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Ageing in place in a rural town in Aotearoa New Zealand: A Deweyan transactional perspective

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ABSTRACT

Rural communities are ageing more rapidly than urban centres due to changing demographics and preference for ageing in familiar communities. Concurrently, ageing in place policies have progressively reinforced community living as the best option for most people. For ageing in place to be successful, understanding the relationship between the community environment and the functional ability of older adults is crucial. Yet, little is known about the relationship between older adults and their environment during their everyday experiences in diverse rural communities. This article reports on the findings from walking interviews with 15 older adults as they negotiated their physical environment in a rural community in New Zealand. Dewey's transactional perspective and theory of inquiry were utilised to view the everyday transactions these older adults were undertaking while being out and about doing what they value. A Deweyan perspective enabled a deep understanding of how participants negotiated and renegotiated their environment as they encountered indeterminate situations. The three main categories identified from the data: negotiating changing capabilities in a changing environment; negotiating the environment safely; and negotiating access within the environment, captured the holistic nature of the participants' everyday transactions and their continually changing relationship with their environment. The observations and discussions during the walks uncovered problem-solving and active citizenship as these older adults undertook their own 'commonsense' investigations of their environment. The findings highlight the valuable contribution rurally living older adults are making as active citizens during their everyday transactions. Understanding the resourcefulness these experienced older stakeholders bring to their rural communities is the first step in active collaboration at the local level. Mobile research methods are a useful means of capturing real-time experiential data in an inclusive and creative way.

1. Introduction

Ageing in place is associated with wellbeing and is an aspiration that intensifies in older adulthood (Wiles et al., 2021). Rural communities are ageing considerably faster than urban centres partly due to the ongoing trend of in migration of people in late and older adulthood and out migration of younger people seeking employment and educational opportunities (Berry, 2021). Concurrently, a sense of belonging and attachment to rural places motivates the older adults who live there to remain living in their familiar communities (Wiles et al., 2021). For ageing in place to be successful in rural settlements it is essential that the environment is safe and inclusive for the changing needs of older adults (Walsh et al., 2012). Thus, understanding the relationship between the

functional ability of older adults and their community environment is important.

Global population ageing is a defining demographic trend this century and has been forecasted for several decades. By 2050 the number of people aged 65 years and over is expected to double from 761 million in 2021 to 1.6 billion making up 16% of the global population (United Nations, 2023). This percentage has already been reached or exceeded in most developed countries, for example, Japan, USA, Canada, United Kingdom, Australia and New Zealand. Yet, planning suitable environments for an ageing population has been largely neglected in government policies in favour of a younger and more productive population (Hogan et al., 2016). As the impact of an ageing population is being realised by many countries, governments are being urged to implement

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strategic plans towards meeting the [United Nations, 2023](#) Sustainable Development Goal 11, "make cities and human settlements inclusive, safe, resilient and sustainable" ([United Nations, 2024](#)). This goal draws attention to equity in ensuring inclusion of older adults ageing in rural communities.

2. Background

2.1. Ageing in place

Ageing in place is widely understood to be the ability to live at home in a community of choice safely and comfortably regardless of age, income or capacity ([United Nations, 2023](#)). The ability to age in place is associated with ageing well ([Sixsmith et al., 2017](#)). Most older adults in developed countries prefer to live independently in the community as long as possible ([Oswald et al., 2011](#); [Scharlach and Lehning, 2016](#)) rather than in long term-care settings ([Martens, 2018](#); [Scharlach and Lehning, 2016](#)). For example, in 2018 only 6% of New Zealanders aged 75–84 lived in residential aged care ([Rose et al., 2022](#)). As age-related needs change this percentage increases in the 85+ age group with 28% of older adults living in residential aged ([Health New Zealand/Te Whatu Ora, 2023](#)). Up until the last decade research on ageing in place has focused mostly on the quality of the home environment ([Gitlin, 2003](#); [Wahl and Weisman, 2003](#)). More recent studies have looked beyond the home to understand the impact of the wider environment on ageing in place ([Peace et al., 2011](#); [Wiles et al., 2012](#)). Interest in the relationship older people have with their rural communities has gained momentum in the last decade ([John and Gunter, 2016](#); [Walsh et al., 2020](#); [Winterton and Warburton, 2012](#)). Across a range of global settings decisions to remain in rural communities during older adulthood were influenced by the rural landscape, shared history, a sense of community and attachment to place ([Keating et al., 2013](#); [Skinner et al., 2021](#); [Skinner and Winterton, 2018](#)).

The World Health Organization's (WHO) age-friendly cities and communities model was developed in response to the challenges and opportunities of ageing populations, ageing in place policies and the aspirations of older adults to remain connected to their communities ([World Health Organization, 2007](#)). More recently the Decade of Healthy Ageing (2021–2030) ([World Health Organization, 2020](#)), has promoted the right of older adults to make informed choices on where they live ([Sixsmith et al., 2017](#)). The New Zealand government has embraced the age-friendly cities and communities model which has been adapted to reflect bi-culturalism and commitment to Te Tiriti o Waitangi, the founding legislative document of New Zealand ([Neville et al., 2021](#)). Two major New Zealand ageing strategies, Better Later Life – He Oranga Kaumātua 2019 to 2034 ([Minister for Seniors, 2019](#)) and the Healthy Ageing Strategy 2016; [Associate Minister of Health \(2016\)](#), reflect global ageing in place policies and promote age-friendly environments. These policies recognise healthy ageing as the interaction between the intrinsic capacity of older adults and their environment ([World Health Organization, 2020](#)). This study makes a nuanced contribution to understanding these interactions in a rural community setting.

2.2. Changing rural environments

Older adults ageing in rural communities are familiar with uncertainty from political and economic restructuring which tend to be more severe in rural communities than in urban centres ([Halseth et al., 2019](#); [Skinner and Winterton, 2017](#); [Walsh et al., 2014](#)). Changing economic conditions have resulted in reduced investment in rural infrastructure and closure of services ([Jaye et al., 2023](#); [Keating et al., 2013](#); [Ryser et al., 2021](#)). While rural decline and loss of essential services have had an impact in some areas, many rural areas, including the current study location, are experiencing population growth and pressure on existing services ([Russell et al., 2021](#); [Stockdale and MacLeod, 2013](#)).

Deficiencies in rural services are often addressed by older adults; volunteering in rural communities is associated with rural sustainability ([Winterton and Warburton, 2020](#)). While contributing in this way is often visible, the more informal and everyday contribution older adults make to their communities is less visible or goes unnoticed. Additionally, older adults living in rural communities spend a lot of their time locally supporting the local economy and contributing to the community.

Geographical gerontology has provided greater understanding of the dynamic nature of a place beyond a location with a set of co-ordinates. The way older adults negotiate space both influences and is influenced by their experiences, identity and attachment associated with places ([Andrews et al., 2013](#)). The mutually constitutive relationship between older adults and the places they interact with has been a focus of critical gerontology. The constantly changing contexts of rural ageing shape and are shaped by older adults ([Skinner and Winterton, 2018](#)). Yet, little is known about the actual day to day experiences of rurally living older adults when they go out into rural spaces. To address this scarcity of place-based evidence, this article presents the findings from walking interviews with 15 older adults as they go about their usual activities in their rural town. Dewey's transactional perspective and theory of 'commonsense' inquiry provided a theoretical lens to examine how older adults in this rural town negotiated everyday situations they encountered.

3. Theoretical perspective

John Dewey, an early pragmatist, proposed humans were innately wired to improve the world they live in and as such, research involving people should reflect this imperative ([Dewey, 1922](#)). The pragmatic tradition takes an anti-dualist stance, rejecting the dichotomy of objective and subjective ways of knowing. As an educationalist Dewey believed learning and knowing could not be separated from the action of real life. Instead, Dewey proposed that people come to know about the world from immersive transactions of the person in their environment. Dewey articulated the notion of transactions as the actions of "organism-in-environment-as-a-whole" ([Dewey and Bentley, 1949](#), p. 109). He was adamant that transactions should be studied holistically, thus there is a mutual interdependence where the person and the environment cannot be separated ([Van Poecck et al., 2020](#)).

This pragmatic philosophical approach to studying the relationship between older people and their environments has increasingly gained attention ([Andrews et al., 2007](#); [Cutchin et al., 2017](#); [Scharlach, 2016](#); [Schwarz, 2012](#)). Geographical gerontologists have critiqued Dewey's transactional perspective and advanced our understanding beyond the person-environment fit model in explaining the dynamic and highly contextual relationship between older people and their environment ([Cutchin, 2018](#)). Within the geographical gerontology field of study, the 'relational turn' has illuminated the "active relationships between people and places in daily life" ([Cutchin, 2018](#), p. 216). Viewed from a transactional perspective, everyday situations occur within complex environmental and community relationships ([Cutchin et al., 2017](#)). Studying the transactions of the person in the environment can help to explain how both older adults and the places they live in change over time ([Scharlach, 2016](#)).

Dewey's theory of inquiry provides practical application to real-world problems in everyday life ([Morgan, 2014](#)). Dewey believed research should be useful for everyday life to improve conditions and proposed people undertook 'commonsense' inquiries in response to problems encountered during everyday transactions in the environment ([Dewey, 1938](#)). He proposed that the complexity of the context was central to the inquiry. To appreciate the complexity and how socio-cultural factors influence peoples' actions Dewey explained "... one would have to follow the behaviour of an individual throughout a day ..." ([Dewey, 1938](#), p. 42). This way of knowing provided a philosophical and theoretical foundation for the study and the walking

interview method. Walking interviews were an ideal way to gain direct access to the transactions and everyday inquiries older adults were undertaking in their environment. Dewey's transactional perspective was utilised as an analytical lens to understand the everyday activities and adjustments the participants in this study were making to remain living in their familiar community (Biesta and Burbules, 2003). The research question this paper addressed was — how do older adults negotiate everyday situations in the environment?

4. Design and methods

This article reports on findings from individual walking interviews with older adults from a larger case study. The interviews were undertaken in the natural and built environment which enabled access to real-time data as the participant negotiated their environment. Qualitative data analysis informed by Miles et al. (2014) was employed to conduct this inquiry in the community context. This approach allowed interpretation of the participants' experiences in a holistic manner as close as possible to the real-world setting.

4.1. Setting

The study was undertaken in a small rural town in the upper North Island of New Zealand located approximately 60 km from the centre of Auckland. The town is an established settlement which has developed into a service town to many smaller rural and coastal settlements. The setting was chosen because of its high proportion of older adults (27%) and rapid growth trajectory projected by Auckland Council, the local governing body. Although the population of the town has increased slowly and incrementally there has been a recent boost in population related to rezoning of rural land to residential and improvements to national roading. The population of the town is expected to increase from approximately 6000 currently to 20,000 people over the next two decades as the area develops (Auckland Council, 2018). The town still largely maintains its rural character; however, the surrounding area is experiencing some changes from the traditional rural landscape to lifestyle properties and new housing developments. These changes have started to impact on the established rural identity of the town. The area is attractive to immigrants in retirement years because of its relative proximity to New Zealand's largest city and the recreational and leisure opportunities the surrounding area offers.

The town was built along a river with the main commercial area centred around the main street. A river walkway and green spaces have been designed to enhance the aesthetic appeal and provide places for walking and sitting along the river. The older residential areas are close to the commercial centre while the newer housing developments are on the out-skirts of the town. As a service hub for the surrounding rural area, the town has a range of amenities, light industry and services including an information centre, supermarkets, medical centres, pharmacies, a post shop, library, cafes and restaurants, and a variety of retail stores.

An earlier research project on barriers and enablers to older adults' engagement undertaken in this rural community influenced the design of the current study (Neville et al., 2018). The findings revealed the need for a more nuanced and in depth understanding of the relationship between older adults and their environment. This article draws on qualitative data from individual walking interviews with older adults ($n = 15$) that were part of a case study undertaken to explore the age-friendly attributes of the town (Napier et al., 2023). Walking interviews were deemed to be a suitable method to enable real-time place-based data collection about the person-place relationship (Hand et al., 2018). Varied approaches to conducting walking interviews have been described including go-along interviews, talking whilst walking and walk-along interviews (Carpiano, 2009; Kusenbach, 2003; Van Cauwenberg et al., 2012). This style of interviewing is an inclusive way to observe and interact with participants in their environment to gain a

deeper understanding than would be possible in the more traditional static interview (Carpiano, 2009; Clark and Emmel, 2010).

4.2. The participants

Participants were recruited through advertising in community notices and local groups. Potential participants were invited to contact the researcher if they were aged 65 years and over, living independently in the community (including retirement complexes, but excluding residential aged care) and willing to undertake a 60-min walking interview. Prospective participants were screened for eligibility. Twelve participants were initially recruited from advertising. A further three participants were recruited from snowballing to provide a more diverse sample, for example gender and functional capacity. Fifteen older adults aged 71–89 years (mean age 78.3 ± 4.89 years) participated in walking interviews. The participants had varied self-perceived health status and a range of functional capabilities that they offered and discussed before and/or during the interviews, for example joint problems, hearing impairments, respiratory conditions and reliance on mobility scooters to get around. Ten participants were female, and all participants identified themselves as European or New Zealand European ethnicity. Table 1 presents the participants' demographic profile. Ethical approval was gained from Auckland University of Technology Ethics Committee (18/418).

4.3. Data collection

Participants provided written consent after reading about the study and having any questions answered. The researcher met with participants prior to the walking interviews to discuss their usual outings and plan the walks. These preliminary meetings established trust between the researcher and participants. Each participant was invited to choose the day and time and to plan their own routes based on their normal activities. A walking interview protocol was created to guide the process and maximise safety. The interviews were conducted from April–June 2019. Several participants chose to start the walking interview from their own home while others preferred to meet near the centre of the town. Most of the walks included the area along the river, the main street, and adjacent streets. The interview process was designed to allow a relaxed and informal conversation about ordinary situations the participant and researcher encountered. This approach enabled thorough exploration of everyday situations and the context, including observing and asking probing questions about the unfolding situations encountered on the walks. Interviews were recorded on a digital audio-recording device.

4.4. Data analysis

The interviews were transcribed verbatim by the researcher and imported into NVivo (12 Plus). Participants were assigned a pseudonym for anonymity. The analysis was guided by the research question — how do older adults negotiate everyday situations in the environment? Data analysis started during the data collection and in writing field notes and analytic memos following the interviews. An analytical approach described by Miles et al. (2014) was utilised to identify patterns, codes and categories from the data. First the transcripts were read thoroughly. The initial codes related to patterns identified from the range of situations encountered in the environment and how participants approached these situations. For example, there were a lot of data on the quality of the footpaths and how various problematic situations were negotiated. This was followed by review of the codes by the research team and subsequent revision as codes were condensed and merged. This was followed by grouping the codes into categories. Dewey's transactional perspective provided a deeper understanding of the data. For example, the data from the walking interviews were analysed holistically by incorporating the contextual factors and the participants' negotiations

Table 1
Demographic data and characteristics of walking interview participants (n = 15).

Pseudonym	Gender	Age	Ethnicity	Relationship status	Self-perceived health	Mobility
Jane	Female	75	NZ European	Married/lives with partner	Good	Independent
Bob	Male	89	NZ European	Married/lives with partner	Good	Uses mobility aids
Mary	Female	77	NZ European	Widowed	Good	Independent
Linda	Female	78	NZ European	Divorced	Good	Independent
Jack	Male	71	NZ European	Single/lives with friend	Poor	Needs assistance
Frances	Female	75	European	Married/lives with partner	Good	Independent
Sally	Female	87	NZ European	Married/lives with partner	Good	Independent
Marion	Female	78	European	Married/lives with partner	Good	Independent
Diana	Female	79	NZ European	Married/lives with partner	Good	Independent
Maude	Female	80	NZ European	Widowed	Good	Independent
Helen	Female	80	NZ European	Widowed	Good	Independent
Philip	Male	74	NZ European	Married/lives with partner	Good	Independent
Eva	Female	82	European	Married/lives with partner	Average	Uses mobility aids
Bill	Male	73	NZ European	Married/lives with partner	Good	Independent
Barry	Male	77	NZ European	Married/lives with partner	Average	Independent

of the situations in their environment.

5. Findings

Three main categories were developed from the data analysis: (a) negotiating changing capabilities in a changing environment, (b) negotiating the environment safely, and (c) negotiating access within the environment.

5.1. Negotiating changing capabilities in a changing environment

All the participants indicated they were regularly out and about in the centre of the town. Like many small rural towns in New Zealand, the main retail and service hub for the town was compact and centred around a main street. Many of the participants had formed longstanding relationships with the local retail and service providers. They talked about the long history of the town, its rural identity and their appreciation of the local community. Most had noticed recent changes in the town associated with the expanding population and the associated development and construction. Changes included new road crossings in the main street, improvements to the river walkway, housing development, and improvements to footpaths in the new development areas. There were mixed feelings about the changing environment; the participants talked about the advantages and disadvantages of rapid population growth in their small town with dated infrastructure. As one of the participants explained she was expecting some improvement to the footpath near her home as part of the local development. "I thought maybe they're going to widen the road and make it decent ... if you had a wide footpath, even on one side, that would solve a heap of problems" (Linda, 78).

The participants described their experiences of continually adapting to the environment while negotiating everyday situations. Walking alongside older adults with a range of capabilities highlighted the variation in how they negotiated the physical environment. The participants commented on changes they noticed in the environment and talked about their own changing capabilities. In coming to terms with changes to her physical capability following a recent acute respiratory illness, Marion (78 years), explained in the following extract how she had become acutely aware of negotiating each step of the ground beneath her, "after being sick, I was more mindful of what was happening and where I'm walking ... because I have fallen over in various places, I tend to look down to see where I'm walking". There was a constant balance between watching each footfall and keeping an eye on the way ahead. Walking uphill was also problematic as Marion would become short of breath with the exertion. However, in getting up the hill on her way home she had discovered a way to negotiate this indeterminate situation by using the relatively new lift in the carpark halfway up the hill that took her up to the flat street level. "I go so far, go into the

car park, press the lift and miss the second part". Reflecting on the process of solving this problem, Marion incorporated her current health condition and past experiences as she attempted to explain, "I think a lot of it is down to being mindful yourself. If there's something that can be done, so well and good". Marion's creative solutions ensured her continued involvement in her community since she relied on walking to get about.

Finding ways to approach problematic situations was identified as important for ageing in place. Linda (78 years) demonstrated how she negotiated her steep driveway with an unstable knee joint. She referred to her "wonky knee" that could give way at any time and could change from day to day. Linda demonstrated the zigzag walking technique she had devised that allowed her to walk down her steep driveway. Based on Linda's experience of trying out different ways of walking this technique had been the most successful for her and crucial to her maintaining independence in walking and remaining in her home. Changes in individual capabilities and/or environmental features were potentially problematic. For example, almost all the participants had to negotiate footpaths that were in poor condition, obstructed or missing entirely. Many participants commented on the local transport agency's lack of attention to improving and repairing footpaths. The way participants approached problematic situations was highly dependent on their individual context. For example, Eva (82 years) had recently almost tipped over in her mobility scooter while attempting to avoid a supermarket trolley on the footpath. Yet, other participants were observed to confidently step around or move obstructions during the walk. These observations were consistent with the notion that a transaction should be viewed holistically as the person in the environment as a whole (Dewey and Bentley, 1949).

Participants were undertaking their own inquiries while negotiating problematic situations by investigating the problem, sharing their assessment, trying out different approaches and offering tentative solutions. Philip (74 years) had many ideas on how to improve the walking environment around the town. He drew attention to a pedestrian walkway obstructed by discarded shopping trolleys and pointed out the jeopardy obstructed walkways presented for people with reduced functional capacity. He wondered if the problem stemmed from public attitude and ignorance. "It is an attitude of the public in general as well as maybe a lack of attention on the part of the owners of these businesses (Philip, 74 years). This observation highlighted the importance of advocating for the ageing population in raising public awareness of barriers to their mobility.

Other participants also looked beyond their own capabilities as they considered other older adults' mobility needs. Bob (89 years) was totally reliant on a mobility scooter and had been thinking about the increasing need for a local repair service for mobility scooters. "What we need here is really somebody that will be a mechanic for mobile scooters. As we get older, as the population gets older, well there's going to be more and

more scooters" (Bob, 89 years). Although Bob had many years of driving a farm quad bike and found some of these skills were transferable, he had noticed there was a real need for some kind of instruction on how to drive and manoeuvre a mobility scooter for those new to this form of transport. Bob's interest and concern for others mobility had progressed to a 'commonsense' inquiry and problem-solving that had resulted in a well thought out plan that he was keen to share with the community.

The individual experiences of the participants were highly contextual and relied on previous experience, knowledge of the environmental conditions and awareness of their individual capabilities. For example, approaching an uneven footpath caused some participants to slow down and avoid the potential hazard whereas to others these imperfections were inconsequential. Bill pondered on the experiences of his less physically capable contemporaries and imagined their different experiences of the environment. "Look how narrow this is ... there's weeds that have grown right out across and people in wheelchairs ... you don't think about it when you're just walking around by yourself". Participants also considered how they would get about in the future if their capabilities changed. For example, Diana (79 years) explained they had moved from their more rural home into a retirement village in the centre of the town in anticipation of potential change in their physical capabilities. "I felt sooner or later we wouldn't be able to drive". Diana explained how living in the centre of the town provided easy access to services she used including the library, supermarket and medical centre. This 'commonsense' inquiry and problem-solving of imagined situations in the future provided opportunity for continuity of involvement in the local community.

There was variation in the motivation to continue walking. Maintaining fitness was identified as important for continuity of mobility by some of the participants even though they had varying levels of physical fitness. Diana (79 years) chose a challenging walk up a steep set of steps to a street above the river and was aware of her body's reaction to the exercise. "I wear my Fitbit and it gets my pulse up to 130". Conversely, Sally had found walking up hill to her home had become increasingly difficult. She had adjusted to her declining fitness by walking down the hill to the main street and getting transport back. "He [husband] plays bowls so I tell him to take the car down and I'll walk down and pick up the car and drive back". This arrangement enabled Sally to keep walking, which she clearly enjoyed. On the walk Sally admired the natural environment as she stopped to look at gardens, trees and birds. On the way down she delivered a jar of jam she had made to a friend and greeted people as she walked, providing evidence that interaction with nature and people were important incentives to maintaining this continuity in the environment within changing capabilities.

5.2. Negotiating the environment safely

Being safe in the physical environment was identified as essential for maintaining a presence in the community environment. Preventing imagined trips and falls influenced decision making about outdoor activities. For example, Jane (75 years) liked riding her bike around the town. However, she had to balance her enjoyment of this activity and being safe. She pointed out the wider footpaths and board walk along the river where she felt safest riding her bike. "I go on the footpath because I'm scared stiff I'm going to get knocked over". Jane picked the quiet times when there was less likelihood of encountering traffic. "I ride either in the early evening or on Sunday afternoons". Although falling off the bike was an imagined scenario, the risk was real and determined how Jane undertook this activity. This example provided further evidence of how these older adults were actively looking at their environment in real time while imagining solutions to potential problematic situations.

Negotiating the footpaths was a major consideration for safety. Many of the footpaths were narrow and uneven. Bob (89 years) constantly pointed out areas of the footpaths where other people have tripped or may potentially trip while riding on his mobility scooter. People were

observed moving off the path to avoid his mobility scooter. In avoiding the scooter people would walk close to the edge or on uneven parts of the footpath. This concerned Bob particularly when he anticipated a narrow part of the footpath. Bob slowed several times to allow pedestrians to pass as he approached these narrow areas demonstrating his knowledge and experience in negotiating uneven and narrow footpaths and the potential risk they posed to others.

Maintaining independence was contingent on maintaining safety. Eva (82 years) was determined to preserve her independence and agency as she regularly made her way into the main street. Dependent on a mobility scooter, Eva had to cross a complex and treacherous intersection and travel along narrow, highly uneven footpaths to get from her home to the main street. Walking alongside Eva it was evident she had a well-developed plan and carefully negotiated several potential risks to her safety to maintain this activity.

We go now to the other side ... and we go to the left ... I cannot see the traffic, so I go always on this side ... and then I go up here by the round-about and go back here. But you cannot cross the street here ... but if I go on that side, I cannot see the cars coming from there ... I can go on the other side but there is no footpath to get over the other side ... I try everything.
(Eva, 82 years)

This imperative to keep safe was always on Eva's mind and constantly reinforced by her family. Eva knew her independence was constantly at stake. Thus, following a familiar route once in the centre of the town where she understood the potential hazards along the way was part of her strategy. "I never go further because I don't know where to go and I have to be careful" (Eva, 82 years).

Traffic congestion was an increasing problem in the town and was on the participants' minds as they negotiated the environment. However, they considered the complexity when balancing the needs of pedestrians and local businesses with traffic volume and flow. This was articulated by one of the participants involved in a local community group that had lobbied local government regarding increasing traffic congestion.

... one of their [traffic engineers] prime concerns is keeping traffic moving ... nobody likes the idea of subways or overpasses and they're particularly impractical for young and older people, so that's not a solution to the problem either. Ultimately, it's to get the traffic out of the town, isn't it? Nobody wants that to happen. Most of all the business community.
(Philip, 74 years)

Traffic movement was experienced differently by the participants depending on their capabilities. While some participants found drivers to be considerate and cautious others were concerned that traffic moved too quickly when there were so many older adults walking about the town. Similarly, there was much attention drawn to cautiously negotiating the pedestrian crossings in the main street. In particular, the poor visibility due to parked cars along the street.

5.3. Negotiating access within the environment

Going out and about in the town was a major aspect of the participants' lives and essential for their wellbeing. The town provided an important information and service hub. Further, shopping in person provided informal socialising opportunities. "The old ones know you, the chemist, hairdressers, everyone knows me" (Jack, 71). The presence of older adults was evident as Sally (87 years) pointed out. "If you look around, you'll see more aged people than most, because it's an old established area". Notwithstanding, there were varying capabilities in accessing green spaces, public toilets, and business and service buildings. Most of the participants desired access to the green spaces in the town. The main park in the town had particularly challenging access due to the hilly terrain. Several participants pointed out the main access into the park which was via a steep paved pathway. This steep access was challenging for people with impaired mobility and mobility scooters. While some were able to walk up the slope, others were not able to

access the park from this main access. These disparate findings illuminate the importance of understanding individual capabilities in determining usability of spaces.

Participants drew on their life experience to assist in negotiating the physical environment. Despite the unsuitable approach into the park, Bob (89 years) demonstrated mastery of his scooter and knowledge of how to access the park. Bob's extensive experience on his farm bike had enabled him to navigate across the grass on his mobility scooter when accessing the park. When purchasing his scooter, Bob had insisted on the scooter having the right specifications, "it's got to be powerful enough to get me around and the wheels big enough". The walk with Bob encompassed a scenic route along the river and up to the park's exit in one of the nearby streets. Bob had given much thought and attention to carefully negotiate the pathway to maintain his access along this more intrepid scenic route. The narrow pathway was interrupted by tree roots, loose shingle and uneven areas that could easily tip the scooter. Bob had identified a problematic situation and had imagined a solution that he considered would lead to a safer and more accessible pathway along the river. Drawing on his knowledge of trees, he believed a section of the large tree root could be removed without impacting on the viability of the tree.

They could cut it off, it would not hurt the tree because that's from that big Totara that's hanging out there and it's got plenty of roots in underneath but for some reason it grew that root into the bank. (Bob, 89 years)

Availability and accessibility of the public toilets in the town was pointed out during the walks. As Diana (79 years) explained, the style of toilets in the recently refurbished facilities were not easy for older adults to use, "the loos have got that awful business where there's a thin sort of round of wood on top". While some participants wondered about the accessibility of the toilet dedicated for use by those with disabilities, Bob (89) reported he was able to access it on his mobility scooter, "the one that I use, the mobility one is excellent". Bob's problem-solving focus and expertise using a scooter aided his experience, once again highlighting the diversity of experiences and understanding the unique situations and contextual factors. Building accessibility was not suitable for all capabilities. Although the recently redesigned Town Hall met the required disability access standards, patrons were expected to arrange for the designated wheelchair entrance to be unlocked ahead of time. "Here is the town hall. I have to make an appointment so they can open the door there" (Eva, 82). While arranging access in advance may seem like a reasonable solution to the local council's hall booking agency, Eva's experience highlighted how having to arrange special access undermined her agency and independence.

Participants negotiated their way around the insufficient car parking spaces. They found solutions to the problem including coming into town early and knowing the best times and places to park. As Barry (77 years) pointed out "parking is a nightmare particularly on Fridays, stay out of here when people come up to their baches [holiday places]". Participants pointed out the places regularly used by older adults that did not have suitable parking for their needs, for example, the public library. "There's 10-min parking outside the library which is a bit unfair because you just can't always choose a book in a few minutes" Frances (75 years). Frances's use of the word 'unfair' revealed her perception there was lack of understanding of the needs of the ageing population in this rural community.

6. Discussion

To support ageing in place the WHO age-friendly movement encourages communities of all sizes to adapt their structures and services to ensure accessible environments that are inclusive of older adults with varying capacities (World Health Organization, 2017). To find out how rurally living older adults negotiate their environment in everyday situations, walking interviews with 15 older adults with diverse capabilities were undertaken around their rural town. The walking interviews

revealed these older adults were actively engaged in problem-solving and continually adapting to their environment to ensure continuity of their usual activities. The resourceful way the participants approached their everyday activities partially challenge some of the alarmist discourse and negative assumptions that relate to older adults as passive recipients of services and a burden to society (Officer and de la Fuente-Nunez, 2018; Ryser et al., 2021; Sao Jose et al., 2019). Ageing in place is prioritised and promoted in global and national policies on ageing as more cost effective and beneficial to wellbeing. These findings capture the creative contribution older adults are making towards their ageing in place aspirations.

With more at stake from changing functional capabilities participants' awareness of negotiating potential risks to safety in the physical environment was heightened. However, the benefits outweighed the risks to personal safety in maintaining independence and engagement in the community and resonate with previous studies set in rural communities in New Zealand (Neville et al., 2018; Wiles et al., 2012) and globally (Novak and Menec, 2014; Weil, 2017; Winterton and Warburton, 2012). The participants were gauging the accessibility of the physical environment in relationship to their needs. Contextual factors, including individual capabilities and prior experience contributed to variations in the usability of the community facilities and recreational areas. For example, the findings identified varying experiences of the public toilets in the town. Some of the participants were particularly reliant on public conveniences. This draws attention to the design of public toilets in places with ageing populations. Accessibility and usability of public toilets is particularly important for older people in rural places as they may need to travel some distance from home. Previous studies have found lack of suitable public toilets was a major barrier to older adults' participation in the community (Doran and Buffel, 2018). Other studies have identified the association between liveability and usability. Thus, the focus on how the 'user' experiences the environment highlights the relational perspective of person-place relationship in transactions in the environment (Heatwole Shank and Cutchin, 2016). Including older adults with a wide range of capabilities in co-designing public amenities would improve usability.

Dewey's pragmatic transactional perspective was a useful theoretical lens to view the dynamic relationship these older adults have with their environment. In negotiating their environment, the participants were simultaneously adapting to changes in their own capabilities and to changes in the physical environment. Viewed from the perspective of what Dewey called 'commonsense' inquiry, it was possible to understand how these older adults were undertaking their own inquiries and problem-solving during their negotiation of the environment in real time. Dewey referred to constant 'flux' in the world where nothing remains constant. The participants' experiences revealed there was a sense of impermanence and uncertainty in the changing environment. When encountering challenges, they were revising established habits in attempting to transform indeterminate situations into those that were more determinate.

Transactions are reciprocal; people cause change in their environment and are subsequently affected by changes they enact in the environment (Biesta and Burbules, 2003). The everyday 'commonsense' inquiries the older adults in this study were undertaking from their transactions in their environment meant their knowledge was constantly evolving. Dewey proposed when the equilibrium is unsettled this type of 'commonsense' inquiry can be transformative (Wills and Lake, 2020). In other words, living with uncertainty becomes an opportunity for new knowledge and ways of doing things. These findings suggest the everyday inquires older adults are undertaking have creative benefits for ageing in place for them and other older adults and have relevance for remaining in a familiar community where many had lived a significant proportion of their lives. This collective response is what Dewey referred to as social inquiry which he believed needed to be conducted at the local community level. With their knowledge of the local environment and their own capabilities older adults are ideally placed to frame

challenges and devise solutions thereby enhancing democratic decision making (Cutchin, 2020). Dewey was a strong advocate of the public being involved in decisions that affect the wellbeing of their communities. The knowledge and experience older adults acquire from these real-time ‘commonsense’ inquires and problem-solving should be of interest to local community leaders.

The predominant focus of rural community sustainability has centred on retaining and attracting younger people (Ryser et al., 2021). With rapidly ageing populations in rural communities the resourcefulness and contribution older adults are making to ensure their rural communities are suitable for ageing in place should be highly valued. Older adults are also supporting the local economy by spending much of their time in their local area. Meanwhile, the specific needs and aspirations of older adults, especially when their functional capabilities change, are often neglected in rural community planning and decision-making. For example, rural communities often lack appropriate housing options such as assisted living and social housing to support ageing in place (Morris and Halseth, 2019). Competing priorities and limited resources are frequently referenced as major challenges to planning for their ageing populations (Kobayashi et al., 2020). Yet, older adults can contribute their knowledge and wisdom at the ‘grassroot’ level. Local community planning usually involves consultation at the organised group level. The more casual and unstructured everyday contributions older adults make to their community should be considered by local governance in rural areas. Involving older adults ageing in place are key factors in the sustainability of rural age-friendly initiatives (Menec et al., 2022).

This study revealed nuanced ‘grassroot’ experiences and contributed to place-based rural ageing research. The current findings draw on diverse experiences of older adults aged 71–89 years with a range of functional capabilities. Few rural studies have included walking interviews in data collection (McDonald et al., 2021). Walking alongside older adults was an inclusive and collaborative way to understand their experiences in real time. Although effective, this method can be time-consuming to organise with older adults. The use of mobile technologies to capture real-time experiences should be explored further with older adults in place-based research. For example, global positioning systems, electronic mapping (Hand et al., 2017), recording from smart devices and utilising citizen science to engage older adults in evaluating their environment (Tuckett et al., 2018). Community-based research should include older adults as co-design partners to maximise their resourcefulness and problem-solving capabilities. This is consistent with the bottom-up approach to community development and is an essential component to promote age-friendliness (Greenfield and Reyes, 2020; Menec and Brown, 2022).

As a place-based study it was limited to the experiences of older adults in one small rural community in New Zealand at one point in time. However, the key findings may be transferable to other similar rural communities in New Zealand and internationally. The experiences of the participants may not be reflective of the wider community of older adults, for example, marginalised or socially disconnected older adults who may not volunteer to participate in research. Further, reflecting the local older demographic, the participants were all European; therefore, the experiences of other ethnic groups were not explored. For example, rural communities with high percentage of Māori are likely to have different experiences and priorities. Indigenous research in New Zealand requires a Kaupapa Māori research approach that respects a Māori world view and ways of knowing (Wilson et al., 2021). The unique experience of immigrant groups should also be explored in the rural context (Neville et al., 2018b). Due to safety considerations, participants with impaired cognition were not included in the study. A co-research design, considered the gold standard for community-based research with older adults (Baldwin et al., 2018; Buffel, 2018), was beyond the resources of the current study. Nevertheless, the participants were involved in planning their walking interviews and were empowered to respond to the environmental experiences as they occurred.

7. Conclusion

Ensuring rural environments are safe and inclusive for ageing in place should be a priority for governments, local policy makers and town planners. Walking alongside older adults as they attended to their everyday activities provided a novel way to discover real-time insight into the quality of the environment from their unique and diverse perspectives. These more casual and unstructured contributions older adults are making to their community are largely overlooked by local governance in rural areas. This study found older adults are highly aware of their environment and were actively involved in problem solving while being present in their community. Using Dewey’s transactional approach and theory of ‘commonsense’ inquiry, the three categories identified; negotiating changing capabilities in a changing environment; negotiating the environment safely; and negotiating access within the environment captured the holistic nature of their everyday transactions and their continually changing relationship with their environment. These findings are important for future planning in the context of increasing numbers of people ageing in place in rural areas. Rural environments will need to meet the constantly changing needs and aspirations of their oldest citizens to promote and support ageing in place. Understanding the everyday resourcefulness these experienced older stakeholders bring to their rural communities is the first step in active collaboration at the local level. Mobile research methods are a useful means of capturing real time experiential data in an inclusive and creative way.

Submission declaration and verification

This work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.

Declaration of interests

None.

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Ethical approval

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CRediT authorship contribution statement

Sara Napier: Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Stephen Neville:** Writing – review & editing, Methodology, Formal analysis, Conceptualization. **Jeffery Adams:** Writing – review & editing, Methodology, Conceptualization.

Data availability

Data will be made available on request.

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