: An explorative study of facilitators and hindrances in the built environment and ageism in design	2020	sc			
The Urban Built Environment, Walking and Mental Health Outcomes Among Older Adults: A Pilot Study	2020	sc			
Neighbourhood environment and dementia in older people from high-, middle- and low-income countries: results from two population-based cohort studies	2020			duplicate	
Neighbourhood environment and dementia in older people from high-, middle- And low-income countries: Results from two population-based cohort studies	2020	sc			
Green spaces, dementia and a meaningful life in the community: A mixed studies review	2020			duplicate	
Green spaces, dementia and a meaningful life in the community: A mixed studies review	2020	sc			
This is my home and my neighbourhood with my very good and not so good memories: The story of autobiographical place-making and a recent life with dementia	2020	sc			
International Mind, Activities and Urban Places (iMAP) study: Methods of a cohort study on environmental and lifestyle influences on brain and cognitive health	2020	sc			
Influence of activity space on the association between neighbourhood characteristics and dementia risk: results from the 3-City study cohort	2019			dup	
Things Are Changing so Fast: Integrative Technology for Preserving Cognitive Health and Community History	2019				
'We have different routes for different reasons': Exploring the purpose of walks for carers of people with dementia	2019			dup	
What is important to people living with dementia?: the long-list' of outcome items in the development of a core outcome set for use in the evaluation of non-pharmacological community-based health and social care interventions	2019				
Neighbourhood environment and cognitive function in older adults: A multilevel analysis in Hong Kong	2019			dup	

Multiple Influences on Cognitive Function Among Urban-Dwelling African Americans	2019			dup	
Would you like to join me for a walk? The feasibility of a supervised walking programme for people with dementia who wander	2019			dup	
Neighbourhood social cohesion and cognitive function in US Chinese older adults-findings from the PINE study	2019				
Neighbourhood Environments and Cognitive Decline Among Middle-Aged and Older People in China	2019				
Perceived Social Determinants of Health Among Older, Rural-Dwelling Adults with Early-Stage Cognitive Impairment	2019				ar
Understanding ageing well in Australian rural and regional settings: Applying an age-friendly lens	2019		pm		
Physical, mental, and physiological health benefits of green and blue outdoor spaces among elderly people	2019		pm		
Cognitive and Sensory Dimensions of Older People's Preferences of Outdoor Spaces for Walking: A Survey Study in Ireland	2019		pm		
Perceptions of Neighbourhood Environment, Sense of Community, and Self-Rated Health: an Age-Friendly City Project in Hong Kong	2019		pm		
[The application and usefulness of virtual reality aimed at encourageing an understanding of and reducing and eliminating prejudice towards dementia patients among local residents]	2019		pm		
Neighbourhood Food Environment and Dementia Incidence: the Japan Gerontological Evaluation Study Cohort Survey	2019		pm		
Nature-Based Social Prescribing in Urban Settings to Improve Social Connectedness and Mental Well-being: a Review	2019		pm		
Would you like to join me for a walk? The feasibility of a supervised walking programme for people with dementia who wander	2019	sc			
Multiple Influences on Cognitive Function Among Urban-Dwelling African Americans	2019	sc			
Neighbourhood environment and cognitive function in older adults: A multilevel analysis in Hong Kong	2019	sc			
Correlations between forgetfulness and social participation: Community diagnosing indicators	2019	sc			

Dementia in immigrant groups: A cohort study of all adults 45 years of age and older in Sweden	2019	sc			
What is important to people living with dementia?: The 'long-list' of outcome items in the development of a core outcome set for use in the evaluation of non-pharmacological community-based health and social care interventions	2019	sc			
Life-space mobility in older persons with cognitive impairment after discharge from geriatric rehabilitation	2019	sc			
â€˜We have different routes for different reasonsâ€™: Exploring the purpose of walks for carers of people with dementia	2019	sc			
Influence of activity space on the association between neighbourhood characteristics and dementia risk: Results from the 3-City study cohort 11 Medical and Health Sciences 1117 Public Health and Health Services	2019	sc			
The application and usefulness of virtual reality aimed at encourageing an understanding of and reducing and eliminating prejudice towards dementia patients among local residents	2019	sc			
Cognitive functioning as a moderator in the relationship between the perceived neighbourhood physical environment and physical activity in Belgian older adults	2019	sc			
Toward Understanding Person-Place Transactions in Neighbourhoods: A Qualitative-Participatory Geospatial Approach	2018				ar
Through the eyes of others - the social experiences of people with dementia: a systematic literature review and synthesis	2018				ar
Digging for Dementia: Exploring the experience of community gardening from the perspectives of people with dementia	2018				ar
Walking interviews as a research method with people living with dementia in their local community	2018				
Neighbourhood Socioeconomic Status and Cognitive Trajectories in a Diverse Longitudinal Cohort	2018				
Cognition in Context: The Role of Objective and Subjective Measures of Neighbourhood and Household in Cognitive Functioning in Later Life	2018				
Ageing in place: creativity and resilience in neighbourhoods	2018				

Community intervention to increase neighbourhood social network among Japanese older adults	2018				
Talking while walking: an investigation of perceived neighbourhood walkability and its implications for the social life of older people	2018				
The lived neighbourhood: understanding how people with dementia engage with their local environment	2018			dup	
Social Participation and Cognitive Decline Among Community-dwelling Older Adults: A Community-based Longitudinal Study	2018				
Residential Surrounding Greenness and Cognitive Decline: A 10-Year Follow-up of the Whitehall II Cohort	2018				
Challenges to ageing in place for African American older adults living with dementia and their families	2018			dup	
The impact of rural-urban community settings on cognitive decline: results from a nationally-representative sample of seniors in China	2018				
[Prevalence of cognitive impairment in a high social risk population older then 60 years from NeuquÃ©n capital, Argentina]	2018		pm		
[Case-control study on the influencing factors related to cognitive impairment in the elderly population of China]	2018		pm		
Designing dementia-friendly gardens: A workshop for landscape architects: Innovative Practice	2018		pm		
Age-Friendly Initiatives, Social Inequalities, and Spatial Justice	2018		pm		
Is community social capital associated with subjective symptoms of dementia among older people? A cross-sectional study in Japan	2018	sc			
Challenges to ageing in place for African American older adults living with dementia and their families	2018	sc			
Disabling Spaces and Spatial Strategies: Feminist Approaches to the Home Environment of Family Caregivers of People with Dementia	2018	sc			
Research with people with dementia-ethical reflections on qualitative research praxis on mobility in public space	2018	sc			
Living Life and Doing Things Together: Collaborative Research With Couples Where One Partner Has a Diagnosis of Dementia	2018	sc			

The lived neighbourhood: Understanding how people with dementia engage with their local environment	2018	sc			
A mismatch between supply and demand of social support in dementia care: A qualitative study on the perspectives of spousal caregivers and their social network members	2018	sc			
Developing a core outcome set for people living with dementia at home in their neighbourhoods and communities: Study protocol for use in the evaluation of non-pharmacological community-based health and social care interventions	2018	sc			
Sex-specific association between neighbourhood characteristics and dementia: The Three-City cohort	2018	sc			
Neighbourhood age structure and cognitive function in a nationally-representative sample of older adults in the US	2017			dup	
Micro-scale environment and mental health in later life: Results from the Cognitive Function and Ageing Study II (CFAS II)	2017			dup	
Cognitive functioning among Dutch older adults: Do neighbourhood socioeconomic status and urbanity matter?	2017				
Neighbourhood Context, Dementia Severity, and Mexican American Caregiver Well-Being	2017				
Shared Use of Physical Activity Facilities Among North Carolina Faith Communities, 2013	2017		pm		
Effects of Perceived Neighbourhood Environments on Self-Rated Health among Community-Dwelling Older Chinese	2017		pm		
Outdoor spaces improve dementia care	2017		pm		
Common Psychological Problems and Influencing Factors Among the Community-dwelling Elderly in Shanghai	2017	sc			
Micro-scale environment and mental health in later life: Results from the Cognitive Function and Ageing Study II (CFAS II)	2017	sc			
Dementia-friendly communities: challenges and strategies for achieving stakeholder involvement	2017	sc			
Neighbourhood age structure and cognitive function in a nationally-representative sample of older adults in the U.S.	2017	sc			
Social citizenship, public art and dementia: Walking the urban waterfront with Paulâ€™s Club	2017	sc			

The landscape of dementia inclusivity	2016				ar
Narrative citizenship, resilience and inclusion with dementia: On the inside or on the outside of physical and social places	2016				ar
Scanning the conceptual horizons of citizenship	2016				ar
Tracing the successful incorporation of assistive technology into everyday life for younger people with dementia and family carers	2016				ar
Walking in the neighbourhood: Performing social citizenship in dementia	2016			duplicate	
Are self-reported neighbourhood characteristics associated with onset of functional limitations in older adults with or without memory impairment?	2016				
Designed Natural Spaces: Informal Gardens Are Perceived to Be More Restorative than Formal Gardens	2016		pm		
Modeling Age-Friendly Environment, Active Ageing, and Social Connectedness in an Emerging Asian Economy	2016		pm		
Information and communication technology solutions for outdoor navigation in dementia	2016	sc			
Walking in the neighbourhood: Performing social citizenship in dementia	2016	sc			
Helping Dementia Caregivers Through Technology	2016	sc			
The will to mobility: life-space satisfaction and distress in people with dementia who live alone	2015	include			
'I want to feel at home': establishing what aspects of environmental design are important to people with dementia nearing the end of life	2015	include			
The everyday use of assistive technology by people with dementia and their family carers: A qualitative study.	2015	include			
Relational interactions preserving dignity experience: Perceptions of persons living with dementia	2015	include			
The association between community environment and cognitive function: a systematic review	2015			duplicate	
Quality of life (QOL) of the community-dwelling elderly and associated factors: A population-based study in urban areas of China	2015			duplicate	

Neighbourhood racial/ethnic composition and segregation and trajectories of cognitive decline among US older adults	2015				
Cognitive decline and the neighbourhood environment	2015				
Community environment, cognitive impairment and dementia in later life: results from the Cognitive Function and Ageing Study	2015			duplicat e	
NEIGHBOURHOOD CHARACTERISTICS AND DEMENTIA STATUS PREDICT PHYSICAL FUNCTIONING IN OLDER ADULTS	2015				
Community environment, cognitive impairment and dementia in later life: Results from the Cognitive Function and Ageing Study	2015	sc			
The association between community environment and cognitive function: a systematic review	2015	sc			
Quality of life (QOL) of the community-dwelling elderly and associated factors: A population-based study in urban areas of China	2015	sc			
The mix matters: Complex personal networks relate to higher cognitive functioning in old age	2015	sc			
What Is the Impact of Using Outdoor Spaces Such as Gardens on the Physical and Mental Well-Being of Those With Dementia? A Systematic Review of Quantitative and Qualitative Evidence	2014			duplicat e	
What is the impact of using outdoor spaces such as gardens on the physical and mental well-being of those with dementia? A systematic review of quantitative and qualitative evidence	2014		pm		
Improving the experience of dementia and enhancing active life - living well with dementia: Study protocol for the IDEAL study	2014	sc			
Neighbourhood linking social capital as a predictor of psychiatric medication prescription in the elderly: A Swedish national cohort study	2014	sc			
Persons with early-stage dementia reflect on being outdoors: a repeated interview study	2013	include			
Older people and outdoor environments: Pedestrian anxieties and barriers in the use of familiar and unfamiliar spaces	2013				
Cognitive function in the community setting: the neighbourhood as a source of 'cognitive reserve'?	2012				

Supporting the friendships of people with dementia	2012			duplicat e	
Connecting with nature is vital to many older people's wellbeing	2012		pm		
Supporting the friendships of people with dementia	2012	sc			
Neighbourhoods and dementia in the health and social care context: A realist review of the literature and implications for UK policy development	2012	sc			
The Creative Care Neighbourhood: Reinventing Dementia Care.	2011				
Neighbourhood Socioeconomic Status and Cognitive Function in Women	2011				
The Urban Neighbourhood and Cognitive Functioning in Late Middle Age	2011				
Neighbourhood socioeconomic status and cognitive function in women	2011	sc			
Remaining hopeful in early-stage dementia: a qualitative study	2010				ar
Designing dementia-friendly neighbourhoods: Helping people with dementia to get out and about	2010	sc			

Appendix 3: Inclusion, Exclusion, and Further Review

Review Question: How do neighbourhood environments promote psychological wellbeing among older adults living with dementia as they age in place?

	Article Title & Authors	Database Source	Abstract Reading	Full Text Reading	Reason for Inclusion	Reason for Exclusion
			Inc/Exc/Further Rev	Inc/Exc		
1	A socially prescribed community service for people living with dementia and family carers and its long-term effects on well-being Giebel, C; Morley, N; Komuravelli, A	Web of Science	exclude			quantitative
2	Features of the social and built environment that contribute to the well-being of people with dementia who live at home: A scoping review Sturge J., Nordin S., Sussana Patil D., Jones A., Legare F., Elf M., Meijering L.	Scopus	further review	exclude		scoping review
3	Individual and neighbourhood characteristics associated with neighbourhood walking among US older adults Besser L.M., Chang L.-C., Kluttz J.	Scopus	exclude			quantitative

4	Prevalence and risk factors of the co-occurrence of physical frailty and cognitive impairment in Chinese community-dwelling older adults Xie B., Ma C., Chen Y., Wang J.	Scopus	exclude			quantitative
5	'... This is my home and my neighbourhood with my very good and not so good memories': The story of autobiographical placemaking and a recent life with dementia Calvert, L; Keady, J; Khetani, B; Riley, C; Swarbrick, C	Scopus	further review	exclude		narrative autobiography, not target topic
6	Neighbourhood-based social capital and cognitive function among older adults in five low- and middle-income countries: Evidence from the World Health Organisation Study on Global AGEing and Adult Health Jiang, N; Wu, B; Lu, N; Dong, TY	Web of Science	exclude			quantitative
7	Impact of individual and neighbourhood dimensions of socioeconomic status on the prevalence of mild cognitive impairment over seven-year follow-up Fernandez-Blazquez, MA; Noriega-Ruiz, B; Avila-Villanueva, M; Valenti-Soler, M; Frades-Payo, B; Del Ser, T; Gomez-Ramirez, J	Web of Science	exclude			quantitative

8	Community participation in activities and places among older adults with and without dementia Chaudhury, H; Mahal, T; Seetharaman, K; Nygaard, HB	Web of Science	further review	exclude		Quan. Focus on destinations and navigation, not wellbeing
9	The saliency of geographical landmarks for community navigation: A photovoice study with persons living with dementia Seetharaman, K; Shepley, MM; Cheairs, C	Web of Science	further review	include	nav focus, outdoor environment and dementia	
10	Psychological distress links perceived neighbourhood characteristics to longitudinal trajectories of cognitive health in older adulthood Sharifian, N; Spivey, BN; Zaheed, AB; Zahodne, LB	Web of Science	further review	exclude		quantitative
11	Generational Distinctions on the Importance of Age-Friendly Community Features by Older Age Groups Black K, Hyer K.	PubMed	exclude			quantitative
12	Age-friendly communities and perceived disconnectedness: the role of built environment and social engagement Cao Q, Dabelko-Schoeny HI, White KM, Choi MS.	PubMed	exclude			quantitative
13	Prevalence and Associated Factors of Depression and Anxiety in Elderly Patients with Mild Cognitive Impairment in Community: a Cross-sectional Study	Scopus	further review	exclude		quantitative

	Ma J., Zhang S., Liu W., Chen S., Yu D., Qian J., Li C., Lu Y.					
14	Using Walking Interviews to Enhance Research Relations with People with Dementia: Methodological Insights From an Empirical Study Conducted in England Brannelly T., Bartlett R.	Scopus	further review	exclude		focus on walking interview technique, not target topic
15	The Urban Built Environment, Walking and Mental Health Outcomes Among Older Adults: A Pilot Study Roe J., Mondschein A., Neale C., Barnes L., Boukhechba M., Lopez S.	Scopus	exclude			Older adults, no dementia, statistical analysis
16	Neighbourhood environment and dementia in older people from high-, middle- And low-income countries: Results from two population-based cohort studies Wu Y.-T., Brayne C., Liu Z., Huang Y., Sosa A.L., Acosta D., Prina M.	Scopus	exclude			Quantitative
17	What is important to people with dementia living at home? A set of core outcome items for use in the evaluation of non-pharmacological community-based health and social care interventions Reilly S.T., Harding A.J.E., Morbey H., Ahmed F., Williamson P.R., Swarbrick C., Leroi I., Davies L., Reeves D., Holland F., Hann M., Keady J.	Scopus	further review		exclude	Mixed methods
18	Neighbourhoods as relational places for people living with dementia Clark, A; Campbell, S; Keady, J; Kullberg, A; Manji, K; Rummery, K; Ward, R	Scopus	further review	include	qualitative, neighbourhood and wellbeing	

19	Age-friendly cities in the Netherlands: An explorative study of facilitators and hindrances in the built environment and ageism in design	Scopus	further review	exclude		Researchers used photo-production research method. Ageism and built envir., not target population
	van Hoof J., Dikken J., ButtiÄ¡ieÄ¡ S.C., van den Hoven R.F.M., Kroon E., Marston H.R.					
20	The Urban Built Environment, Walking and Mental Health Outcomes Among Older Adults: A Pilot Study	Scopus	exclude			Independent living facility participants, not target population
	Roe J., Mondschein A., Neale C., Barnes L., Boukhechba M., Lopez S.					
21	Neighbourhood environment and dementia in older people from high-, middle- And low-income countries: Results from two population-based cohort studies	Scopus	exclude			quantitative
	Wu Y.-T., Brayne C., Liu Z., Huang Y., Sosa A.L., Acosta D., Prina M.					
22	Green spaces, dementia and a meaningful life in the community: A mixed studies review	Scopus	exclude			Mixed methods
	Mmako N.J., Courtney-Pratt H., Marsh P.					

23	International Mind, Activities and Urban Places (iMAP) study: Methods of a cohort study on environmental and lifestyle influences on brain and cognitive health	Scopus	exclude			focus on locations visited for daily activities rather than dementia and residential neighbourhoods
	Cerin E., Barnett A., Chaix B., Nieuwenhuijsen M.J., Caeyenberghs K., Jalaludin B., Sugiyama T., Sallis J.F., Lautenschlager N.T., Ni M.Y., Poudel G., Donaire-Gonzalez D., Tham R., Wheeler A.J., Knibbs L., Tian L., Chan Y.-K., Dunstan D.W., Anstey K.J., Carver A.					not target topic
24	Things Are Changing so Fast: Integrative Technology for Preserving Cognitive Health and Community History	Web of Science	further review	exclude		Participants were not diagnosed with dementia,, not target population
	Croff, RL; Witter, P; Walker, ML; Francois, E; Quinn, C; Riley, TC; Sharma, NF; Kaye, JA					
25	What is important to people living with dementia?: the long-list' of outcome items in the development of a core outcome set for use in the evaluation of non-pharmacological community-based health and social care interventions	Web of Science	further review	exclude		Was not a single study but integration of many to develop intervention outcomes
	Harding, AJE; Morbey, H; Ahmed, F; Opdebeeck, C; Lasrado, R; Williamson, PR; Swarbrick, C; Leroi, I; Challis, D; Hellstrom, I; Burns, A; Keady, J; Reilly, ST					
26	Neighbourhood social cohesion and cognitive function in US Chinese older adults-findings from the PINE study	Web of Science	exclude			Quantitative design
	Zhang, W; Liu, SZ; Sun, F; Dong, XQ					

27	Neighbourhood Environments and Cognitive Decline Among Middle-Aged and Older People in China Luo, Y; Zhang, LL; Pan, X	Web of Science	exclude			Quantitative design
28	Understanding ageing well in Australian rural and regional settings: Applying an age-friendly lens Hancock S, Winterton R, Wilding C, Blackberry I.	PubMed	further review	exclude		No diagnosis of dementia among participants, not target population
29	Physical, mental, and physiological health benefits of green and blue outdoor spaces among elderly people Aliyas Z.	PubMed	exclude			Random healthy older participants, not target population
30	Cognitive and Sensory Dimensions of Older People's Preferences of Outdoor Spaces for Walking: A Survey Study in Ireland Cassarino M, Bantry-White E, Setti A.	PubMed	exclude			Healthy adult population, not target population
31	Perceptions of Neighbourhood Environment, Sense of Community, and Self-Rated Health: an Age-Friendly City Project in Hong Kong Yu R, Wong M, Woo J.	PubMed	exclude			quantitative
32	The application and usefulness of virtual reality aimed at encourageing an understanding of and reducing and eliminating prejudice towards dementia patients among local residents Shirayama Y, Yuasa M, Kashimori S, Kitamura M, Goto T, Teranishi S, Yanagisawa S, Takeuchi Y, Ichikawa T, Usutani S.	PubMed	exclude			Not neighbourhood based. quantitative

33	Neighbourhood Food Environment and Dementia Incidence: the Japan Gerontological Evaluation Study Cohort Survey Tani Y, Suzuki N, Fujiwara T, Hanazato M, Kondo K.	PubMed	exclude			Quantitative design. Relationship between food and dementia
34	Nature-Based Social Prescribing in Urban Settings to Improve Social Connectedness and Mental Well-being: a Review Leavell MA, Leiferman JA, Gascon M, Braddick F, Gonzalez JC, Litt JS.	PubMed	exclude			Nature based. Healthy, not target population
35	Would you like to join me for a walk? The feasibility of a supervised walking programme for people with dementia who wander MacAndrew M., Kolanowski A., Fielding E., Kerr G., McMaster M., Wyles K., Beattie E.	Scopus	further review	exclude		Participants lived in long-term care setting, not target population
36	Multiple Influences on Cognitive Function Among Urban-Dwelling African Americans Wright R.S., Waldstein S.R., Gerassimakis C.S., Sprung M.R., Moody D.L.B., Taylor A.D., Al, Najjar E., McNeely J.M., Zhang Z., Evans M.K., Zonderman A.B.	Scopus	exclude			quantitative
37	Neighbourhood environment and cognitive function in older adults: A multilevel analysis in Hong Kong Guo Y., Chan C.H., Chang Q., Liu T., Yip P.S.F.	Scopus	further review	exclude		quantitative

38	Correlations between forgetfulness and social participation: Community diagnosing indicators Jeong S., Inoue Y., Kondo K., Ide K., Miyaguni Y., Okada E., Takeda T., Ojima T.	Scopus	exclude			quantitative
39	Dementia in immigrant groups: A cohort study of all adults 45 years of age and older in Sweden Wandell P., Carlsson A.C., Li X., Gasevic D., Sundquist J., Sundquist K.	Scopus	exclude			quantitative
40	Life-space mobility in older persons with cognitive impairment after discharge from geriatric rehabilitation Ullrich P., Eckert T., Bongartz M., Werner C., Kiss R., Bauer J.M., Hauer K.	Scopus	exclude			quantitative
41	We have different routes for different reasons: Exploring the purpose of walks for carers of people with dementia Silverman M.	Scopus	further review	exclude		Qualitative, but explores the purpose of walks from caregiver's perspective
42	Influence of activity space on the association between neighbourhood characteristics and dementia risk: Results from the 3-City study cohort 11 Medical and Health Sciences 1117 Public Health and Health Services Letellier N., Carrire I., Gutierrez L.-A., Gabelle A., Dartigues J.-F., Dufouil C., Helmer C., Cadot E., Berr C.	Scopus	further review	exclude		Design and inclusion fit. Quantitative.

43	The application and usefulness of virtual reality aimed at encourageing an understanding of and reducing and eliminating prejudice towards dementia patients among local residents Shirayama Y., Yuasa M., Kashimori S., Kitamura M., Goto T., Teranishi S., Yanagisawa S., Takeuchi Y., Ichikawa T., Usutani S.	Scopus	exclude			Not a neighbourhood design. Virtual reality and prejudice evaluation, not target topic
44	Cognitive functioning as a moderator in the relationship between the perceived neighbourhood physical environment and physical activity in Belgian older adults Gheysen F., Herman K., Van Dyck D.	Scopus	further review	exclude		quantitative
45	Walking interviews as a research method with people living with dementia in their local community Kullberg, A; Odzakovic, E	WoS	further review	exclude		Book chapter
47	Neighbourhood Socioeconomic Status and Cognitive Trajectories in a Diverse Longitudinal Cohort Meyer, OL; Mungas, D; King, J; Hinton, L; Farias, S; Reed, B; DeCarli, C; Geraghty, E; Beckett, L	WoS	further review	exclude		Descriptive statistics
48	Cognition in Context: The Role of Objective and Subjective Measures of Neighbourhood and Household in Cognitive Functioning in Later Life Lee, H; Waite, LJ	Web of Science	further review	exclude		Descriptive statistics, quantitative design
49	Ageing in place: creativity and resilience in neighbourhoods	Web of Science	further review	exclude		Book chapter

	Bailey, C; Gilroy, R; Reynolds, J; Douglas, B; Saaremets, CW; Nicholls, M; Warwick, L; Gollan, M					
50	Community intervention to increase neighbourhood social network among Japanese older adults Harada, K; Masumoto, K; Katagiri, K; Fukuzawa, A; Chogahara, M; Kondo, N; Okada, S	Web of Science	exclude			quantitative
51	Talking while walking: an investigation of perceived neighbourhood walkability and its implications for the social life of older people Alidoust, S; Bosman, C; Holden, G	Web of Science	further review	exclude		Neighbourhood design that promotes walkability and social interactions among older people, not target topic
52	Social Participation and Cognitive Decline Among Community-dwelling Older Adults: A Community-based Longitudinal Study Tomioka, K; Kurumatani, N; Hosoi, H	Web of Science	exclude			quantitative
53	Residential Surrounding Greenness and Cognitive Decline: A 10-Year Follow-up of the Whitehall II Cohort de Keijzer, C; Tonne, C; Basagana, X; Valentin, A; Singh-Manoux, A; Alonso, J; Anto, JM; Nieuwenhuijsen, MJ; Sunyer, J; Dadvand, P	Web of Science	exclude			quantitative
54	The impact of rural-urban community settings on cognitive decline: results from a nationally-representative sample of seniors in China	Web of Science	exclude			quantitative

	Xiang, YX; Zare, H; Guan, CL; Gaskin, D					
55	Prevalence of cognitive impairment in a high social risk population older then 60 years from Neuquenn capital, Argentina Regueiro M, Homar C, Canas M, Tosello V.	PubMed	exclude			Quantitative. Measures cognitive changes within populations
56	Case-control study on the influencing factors related to cognitive impairment in the elderly population of China Qi SG, Wang ZH, Wei CB, Yang Z, Zhu XQ.	PubMed	exclude			quantitative
57	Designing dementia-friendly gardens: A workshop for landscape architects: Innovative Practice Charras K, BÃ©bin C, Laulier V, Mabire JB, Aquino JP.	PubMed	exclude			Not target population
58	Age-Friendly Initiatives, Social Inequalities, and Spatial Justice Greenfield EA.	PubMed	exclude			Special report. Not peer reviewed or topic related.
59	Is community social capital associated with subjective symptoms of dementia among older people? A cross-sectional study in Japan Murayama H., Sugiyama M., Inagaki H., Okamura T., Miyamae F., Ura C., Edahiro A., Motokawa K., Awata S.	Scopus	exclude			quantitative population-based, large-scale questionnaire survey
60	Challenges to ageing in place for African American older adults living with dementia and their families Epps F., Weeks G., Graham E., Luster D.	Scopus	further review	exclude		socio-economic perspective, not target topic

61	Disabling Spaces and Spatial Strategies: Feminist Approaches to the Home Environment of Family Caregivers of People with Dementia Kallitsis P., Soilemezi D., Elliott A.M.	Scopus	exclude			family caregiver perception
62	Research with people with dementia-ethical reflections on qualitative research praxis on mobility in public space Reitinger E., Pichler B., Egger B., Knoll B., Hofleitner B., Plunger P., Dressel G., Heimerl K.	Scopus	further review	exclude		focus on mobility, not target topic
63	Living Life and Doing Things Together: Collaborative Research With Couples Where One Partner Has a Diagnosis of Dementia Bielsten T., Lasrado R., Keady J., Kullberg A., HellstrÃ¶m I.	Scopus	further review	exclude		family perspective
64	The lived neighbourhood: Understanding how people with dementia engage with their local environment Ward R., Clark A., Campbell S., Graham B., Kullberg A., Manji K., Rummery K., Keady J.	Scopus	further review	include	lived neighbourhood, dementia, wellbeing	
65	A mismatch between supply and demand of social support in dementia care: A qualitative study on the perspectives of spousal caregivers and their social network members Dam A.E.H., Boots L.M.M., Van Boxtel M.P.J., Verhey F.R.J., De Vugt M.E.	Scopus	exclude			Caregiver perspective

66	Developing a core outcome set for people living with dementia at home in their neighbourhoods and communities: Study protocol for use in the evaluation of non-pharmacological community-based health and social care interventions Harding A.J.E., Morbey H., Ahmed F., Opdebeeck C., Wang Y.-Y., Williamson P., Swarbrick C., Leroi I., Challis D., Davies L., Reeves D., Holland F., Hann M., HellstrÃ¶m I., HydÃ©n L.-C., Burns A., Keady J., Reilly S.	Scopus	exclude			study protocol
67	Sex-specific association between neighbourhood characteristics and dementia: The Three-City cohort Letellier N., Gutierrez L.-A., CarriÃ¨re I., Gabelle A., Dartigues J.-F., Dufouil C., Helmer C., Cadot E., Berr C.	Scopus	exclude			quantitative
68	Cognitive functioning among Dutch older adults: Do neighbourhood socioeconomic status and urbanity matter? Worn, J; Ellwardt, L; Aartsen, M; Huisman, M	Web of Science	exclude			quantitative
69	Neighbourhood Context, Dementia Severity, and Mexican American Caregiver Well-Being Rote, SM; Angel, JL; Markides, K	Web of Science	exclude			Caregiver perspective
70	Shared Use of Physical Activity Facilities Among North Carolina Faith Communities, 2013 Hardison-Moody A, Edwards MB, Bocarro JN, Stein A, Kanters MA, Sherman DM, Rhew LK, Stallings WM, Bowen SK.	PubMed	exclude			quantitative

71	Effects of Perceived Neighbourhood Environments on Self-Rated Health among Community-Dwelling Older Chinese Wong M, Yu R, Woo J.	PubMed	exclude			quantitative
72	Outdoor spaces improve dementia care Trueland J.	PubMed	exclude			Feature review of outdoor spaces, care homes and depression, not target topic
73	Common Psychological Problems and Influencing Factors Among the Community-dwelling Elderly in Shanghai Chen Y.-M., Zhuang X.-W., Liu H., Yu Q.-S.	Scopus	Further review	exclude		healthy, not target population
74	Micro-scale environment and mental health in later life: Results from the Cognitive Function and Ageing Study II (CFAS II) Wu Y.-T., Prina A.M., Jones A., Barnes L.E., Matthews F.E., Brayne C., MRC CFAS	Scopus	exclude			quantitative
75	Dementia-friendly communities: challenges and strategies for achieving stakeholder involvement Heward M., Innes A., Cutler C., Hambidge S.	Scopus	exclude			not from PWD perspective
76	Neighbourhood age structure and cognitive function in a nationally-representative sample of older adults in the U.S. Friedman E.M., Shih R.A., Slaughter M.E., Weden M.M., Cagney K.A.	Scopus	exclude			Neighbourhood age structure to cognitive health outcomes quantitative

77	The uncommon impact of common environmental details on walking in older adults Brookfield K., Thompson C.W., Scott I.	Scopus	exclude			Environment design focus on healthy, not target population
78	Social citizenship, public art and dementia: Walking the urban waterfront with Paula's Club Kelson E., Phinney A., Lowry G.	Scopus	further review	include	early onset dementia and social citizenhip	
79	Are self-reported neighbourhood characteristics associated with onset of functional limitations in older adults with or without memory impairment? Nguyen, TT; Rist, PM; Glymour, MM	Web of Science	exclude			quantitative
80	Designed Natural Spaces: Informal Gardens Are Perceived to Be More Restorative than Formal Gardens Twedt E, Rainey RM, Proffitt DR.	PubMed	exclude			No neighbourhood or dementia, not population target of focus
81	Modeling Age-Friendly Environment, Active Ageing, and Social Connectedness in an Emerging Asian Economy Lai MM, Lein SY, Lau SH, Lai ML.	PubMed	exclude			quantitative
82	Information and communication technology solutions for outdoor navigation in dementia Teipel S., Babiloni C., Hoey J., Kaye J., Kirste T., Burmeister O.K.	Scopus	further review	exclude		Technology based for feasibility and usability, not topic of focus

83	Walking in the neighbourhood: Performing social citizenship in dementia Phinney A., Kelson E., Baumbusch J., Oâ€™Connor D., Purves B.	Scopus	further review	include	young onset dementia, social citizenship	
84	Helping Dementia Caregivers Through Technology Fowler C.N., Haney T., Lemaster M.	Scopus	exclude			Caregiver perspective
85	Neighbourhood racial/ethnic composition and segregation and trajectories of cognitive decline among US older adults Kovalchik, SA; Slaughter, ME; Miles, J; Friedman, EM; Shih, RA	Web of Science	exclude			quantitative
86	Cognitive decline and the neighbourhood environment Clarke, PJ; Weuve, J; Barnes, L; Evans, DA; de Leon, CFM	Web of Science	exclude			quantitative
87	Neighbourhood Characteristics and Dementia Status Predict Physical Functioning In Older Adults Liebmann, E; Breda, AI; Watts, A; Ferdous, F; Moore, KD; Burns, JM	Web of Science	further review	exclude		Physical functioning rather than physiosocial wellbeing, not topic of focus
88	Community environment, cognitive impairment and dementia in later life: Results from the Cognitive Function and Ageing Study Wu Y.-T., Prina A.M., Jones A.P., Barnes L.E., Matthews F.E., Brayne C., Medical Research Council Cognitive Function and Ageing Study	Scopus	exclude			Land use and crime statistical analysis, not topic of focus

89	The association between community environment and cognitive function: a systematic review Wu Y.-T., Prina A.M., Brayne C.	Scopus	further review	exclude		systematic review
90	Quality of life (QOL) of the community-dwelling elderly and associated factors: A population-based study in urban areas of China Sun W., Aodeng S., Tanimoto Y., Watanabe M., Han J., Wang B., Yu L., Kono K.	Scopus	exclude			quantitative
91	The mix matters: Complex personal networks relate to higher cognitive functioning in old age Ellwardt L., Van Tilburg T.G., Aartsen M.J.	Scopus	exclude			quantitative
92	What is the impact of using outdoor spaces such as gardens on the physical and mental well-being of those with dementia? A systematic review of quantitative and qualitative evidence Whear R, Coon JT, Bethel A, Abbott R, Stein K, Garside R.	PubMed	further review	exclude		Cannot access and read full text
93	Improving the experience of dementia and enhancing active life - living well with dementia: Study protocol for the IDEAL study Clare L., Nelis S.M., Quinn C., Martyr A., Henderson C., Hindle J.V., Jones I.R., Jones R.W., Knapp M., Kopelman M.D., Morris R.G., Pickett J.A., Rusted J.M., Savitch N.M., Thom J.M., Victor C.R.	Scopus	further review	exclude		Study protocol

94	Neighbourhood linking social capital as a predictor of psychiatric medication prescription in the elderly: A Swedish national cohort study Sundquist J., Hamano T., Li X., Kawakami N., Shiwaku K., Sundquist K.	Scopus	exclude			Neighbourhood and medication study, not topic of focus
95	Older people and outdoor environments: Pedestrian anxieties and barriers in the use of familiar and unfamiliar spaces Phillips, J; Walford, N; Hockey, A; Foreman, N; Lewis, M	Web of Science	exclude			Healthy population not diagnosed with dementia, not population target
96	Cognitive function in the community setting: the neighbourhood as a source of 'cognitive reserve'? Clarke, PJ; Ailshire, JA; House, JS; Morenoff, JD; King, K; Melendez, R; Langa, KM	Web of Science	Further review	exclude		Statistical analysis
97	Connecting with nature is vital to many older people's wellbeing McManus M.	PubMed	further review	exclude		Article from nursing perspective
98	Supporting the friendships of people with dementia Ward R., Howorth M., Wilkinson H., Campbell S., Keady J.	Scopus	further review	exclude		Social connection, qualitative, but not within the neighbourhood setting
99	Neighbourhoods and dementia in the health and social care context: A realist review of the literature and implications for UK policy development	Scopus	further review	exclude		realist review of literature

	Keady J., Campbell S., Barnes H., Ward R., Li X., Swarbrick C., Burrow S., Elvish R.					
100	The Creative Care Neighbourhood: Reinventing Dementia Care. Medina-Walpole, A; Adams, M; Bonito, E; Wright, T	Web of Science	further review	exclude		Could not access full text from WoS or library
101	Neighbourhood Socioeconomic Status and Cognitive Function in Women Shih, RA; Ghosh-Dastidar, B; Slaughter, ME; Jewell, A; Bird, CE; Eibner, C; Margolis, KL; Denburg, NL; Ockene, J; Messina, CR; Espeland, MA	Web of Science	exclude			quantitative
102	The Urban Neighbourhood and Cognitive Functioning in Late Middle Age Aneshensel, CS; Ko, MJ; Chodosh, J; Wight, RG	Web of Science	exclude			quantitative
103	Neighbourhood socioeconomic status and cognitive function in women Shih R.A., Ghosh-Dastidar B., Margolis K.L., Slaughter M.E., Jewell A., Bird C.E., Eibner C., Denburg N.L., Ockene J., Messina C.R., Espeland M.A.	Scopus	exclude			quantitative
104	Designing dementia-friendly neighbourhoods: Helping people with dementia to get out and about Mitchell L., Burton E.	Scopus	further review	exclude		article was based off 2002-2003 data\design element

105	Remaining hopeful in early-stage dementia: a qualitative study Wolverson Radbourne EL, Clarke C, Moniz-Cook E.	Reference check	further review	exclude		investigated the subjective experience of hope. Absence of neighbourhood or ageing- in place specific, not target topic
106	Relational interactions preserving dignity experience: Perceptions of persons living with dementia Tranvåg O, Petersen KA, Nåden D.	Reference check	further review	exclude		dignity with interactions, not ageing in place /neighbourhood/ health care and social network
107	I want to feel at home': establishing what aspects of environmental design are important to people with dementia nearing the end of life Fleming R, Kelly F, Stillfried G.	Reference check	further review	exclude		Mixed methods
108	Tracing the successful incorporation of assistive technology into everyday life for younger people with dementia and family carers Arntzen C, Holthe T, Jentoft R.	Referene check	further review	exclude		in home technology based, not topic focused
109	Scanning the conceptual horizons of citizenship Bartlett R.	Reference check	further review	exclude		No participants. Focus on related articles.

110	Narrative citizenship, resilience and inclusion with dementia: On the inside or on the outside of physical and social places Clarke CL, Bailey C.	Reference check	further review	include	dementia and everyday life	
111	The landscape of dementia inclusivity Marsh P, Courtney-Pratt H, Campbell M.	Reference check	further review	exclude		Participatory research: qualitative methods of participant observation, videography and semi-structured interviews Residential Aged Care Residents, employees and volunteers
112	Digging for Dementia: Exploring the experience of community gardening from the perspectives of people with dementia Noone S, Jenkins N.	Reference check	exclude			Participants lived in long-term care setting
113	Through the eyes of others - the social experiences of people with dementia: a systematic literature review and synthesis Patterson KM, Clarke C, Wolverson EL, Moniz-Cook ED.	Reference check	further review	exclude		Systematic lit review
114	Toward Understanding Person-Place Transactions in Neighbourhoods: A Qualitative-Participatory Geospatial Approach	Reference check	further review	exclude		Narrative interviews, person to place association to wellbeing

	Hand CL, Rudman DL, Huot S, Gilliland JA, Pack RL.					Not dementia related	
115	Muddling along in the city: Framing the cityscape of dementia Manthorpe J, Iliffe S.	Reference check	exclude			Paper only frames, no participants etc.	
116	O*verjoyed that I can go outside*': Using walking interviews to learn about the lived experience and meaning of neighbourhood for people living with dementiaOdzakovicE, Hellström I, Ward R, Kullberg A.	Reference check	include	include	lived experiences		
117	'It's our pleasure, we count cars here': An exploration of the 'neighbourhood-based connections' for people living alone with dementia	Reference check	include	include	neighbourhood-based, qualitative, dementia/ wellbeing. perfect!		
	Odzakovic, Elzana, Kullberg, Agneta, Hellström, Ingrid, Clark, Andrew, Campbell, Sarah, Manji, Kainde, Ward, Richard						
118	Transforming lived places into the connected neighbourhood: A longitudinal narrative study of five couples where one partner has an early diagnosis of dementia	Reference check	include	include	qualitative, narrative		
	Li X., Keady J., Ward R.						
119	The everyday use of assistive technology by people with dementia and their family carers by Brittain et al., 2010	Reference check	further review	exclude		technology based	

120	The will to mobility: life-space satisfaction and distress in people with dementia who live alone Lloyd and Stirling	Reference check	Include	include	ageing in place, dementia, life-space		
121	Persons with early-stage dementia reflect on being outdoors: a repeated interview study Olsson et al.	Reference check	include	include	wellbeing, outdoor, qualitative		
122	Perceived Social Determinants of Health Among Older, Rural-Dwelling Adults with Early-Stage Cognitive Impairment, Mattos et al.	Reference check	further review	include	qual, dementia, ageing in place		
123	Everyday Built Environments of Care: Examining the Socio-Spatial Relationalities of Suburban Neighbourhoods for People Living with Dementia, Biglieri et al.	Reference check	further review	include	qual, dementia, ageing in place		
124	Exploring Assets of People with Memory Problems and Dementia in Public Space: A qualitative study, Sturge et al.	Reference check	further review	include	qual, dementia, ageing in place		
125	Beyond the Shrinking World: Dementia, Localisation and Neighbourhood, Ward et al.	Reference check	further review	include	qual, dementia, ageing in place		

Appendix 4: Included Papers Characteristics

Source Number, Article Title, Lead Author, Year, Country and Location	Participants with Dementia	Study Design	Study Objective	Study Details	Key Findings
[1] Neighbourhoods as relational places for people living with dementia Clark et al., 2020 United Kingdom and Sweden Urban, Suburban, and Rural	67 people living with dementia and 62 care partners Between ages 51-88	Qualitative-driven mixed methods research design Threefold set of methods: 1. walking interviews 2. filmed home tours 3. participatory network mapping technique Thematic analysis Focus was on meanings of neighbourhood and day-to-day activities. Participatory ethos and constructive design	To contribute to a new understanding about the relevance of neighbourhoods and how they provide connections, interactions and social engagements for people living with dementia Aim is to understand how neighbourhoods support well-being and everyday lives of people living with dementia.	Part of a 5-year international programme Data collection took place in city, suburban and rural locations. Participants were interviewed while taking a neighbourhood walk, then filmed home tours to related to the meaning of “home”, and finally network mapping which asks participants to map and describe relationships that support giving and receiving	Results indicated two themes: 1. Neighbourhoods as connections. A. They are support systems that provide practical support, and B. relationship development (interactions that contribute to maintaining a sense of connection) 2. Networked neighbourhoods. They are experienced through lines of travel – foot paths or transportation lines.

Source Number, Article Title, Lead Author, Year, Country and Location	Participants with Dementia	Study Design	Study Objective	Study Details	Key Findings
					Subjective feelings about a neighbourhood can contribute to well-being
[2] Narrative citizenship, resilience and inclusion with dementia: On the inside or on the outside of physical and social places Clarke et al., 2016 United Kingdom Suburban and Rural	13 people living with dementia along with family members and service providers 6 men 7 women born mid 1960s-early 1990s.	Qualitative design with a thematic-comparative analysis. Four interviews with a focus on 1. Daily activities and routines 2. Contacts and connections with family, friends, neighbours 3. Involvement in community life 4. Personal growth Interviewer follows up with	To explore the importance of place and its relationship with resilience and citizenship.	Participants were visited at home six times over one year. Each interview focused on different aspects of everyday life. 89 interviews were conducted with participants living with dementia. Each interview topic included option to record a weekly diary.	Results indicated 5 themes: 1. Others knowing and responding 2. Socially withdrawing and feeling excluded 3. Sustaining and changing activities-relating to activities within community 4. Belonging and estrangement from place – familiarity within the neighbourhood and

Source Number, Article Title, Lead Author, Year, Country and Location	Participants with Dementia	Study Design	Study Objective	Study Details	Key Findings
		participant diary entries.			challenges it presents 5. Engageing services and support-
[3] Social citizenship, public art and dementia: Walking the urban waterfront with Paula's Club Kelson et al., 2017 Canada Urban	Groups with approximately 15 living with dementia Between ages 50-75	Qualitative design drawing on 100+ hours of observation while accompanying the groups during afternoon walks with data recorded as field notes and "walking vignettes"	To build on body of research by exploring the social and spatial dynamics through walking and interacting with public spaces within the neighbourhood Explores how dementia relates to social citizenship.	Drew data from 100+ hours of observation during afternoon walks.	Revolved around social engagement and inclusion. Art has the potential to be 1) therapeutic or 2) a support for wayfinding and getting out-and-about within the neighbourhood
[4] Transforming lived places into the connected neighbourhood: a longitudinal study of five couples where one partner has an early	5 persons living with dementia and their partner Between ages 66-85	Mixed qualitative method study using participatory approach. Draws upon narrative and photography. Subjective and inductive	Explore the meaning of and place of neighbourhood in the everyday lives of people living with dementia.	Purposive sampling. 65 home visits that resulted in 57 hours of interview data.	Three themes emerged: 1. Connecting to people 2. Connecting to places 3. Connecting to resources

Source Number, Article Title, Lead Author, Year, Country and Location	Participants with Dementia	Study Design	Study Objective	Study Details	Key Findings
diagnosis of dementia Li et al., 2019 United Kingdom Urban and Suburban		approach using a narrative analysis.			
[5] The will to mobility: life-space satisfaction and distress in people with dementia who live alone Lloyd et al., 2015 Australia Urban	7 people living in single-person households diagnosed with early to moderate dementia Between ages 48-85	qualitative exploratory study using semi-structured interviews ranging between 25-45 minutes in participant's homes	Exploratory project aimed at gaining a deeper understanding of the everyday lives within the home and 'life-space'.	Audio-recorded, semi-structured in-depth interviews with a focus on their mobility and wellbeing as they go about their daily lives in the home and community	Four themes emerged: 1. Access to public space 2. Social distance and proximity with neighbours and friends 3. Changing meanings of space and objects 4. Imaginative co-presence

Source Number, Article Title, Lead Author, Year, Country and Location	Participants with Dementia	Study Design	Study Objective	Study Details	Key Findings
[6] Perceived Social Determinants of Health Among Older, Rural-Dwelling Adults with Early-Stage Cognitive Impairment Mattos et al., 2017 United States Rural	9 participants living with dementia and 10 care partners Ages > 65	Qualitative research design utilizing semi-structured interviews.	Explored social determinants of health among rural-dwelling older adults diagnosed with early-stage cognitive impairment to help understand and facilitate lifestyle modifications within the rural community.	Semi-structured interviews within the home environment asking 14 questions aimed at focus on community, interpersonal, and individual levels (health and wellbeing).	Six themes emerged: 1. Staying active 2. Eating well 3. Living with cognitive changes 4. Living rural 5. Connecting with neighbours and community 6. Relying on children
[7] 'It's our pleasure, we count cars here': an exploration of the neighbourhood-based connections for people	14 participants living with dementia in three field sites (four participants were included in the below study #10).	Qualitative design using semi-structured interviews, walking interviews, home tours and network mapping. Framed by social	Purpose is to examine how persons with dementia who live alone establish social networks and relationships within the	Chart within this study breaks down the process between the three field sites.	Four main themes: 1. Making the effort to stay connected 2. Befriending by organisations

Source Number, Article Title, Lead Author, Year, Country and Location	Participants with Dementia	Study Design	Study Objective	Study Details	Key Findings
living along with dementia Odzakovic et al., 2019 Sweden and United Kingdom Urban, Suburban and Rural	Between ages 62-87	constructionist paradigm. Thematic analysis.	neighbourhood.		and facilitated friendships 3. The quiet neighbourhood atmosphere 4. Changing social connections participants' actions are crucial to sustaining social life in the neighbourhood to reduce the threat of social isolation
[8] 'Overjoyed that I can go outside': Using walking interviews to learn about the lived experience and meaning of neighbourhood for people living with dementia	14 people living with dementia Between ages 62-87	Qualitative design using walking interviews framed by a social constructionist paradigm.	2 research questions for guidance: 1. How can the neighbourhood support people to remain socially and physically active after being	Participants lead the walk and play "tour guide". Researcher used open-ended questions regarding environment, services, people, and buildings. Walks were	Four themes were identified: 1. Life narratives embedded within the neighbourhood 2. The support of selfhood

Source Number, Article Title, Lead Author, Year, Country and Location	Participants with Dementia	Study Design	Study Objective	Study Details	Key Findings
Odzakovic et al., 2020 Sweden and United Kingdom Urban, Suburban, and Rural			diagnosed with dementia 2. What meanings do people with dementia attach to their experiences of living within the neighbourhood	between 25-97 minutes. Field notes were made and transcribed verbatim. Thematic analysis.	and wellbeing through movement 3. The neighbourhood as an immediate social context 4. Restorative connections to nature
[9] Persons with early-stage dementia reflect on being outdoors: a repeated interview study Olsson et al., 2013	Purposive sampling of 11 participants in early-stage dementia Between ages 52-81	Qualitative design utilizing repeated interviews.	Describe how persons in the early stage of dementia feel about being outdoors What effect does this have on well-being?	Indoor and outdoor interviews (total = 2), which were recorded and transcribed verbatim. Analysed using content analysis resulting in themes and sub-themes.	Main theme identified: 1. Outdoor activities as a confirmation of self through being and doing (social interactions, self-confidence, and well-being)

Source Number, Article Title, Lead Author, Year, Country and Location	Participants with Dementia	Study Design	Study Objective	Study Details	Key Findings
Sweden Suburban					
[10] Walking the neighbourhood: Performing social citizenship in dementia Phinney et al., 2016 Canada Urban	Reporting on a subset of data from another study of Paula's Club – see #5	Participant observation with focus on physical and social environment as well as verbal/non-verbal exchanges between participants	Explore how community-based programmes promote social citizenship for people living with dementia	Participant observation by researcher lead to 58 walking sessions and resulted in over 400 hours of observations. Wide-ranging, spontaneous conversations. "go-along" interview	Three themes emerged: 1. Keeping the focus off dementia 2. Creating a place of belonging 3. Claiming a place in the community
[11] The saliency of geographical landmarks for community navigation: A photo-voice study with persons living with dementia Seetharaman et al., 2020	8 members of walking group for persons living with mild to moderate dementia Ages not disclosed.	Qualitative/photo-voice method, which is participatory visual research.	Focus on characteristics of landmarks to help navigate neighbourhood environments for persons living with dementia. Aim was to explore landmarks and identify characteristics to help	Participants take pictures within neighbourhood and discuss the importance with researcher through focus group discussion. Three weeks later, online survey was emailed, which were meant to triangulate the	Grouped into 1) visual distinctiveness and 2) meaningfulness. Characteristics relayed identify a starting point for further development into helping navigate

Source Number, Article Title, Lead Author, Year, Country and Location	Participants with Dementia	Study Design	Study Objective	Study Details	Key Findings
Canada and United States Urban			outdoor navigation.	focus group responses. Photos were categorized and thematized.	through the neighbourhood.
[12] The lived neighbourhood: understanding how people with dementia engage with their local environment Ward et al., 2018 United Kingdom and Sweden Urban, Suburban, and Rural	First round 10-11 participants Ages between 40-85	Qualitative and participatory approach. Walking interview, social network mapping interview, and home tour with filming or audio-recording data	Aims to map local spaces across three sites: Manchester, Central Scotland, and Linkoping, Sweden. This paper provides insight on how people living with dementia balance their capabilities and limitations both socially and environmentally.	Ongoing 5-year study reporting the first phase. First round interviews (between 20-120 minutes) included 30 interview transcripts that were open coded and categorized into emerging themes.	Data organised into 5 headings: Person, Place, Connections, Citizenship and Time
[13] Everyday built environments of care: Examining the socio-spatial relationalities of suburban neighbourhoo	7 people living with dementia 57 – 81 years of age	Qualitative-driven multi-method research design with a participatory approach	Examine the ways in which people with dementia remake spaces to support themselves within their suburban	Took place over seven months. Threefold set of methods: 1. semi-structured introductory interview	Results indicated two themes: Theme 1: Self-care in place over time Subthemes: Noticing

Source Number, Article Title, Lead Author, Year, Country and Location	Participants with Dementia	Study Design	Study Objective	Study Details	Key Findings
ds for people living with dementia Biglieri et al., 2021 Canada Urban		Thematic analysis	neighbourhood.	2. go-along interview (between 45 and 180 min), where the participant gave the researcher a tour of their neighbourhood 3. two-week GPS tracking and travel diaries were used to gather participant mobility patterns and then were used to guide a second go-along interview	friction, Present day self-care, and planning for care in future Theme 2: Care interdependence in place: Participants created a social network to help with mobility and caring for others Participants were able to deal with changes and negotiate their environments as best as they could Theme 3: Encounter as care in neighbourhoods with friends and strangers
[14] Exploring assets of people with memory problems and dementia in	8 participants 6 women & 2 men	Qualitative Study Asset-based approach using	The aim of this paper is to identify assets (physical, social and institutional)	(1) a sociodemographic survey (2) walking interview	Identified three assets that support wellbeing: physical,

Source Number, Article Title, Lead Author, Year, Country and Location	Participants with Dementia	Study Design	Study Objective	Study Details	Key Findings
public space: A qualitative study Sturge et al., 2021 The Netherlands Urban	59-93 years of age	deductive content analysis Walking and in-depth interviews	in public space and understand how they support the well-being of people dementia.	(3) GPS tracking (4) travel diary entries, and (5) an in-depth interview to discuss activities and experiences over 2-week period	social, and institutional Then divided into two themes: Theme 1: Navigating public space and Theme 2: Supporting social inclusion and encounters Noted it wasn't one asset, but a combination of many that contributed to wellbeing
[15] Beyond the shrinking world: dementia, localisation and neighbourhood Ward et al., 2021	127 participants Age range: 51-88	Social constructionist paradigm Longitudinal and comparative design	Aim was to investigate how communities and neighbourhoods could support people living with dementia be socially and	1) Walking interviews of neighbourhood and house, filmed or audio-recorded 2) social networking mapping at home	Findings: Onset of dementia and diagnosis change across many areas of lives. Social exclusion, negative experiences in public, retail

Source Number, Article Title, Lead Author, Year, Country and Location	Participants with Dementia	Study Design	Study Objective	Study Details	Key Findings
England, Scotland, Sweden Urban, Suburban and Rural			physically active.	Open-ended interviews with a return to interview again between 8-12 months later	and personal settings were reported. Participants took a positivist view of the resources to manage their circumstance

Appendix 5: Data Extraction of Primary

Source Number	Main Author, Title, Year	Findings
[1]	Neighbourhoods as relational places for people living with dementia, Clark et al., 2020	"[The people who live] next door are brilliant. I might not see them from one day to the next, but my daughter has got their phone number and they take my [rubbish] bins out and bring them back for me whenever they need emptying" (Margaret, England, Paper 1). "I suppose the biggest person that is a support to me is a girl called [name]. And she's my best friend and I talk to her every day. She texts me in between times, she WhatsApp's me…They live in Dubai. So yes, it's not easy to have coffee with [her] but we talk every day and if she's worried about me she'll organise a haircut for me, I just turn up at the hairdressers and it's already been paid" (Brenda, Paper1). "One of the worst things for me is, because my memory can go…, we can walk along and it can just go off. And there's been times when I've gone into town and then I've had to phone [husband] and say, what bus do I get home?" (Elizabeth, Paper 1). "I went into the local shop. I go there for a paper…I said, I'm going to tell you that I've been diagnosed with dementia. 'Oh God', she says, 'That's a shame. Well', she says, 'I'll have a talk with the [staff] and just tell them to look after you'." (John, Paper 1).

Source Number	Main Author, Title, Year	Findings
[2]	Narrative citizenship, resilience and inclusion with dementia: On the inside or on the outside of physical and social places, Clarke et al., 2016	"But I am a lot quieter than I was. And I know that. Because I don't want to go out and make an idiot of myself, say something and it's wrong (Jim, Paper 2).
[3]	Social citizenship, public art and dementia: Walking the urban waterfront with Paula's Club, Kelson et al., 2017	"I'm able to get out and about and still do most of the, sort of, jobs that I would normally do around the house – the gardening. So I'm not really aware of I [dementia] all the time…But most of the time I feel okay, and I'm not really aware that I'm losing my memory. I know I'm losing my memory, but I don't feel like it (Peter, Paper 3).
[4]	Transforming lived places into the connected neighbourhood: a longitudinal study of five couples where one partner has an early diagnosis of dementia, Li et al., 2019	"My daughters and sons are all on there [Facebook], my sister and her kids, and I speak to them sometimes, sometimes I just look and see what's on there and who's on there". (Jonathan, Paper 4)
[5]	The will to mobility: life-space satisfaction and distress in people with dementia who live alone, Lloyd et al., 2015	"I just love the look of the place. The people are nice. I just feel at home. I enjoy getting out and about and do a lot of walking, getting outside. I seem to feel better with myself…I love trees (James, Paper 5).
[6]	Perceived Social Determinants of Health Among Older, Rural-Dwelling Adults with Early-Stage Cognitive Impairment, Mattos et al., 2017	"We don't have any kids around here to help us with. That's our problem, see?"(81 year old female, Paper 6). "All of us on this road are…real friendly and help each other" (female, Paper 6).

Source Number	Main Author, Title, Year	Findings
[7]	'It's our pleasure, we count cars here': an exploration of the neighbourhood-based connections for people living along with dementia, Odzakovic et al., 2019	"I go to a group that Philip [son]…he knew the fella that ran it…I was only there last week. They had a dancing session last week when I went. It is good for your brain, and they're all very friendly (Margaret, England, Paper 7). "Look what a nice view I have. And I can see everyone who goes to the day care centre. But I can also see those who are walking and shopping it may seem a bit curious (Alma, Sweden, Paper 7).
[8]	'Overjoyed that I can go outside': Using walking interviews to learn about the lived experience and meaning of neighbourhood for people living with dementia, Odzakovic et al., 2020	"In summer, this long summer, then it's almost a small meeting point for those of us who are retired. It's our pleasure, we're counting cars here. I can sit for a while and sometimes there is nobody to talk with, sometimes there is someone that I can talk with (Anna, Paper 8) "We have a church there, you see up there to the clock yard, where he lives, he (former working colleague) has an overview of the neighbourhood. I know most people who are in the cemetery who have lived…and worked with me" (Lennart,, Paper 8). "I go out almost every day because my doctor has said that being around people, having same routines every day and walking is good for my brain…I take control over myself and then, and it has got much better. But when you've got Alzheimer's, everyone thinks that one is just destroyed, which

Source Number	Main Author, Title, Year	Findings
		is completely wrong. (Ingvar, Paper 8).
[9]	Persons with early-stage dementia reflect on being outdoors: a repeated interview study, Olsson et al., 2013	"I need to know that I can do things I did before" (Participant 8, Paper 9) "As long as I can be outside and do things, I'll have an identity" (Participant 9, Paper 9).
[10]	Walking the neighbourhood: Performing social citizenship in dementia, Phinney et al., 2016	"They…you know…respond to me…. Interviewer: "Because they're smart, they know…" "They are, more than people." (Participant, Paper 10)
[11]	The saliency of geographical landmarks for community navigation: A photo-voice study with persons living with dementia, Seetharaman et al., 2020	"I like the fact that the disc is glass and that's something that's attractive to me. I would remember to use Public Art 3 [PA3] a a landmark in terms of navigating my way around (Participant 5, Paper 11) "Time is passing by…and it's passing so fast! I'm getting older and I'm also declining and Heritage Structure 3 [HS3] just reminds me that I need to cherish every single minute that I've got left" (Participant 4, Paper 11).
[12]	The lived neighbourhood: understanding how people with dementia engage with their local environment, Ward et al., 2018	Lottie: The other tenants in here all look after and keep an eye out for each other. Now, it was another tenant that actually shouted for me…Yeah, Roger. Interviewer: …who actually stopped you from going out? Lottie: Roger. Because he knew there was something wrong…, which obviously I then went out. But they all look out for each

Source Number	Main Author, Title, Year	Findings
		other, so it's more of a safety net" (Paper 12). Interviewer: But you're still continuing your day, just doing it from bed. Participant: "I'm just doing it lying down. And my bedroom you've seen has a big window so you're getting natural light. …But I just know that I'm safe, my door's locked and all's well with the world" (Ruth, Paper 12).
[13]	Everyday Built Environments of Care: Examining the Socio-Spatial Relationalities of Suburban Neighbourhoods for People Living with Dementia, Biglieri et al., 2021	"There's a lot of nice, lot of people out. Older than me and younger than me that they're walking their dogs or their kids and I get to say hello to somebody. That's a human. I do talk to my dogs, but they don't tell me anything back. Good listeners" (Paper 13).
[14]	Exploring Assets of People with Memory Problems and Dementia in Public Space: A qualitative study, Sturge et al., 2021	"I know that I am going to turn left here at the traffic light, cross the bridge and all the way back, then left and then I am already on the path to go to the hospital" (Paper 14). "A young man like this always comes to [the supermarket]. I often meet him and then we sit down on the bench for a while, but I cannot think of his name anymore" (Paper 14). "I feel connected because I've always lived here. I belong here. This is part of me […] You know where everything is" (Paper 14)
[15]	Beyond the Shrinking World: Dementia, Localisation and Neighbourhood,	Interviewer: "So, people you'd played with for a long time weren't supportive?"

Source Number	Main Author, Title, Year	Findings
	Ward et al., 2021	Participant: “Long time yeah…played there 18 years” (Paper 15). “I must admit I’ve been known now in town: ‘Oh, you know that lady with the purple hair’ which is preferable to ‘Oh, you know that lady with dementia” (Paper 15).

Appendix 6: Study Information Flyer

Health & Medicine | Lancaster University

Research Study

Looking for participants!

Exploring the wellbeing of people living with dementia.

Share your lived experience by participating in interviews, creating a social networking map, and photography.

Eligibility:

1. Must be living with dementia at home, and
2. Living in a rural area/community

Interested or want to learn more?

Contact: Melinda Helal
mhelal@lancaster.ac.uk
(352) 871-1633

Appendix 7: Participant Information Sheet

Understanding the experiences and psychological wellbeing of older adults living with dementia in rural, age in place communities

This is a research study for people living with dementia who live at home and within the community (ageing in place) safely, independently, and comfortably, regardless of age, income, or ability level. This study aims to identify and explore how you engage with your neighbourhood and community and how that impacts your wellbeing.

What's involved?
You will be invited to take part in

- An initial interview in your home, neighbourhood, or community (your choice) to share and discuss how living at home affects your daily activities and wellbeing.

- A follow-on interview to talk about the role your family, friends and support groups play in supporting or limiting your ability to age in place.

- A final interview to discuss photographs that are meaningful in your life journey.

- Each interview will last approximately 30 minutes.

- Family members or significant others will not participate in the study, but their presence will be welcomed as observers during the interviews.

You will be asked to sign a consent form at the start of each interview. Your participation is voluntary, and you may withdraw at any time, for any reason.
ALL material collected will be destroyed in case of withdrawal.

Why is this important?
When the voice of those living with dementia is heard and understood, community leaders and state services will have a better understanding of your needs and how they can be more helpful to your wellbeing.

What about confidentiality, anonymity, and security?

- Information collected about you will be kept confidential.

- Data will be stored securely on password-protected computer and files will be encrypted.

- Paper copies of interview transcripts will be securely placed and stored in a locked cabinet.

- Your name will not be attached to direct quotations and all written work will be anonymized.

- At the end of the study, data will be securely and safely archived for ten years and then destroyed thereafter.

What will happen to the results?
I will use your shared information, in anonymized form, for academic purposes only. This includes writing a PhD thesis, academic publications and presentations.

Who has reviewed the project?
This study has been approved by the Faculty of Health Research Ethics Committee at Lancaster University.

Further bits and pieces
It is unlikely that there will be any major disadvantages or risks in taking part in these interviews. However, should you feel distressed either because of taking part, or in the future, you are encouraged to inform the researcher and contact the resources provided at the end of the sheet.

Where can I find further information about this study?
If you have any questions about the study or if you are unhappy with anything concerning the participation in this study, please contact myself or my two research supervisors:

Melinda Helal, Ageing Researcher
Email: helalm@lancaster.ac.uk
Mobile: (352) 871-1633

Research Supervisor 1:
Dr. Caroline Swarbrick, Senior Lecturer in Ageing
Email: c.swarbrick2@lancaster.ac.uk

Research Supervisor 2:
Dr. Sandra Varey, Lecturer in Health Research
Email: s.varey@lancaster.ac.uk

If you have any concerns or complaints that you would like to discuss with a person who is not directly involved in the research, you can also contact:

Dr. Laura Machin, Chair of Faculty of Health and Medicine REC
Email: l.machin@lancaster.ac.uk

Resources in the event of distress

- Alzheimer's Association, North Central Texas
  Office: 325-672-2907
  Direct: 325-480-3870
  24/7 Helpline: 800-272-3900

- West Central Texas Area Agency on Ageing
  Office: 325-793-8417

Appendix 8: Consent Form

Understanding the experiences and psychological wellbeing of older adults living with dementia in rural, age in place communities

Please read the following carefully and check the box after each statement if you agree.

1. I understand the participant information sheet and have had the opportunity to consider the information and ask questions.	
2. I understand that my participation is voluntary, and I am free to withdraw at any time, for any reason.	
3. I understand that any information given by me may be used in publications or presentations.	
4. I understand that all personal information will not be included in written reports, and I will be anonymous.	
5. I understand that my name will not appear in any written documents without my consent.	
6. I understand that any interviews will be audio-recorded and transcribed. All data will be protected on encrypted devices and kept secure at all times.	
7. I understand that the information will be pooled with other participants' responses and anonymized within written work.	
8. I consent to information, quotations, and photographs from the interview being used in written documentations.	
9. I understand that the researcher will break confidentiality and speak to supervisor if believed you are at risk of harm.	
10. I understand that data will be kept according to university guidelines for a minimum of 10 years after the end of the study.	
11. I agree to take part in the above study.	

Participant, please sign and date below:
Name and signature participant: _____
Date: _____

Researcher, please read, sign and date below:
I confirm that the participant was given an opportunity to ask questions about the study. I have answered all questions correctly and to the best of my ability.

I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

Signature of researcher taking consent: _____
Date: _____

Appendix 9: Participant Demographic Form

Understanding the experiences and psychological wellbeing of older adults living with dementia in rural, age in place communities

We are asking if you would like to share demographic details about yourself as we take part in a research project to investigate the impact of living in rural communities on the psychological wellbeing of people living with dementia. We will go over this form together after our first interview.

Demographic Information
1. Name of Participant:

2. Age at interview:

3. Gender
Male ☐ Female ☐ Transgender ☐
I would rather not disclose ☐ I would rather self-describe ☐

4. Ethnicity:
African American ☐ Caucasian, Non-Hispanic ☐ Hispanic ☐
American Indian ☐ Two or more races ☐
I would rather not disclose ☐

5. Education Status:
High School ☐ College ☐ Advanced Degree ☐

6. Current living situation:
Live alone ☐ Live with family ☐
Live with unrelated caregiver/friend ☐

7. Do you volunteer or participate in an organised activity?
Yes ☐ No ☐
If yes, which volunteer group or activity?

8. Approximate distance and times per week you travel for social services:

9. Years lived in your community:

Appendix 10: Key Topic Interview Areas

Understanding the experiences and psychological wellbeing of older adults living with dementia in rural, age in place communities

The researcher will ask the participant for the following introductory details:

Confirm relevant personal contact details

Ask for the following demographic information:

- Gender, age at interview, ethnicity, educational status
- Current living situation
- Benefits and concerns regarding living situation
- How long they have lived in neighbourhood and community
- Volunteer or organisational activities they participate in
- Distance and times/week they travel for social services
- Self-identify or have dementia diagnosis
- Emergency contact name and number

Neighbourhood reflection interview discussions will include:

- Reflection of perceived benefits and challenges about living in the neighbourhood or community

Social network mapping interview discussions will include:

- Reflection of informal and formal supports

Photovoice interview is an exploratory meeting to review and contextualise photos taken by the participant. Discussions will include:

- Focus on benefits and challenges or rurality
- When, where, and why photograph was taken
- Meaning of photo
- Likes and dislikes about content of phot

Appendix 11: Reflection on the Study Interviews

12 participants	3 men, 9 women
Transcription Status: 12 participants completed and reflected upon in this document	

Collective, Overarching Reflections

- Almost all of the discussions reflect talking to an older adult with no sense that they have memory issues.
- Dementia was subtly referred to at times using terms such as transition or challenge. Not one explicit mention was made about dementia, as I suspect, after talking with many participants, this is a topic that is truly frightening to them.
- Neighbours and neighbourhoods and the community were not defined in a unifiable way. They were defined differently depending on the location of the house and the level of rurality. More rural dwellers considered their neighbourhood in miles or what was visual in their line of view. Those that dwelled in a more traditional neighbourhood near the small town perimeter related that they had no neighbour or neighbourhood connection at all. Transportation, friends, family, faith, nature, and hobbies were talked about in almost all interviews.
- Transportation in particular was an issue and concern throughout.

Reflections from Frank's Interview (self-diagnosed)

- Frank lives in a neighbourhood of the small town of Winters that consists of about 18-20 houses (light rural).
- It was observed that he moves from present to past suddenly and subconsciously.
- Not one worry about health care or the need of others to care for him. His goal was to be independent as long as possible. It should be noted that Bob has cancer.
- Two very close friendships of Frank kept him connected. He was never married, took care of his mother, but in this interview, I sensed that he valued two little girls and kept their rainbows-decorated bedroom (in his house) unchanged for over 45 years.
- Age was a worry, but laughter took place of worry.
- Driving and transportation were his main fear. Losing a driving licence was a major concern.

- Frank hired a person to drive him to the next big city (Abilene) to doctor appointments.

Photos: His mom's bedroom, record album and records, a photo album of his birthday party, a bench he and his mom would sit on in the backyard while she shelled peas, and a 40-year-old pot on the patio that was his moms – the plant dies back every year, but he waters and talks to that plant as if he's chatting with his mom when he's lonely.

Reflections from Jane's Interview (self-diagnosed)

- Jane lives alone on a farm (very rural). She is a historian, who is great with years and specific dates.
- She is educated and well versed
- Reflective and extremely reminiscent of past times
- It was observed that Jane has very vivid memories of past experiences. She's a historian who can throw early dates around easily. She lives alone in the country with family very close by. They visit her every day. She's savvy with phones/texting. She has hobbies such as writing, quilting, and editing for a historical society.
- There were no major fears or concerns about living in place alone – just grateful for each day. Family was a major topic. Loss of animals and letting go was another. She values an outside bench where she enjoys sunshine and watches her cattle.

Photos: Computer that she's using to write a short book of earlier years for her grandkids, sewing room where she quilts, outside bench she sat at with her then cat as she watched her cattle and soaked up sunshine, her driveway leading to her house that her family comes down to visit her, her cows, and possibly her buggy she uses to walk around the house with. It has a basket in the front she places her stuff, and she's able to maneuver easily from place to place.

Reflections from Clara's Interview (self-diagnosed)

- Carla used to be active in volunteering such as in the Meals on Wheels programme.
- She is hard to get around and currently has a housekeeper for cleaning
- She lives alone on a quiet street on the edge of town (medium rurality).
- She doesn't get out of the house by herself. Her family comes over every day, does her grocery shopping for her, and takes her to the doctor and the hairdresser.

- She lived in the country (very rural) until retirement, after which, her family literally moved her house (the same home was moved) from their land to the edge of town – where she currently lives.
- She has a great appreciation for others, and what they do in way of keeping a clean house and arranging visits with grandchildren.
- Financial independence was important to her, along with service toward others. She mentioned volunteering (and emphasized "without pay") to those in need. Also, baking cakes for friends and neighbours to show gratitude.
- She's tech-savvy and uses an iPad frequently to connect with others and play games.
- Mapping was a challenge. This was difficult to get started with her. She doesn't leave her home at all, except with her son to the doctor or occasionally the grocery store or family gathering. First, she was concerned of doing it wrong. Then, long pauses and visual expressions of concern as she noticed her circle was small. This took some time and lots of thought. Felt like I needed more experience with this beforehand. Hopefully, with more practice, this gets easier/and flows a little more smoothly with the remaining participants. Seeing their world on a piece of paper (and how small/restricted they are with their network – friends dying – only family left to help them out.

Photos: She's at home almost always so there are family pictures everywhere. She's also a collector of windmill wall art because it reminds her of living on the farm before moving to town. Other photos include a picture of her sewing room (she quilts), a basket full of toys her grandchild uses when he comes to visit, and her immaculately clean house. She also uses the same buggy (cart) as another participant – but no picture of this.

Reflections from Darian's Interview (self-diagnosed)

- Darian lives with his wife for 32 years. He gets out every Saturday as his son comes to pick him up and take him to his farm.
- He's supported by his wife. He's a farmer at heart, doesn't drive – except when needed – but only in town or to and from his farm. His two greatest joys are his family and being out on a tractor – "feels like he's on top of the world" when outside.
- His definition of a neighbourhood has changed over the years. In the past he felt every neighbour was more thoughtful and like family. Now, he feels it's changed a whole lot – "everybody for themselves."
- He opted out of photos – so none to share or talk about. I would imagine, it would be filled with family and farm pictures. Possibly a dog thrown into one or two photos. He lost a grandchild years back and is still unable/unwilling to talk about this. He briefly mentioned the loss and we quickly moved on to the next topic.

- Asked about changing any life experiences – his answer was that he wouldn't change a thing.

Photos: No photos were permitted to be part of the interview.

Reflections from Noreen's Interview (self-diagnosed)

- A centenarian by early February 2023
- An older lady who lives literally in the middle of nowhere (most rural of all interviewees).
- She's a war veteran and talks fondly of her past history.
- I found it difficult for her to stay focused on the topic at hand – she's extremely versed and talkative about past war/veteran experiences.
- The house has a deep history (constructed over multiple generations by the families themselves), however, it's very primitive.
- The neighbourhood was defined as the view out of the living room window.
- She likes that many cats come and go.
- She lives mainly in an area in her bedroom, where her bedroom chair, office area, bed, and TV are located within reach.
- When her husband died, her son moved in to serve as caregiver within the last four years. He cooks/brings her food, is responsible for bathing her, taking her to the doctor, etc.
- This was my second interview and a hard lesson learned. Her caregiver is a talker, and the transcription of this interview was laborious as I edited out his side-tracked stories. I find the edited transcript less time-consuming and more practical to transcribe and pull out her relevant quotations rather than transcribe the whole document.
- It was obvious to me that it would be very difficult, if not impossible, for her to successfully age in place at such an age without support based upon location and mobility.

Photos: Several pictures of her work area, reading books, bedroom, a living room window showing their neighbourhood, and sunsets.

Reflections from Kate's Interview (medically diagnosed)

- Kate lives alone in the country in a large farmhouse (very rural).
- The interview took place in the living room, though she stays (lives) in her back bedroom much of the time.
- She's an excellent painter, with artwork displayed throughout her home. She's also an avid reader and puzzle solver.
- The thought of her experiencing memory loss was puzzling to me at first, it was not until the second go around that I caught the extreme subtleties in her

conversation. Her sense of humor and ability to laugh at herself (and others) was really great.

- Her neighbourhood was defined by miles in her own words (which is what she could view and see from her home). A twisted road here, a neighbour around the corner over there.
- She has no family members that are local. Her husband passed away, and her two children live states away. They keep in touch through daily telephone conversations and morning emails.
- She shared her fear of being placed in a nursing home, and uneasiness about her independence and what the future holds.
- Kate was able to express her emotions through words. She expressed how she felt scared at certain happenings and angry that the community isn't doing enough to support cohesiveness and felt lonely because all her friends are not around anymore.
- She's able to drive, but only in the small town. She hires another person to take her into the city for doctor appointments.

Photos: Pictures of her water-coloured artwork.

Reflections from Iris's Interview (self-diagnosed)

- Iris lives in a neighbourhood in town (light rural)
- She grew up in a (very rural) town located 20-30 minutes from Winters, where she currently lives.
- Iris moved away to pursue work and raising children, and then returned to Winters after retirement. She has lifelong friends in the area, and an older sister living in a nursing within close proximity (Ballinger).
- She's divorced, lives alone, and enjoys playing cards and domino games with friends. Iris is also a community museum volunteer and enjoys reading books and being outside in her garden.
- She's able to drive without restrictions, goes to Ballinger and Abilene for doctor appointments. Her biggest frustration is 1) back pain and mobility, and 2) ageing in general – especially memory loss, as her older sister also has dementia.
- She made a conscious decision to move from a larger town to a smaller town and age in a community where she knew people and felt she had support.
- Her neighbourhood was defined as friends and family, not buildings or walkways.

Photos: No photos were permitted to be part of the interview.

Reflections from Nanay's Interview (self-diagnosed)

- Nanay lives alone in the country (very rural)

- She's has an outgoing personality and enjoys visiting, square-dancing (in her younger years), playing bridge, and is an active member of her church community
- Storytelling is vibrant
- She's able to drive without restrictions, though when going long distances (40 miles maximum to the largest city for shopping). Nanay will return home before dark to not worry her family.
- Two sons live local – one has a barn within visual proximity and brings her breakfast every morning
- Her definition of ageing was unique to all participants. She stated multiple times throughout the interview that she felt young inside; her spirit was ageless.
- Nanay enjoys being outside working in the yard, is "organising her life" and decluttering her many clippings accumulated over the years – tossing out irrelevant and saving important for her family as to not be a burden.
- Independence is defined clearly within the interview and her neighbourhood is defined in social pockets: one neighbourhood is family, church, bridge club, visual proximity, and the last is manageable driving distance to visit friends
- She's tech savvy and enjoys communicating with friends and family with her iPad
- She talks of future goals, enjoys independence, and magnifies a positive (almost childlike) energy.

Photos: empty baskets in her living room, outside swing, driveway to her home, family album, picture of her church

Reflections from Jack's Interview (medically diagnosed)

- Jack lives alone in a neighbourhood in town (light rural)
- Daughter was present with interview
- He talks fondly of his younger years, can recognize faces but not names
- Becomes easily frustrated following a conversation
- No attachment to home – described it as just a place to stay
- The bed and chair (sleeping areas) were the favorite parts of his house.
- A lifelong farmer who tends to his cattle (questionable)and enjoys going out to his fields, which requires a drive into the country
- Overwhelmed with a massive amount of mail coming into his home.
- Supports come from two daughters – one lives down the street, and another comes by house often.
- Meals-on-Wheels provides his food each weekday, and daughters make up difference. They prepare and bring him food or take him out to eat.
- Overall, this interview would have been very difficult without the daughter there. Jack was easily distracted and hard to talk with, living day by day, no thought or appreciation for supports given and was negative in general.

Photos: pile of mail by his living room chair

Reflections from Evelyn's Interview (medically diagnosed)

- Lives in a neighbourhood in town (light rural)
- Hard to follow this conversation. If I did not know this person, I feel it would have been very difficult to understand her answers within the interview.
- Returned a couple of times to talk with Evelyn. Thirty minutes were the maximum she could sustain a meaningful conversation.
- Almost all of the interview conversation was related to past experiences.
- When asked about the importance of neighbourhood, she answered the question indirectly following a long conversation regarding an experience when her now adult son a child.
- Three children: One daughter lives local and assists with food, transportation, getting her out to visit friends and family. Another daughter lives 4-5 hours away and talks with her on the phone often. A son also lives far and comes to visit once a year.
- Was not capable of communicating what a neighbourhood means to her. Her in-the-moment points were conveyed through past experiences.

Photos: No photos were permitted to be part of the interview.

Reflections from Alice's Interview (medically diagnosed)

- Alice lives alone in the country in a large farmhouse (very rural).
- Enjoys being outside tending to the land – gardening, helping her son in the fields.
- Long walks and sitting outside on the porch with a cup of tea
- Enjoys the little things in life – nature, unique rocks, and birds
- Talks fondly of her son, who is considered a caregiver.
- Enjoys visiting and talking about past times – cries often throughout our conversation
- Is active in the church choir (doesn't miss a Sunday) and considers this her neighbourhood

Photos: No photos were permitted to be part of the interview.

Reflections from Julia's Interview (self-diagnosed)

- Lives alone in a neighbourhood in town (light rural)
- No family in the vicinity – she relies on technology to communicate with children
- Feels comfortable in the small town as it seems manageable
- Visually impaired, but has outside help including food delivery, cleaning service, transportation to and from doctor appointments

- Describes herself as a promoter and has positive attitude
- Enjoys listening to audiobooks, decorating, and following television programmes
- Volunteered at the museum and senior community centre in earlier years
- Her living room is her favorite part of the house because she enjoys visiting with friends in this space
- The food service delivery person and housecleaner are also important, as they are constants that help maintain her independence

Photos: Living room, audio book device, kitchen table with food delivery on top, bedroom space, and art displaying a memorable hotel she once enjoyed visiting

Appendix 12: Ethics Application Approval Letter

[External] FHM-2022-0903-RECR-2 Ethics Approval from FREC

donotreply@infonetica.net <donotreply@infonetica.net>
Tue 9/13/2022 7:15 AM
To: Helal, Melinda (Postgraduate Researcher) <m.helal@lancaster.ac.uk>
Cc: Swarbrick, Caroline <c.swarbrick2@lancaster.ac.uk>;Varey, Sandra <s.varey@lancaster.ac.uk>

1 attachments (110 KB)
Letter.pdf;

This email originated outside the University. Check before clicking links or attachments.

Name: Melinda Helal

Supervisor: Caroline Swarbrick

Department: Health Research

FHM **REC Reference:** FHM-2022-0903-RECR-2

Title: Understanding the experiences and psychological wellbeing of adults living with dementia in rural, age-in-place communities

Dear Melinda Helal,

Thank you for submitting your ethics application in REAMS, Lancaster University's online ethics review system for research. The application was recommended for approval by the FHM Research Ethics Committee, and on behalf of the Committee, I can confirm that approval has been granted for this application.

As Principal Investigator/Co-Investigator your responsibilities include:

- ensuring that (where applicable) all the necessary legal and regulatory requirements in order to conduct the research are met, and the necessary licences and approvals have been obtained.

- reporting any ethics-related issues that occur during the course of the research or arising from the research to the Research Ethics Officer at the email address below (e.g. unforeseen ethical issues, complaints about the conduct of the research, adverse reactions such as extreme distress).

- submitting any changes to your application, including in your participant facing materials (see attached amendment guidance).

Please keep a copy of this email for your records. Please contact me if you have any queries or require further information.

Yours sincerely,

Dr Laura Machin
Chair of the Faculty of Health and Medicine Research Ethics Committee
fhmresearchsupport@lancaster.ac.uk