Living close to nature: how older adults in Sweden navigate relocation in later life

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Spending time in nature has many benefits for older individuals' health and well-being and is often closely tied to personal identity. As individuals age, their activity spaces typically become more geographically limited to areas near their homes. Therefore, having access to nearby nature environments is crucial for maintaining their habits of engaging with nature. This study employs a mixed-methods approach, combining survey data and interviews with older adults in two Swedish municipalities, to explore what proximity to nature means to them and how it influences their relocation decisions. The findings highlight that the relationship between individuals and nature environments can be lifelong and deeply embedded in their identity; something they wish to preserve in later life. However, various individual and societal constraints can complicate the ability to prioritise proximity to nature when moving. We argue that access to nature for older adults should be more prominently considered in policy planning, as it is currently underrepresented. It is essential to provide housing options with nature nearby, whether individuals choose to age in place or relocate to improve access to other amenities.

Keywords: moving decisions, proximity to nature, meaning of place, geographical gerontology, time geography, constraints

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Introduction

People are living longer and often remain healthy well into later life, especially in the Global North, prompting growing research interest in their everyday experiences (Gagliardi & Piccinini 2019). One emerging research strand explores outdoor leisure among older adults (Vilhelmson *et al*. 2022; Vilhelmson & Thulin 2022). Walking plays a key role, not only as transport and recreation, but also as a health-promoting activity (Sugiyama & Ward Thompson 2008). Green spaces and appealing nature environments support such activities and contribute positively to well-being. However, as mobility becomes more localised and individuals' activity space decreases, often due to health or accessibility concerns, the need for nearby nature grows (Kemperman & Timmermans 2014). Recent studies have focused on residential relocation in later life, examining housing preferences and motives for moving

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(Pettersson & Malmberg 2009; Abramsson & Andersson 2015; Granbom *et al*. 2016). While many do relocate, a growing number prefer to remain in familiar environments (Wiles *et al*. 2012; de Jong *et al*. 2022). Despite increased attention to relocation and the recognised value of nature for well-being, these areas of research remain largely disconnected. Studies on older individuals' internal relocation and residential choices rarely consider nature as a factor influencing decisions to move or stay in the Nordic context.

Understanding how nature influences relocation decisions is vital for aligning housing options with residential preferences and supporting active, healthy ageing (Freeman *et al*. 2019). This study addresses that gap by using a mixed-methods design, combining a survey and interviews with older adults living in Sweden. We explore how proximity to nature shapes residential choices, focusing on two key questions: first, what living close to nature means to individuals in later life, and second, how socio-demographic factors, current routines, and opportunities for engaging with nature influence the value placed on proximity to nature when considering relocation. We address the first question through interview data and open-ended survey responses, while the second draws primarily on survey data, with interviews adding depth and nuance.

We apply a time-geographical framework to examine how various constraints shape relocation decisions and access to nature, recognising that these constraints and opportunities evolve over time (Hägerstrand 1970). Drawing on a relational perspective, we highlight the interplay between personal and environmental factors in shaping individuals' ability to engage with nature and choose where to live (Iwarsson & Ståhl 2003). We also incorporate insights from geographical and rural gerontology, acknowledging that people living in nature rich areas often maintain strong emotional and identity-based ties to nature. Land and landscape frequently influence daily routines, place attachment, and decisions about ageing in place (Scharf *et al*. 2016; Skinner *et al*. 2021). Together, these perspectives frame our investigation into how access to nature informs residential choices and experiences of ageing.

We use the term 'move' to refer to both local relocation and internal migration across longer distances, reflecting the range of mobility captured in our data. While migration and nature have been increasingly acknowledged in literature on forced migration due to climate change, this paper is delimited to focus on moving within Sweden with nature being a pull rather than push factor. The term 'older individuals' refers to individuals typically considered 'old' based on chronological age (from retirement age onwards), while recognising that self-perceptions of ageing vary. In Sweden, retirement often begins around age 65, though this differs across individuals. Finally, we approach 'nature' as a multifaceted concept shaped by personal interpretations. In this study, participants could hold their own understandings of what nature means to them. Rather than relying on a strict urban–rural divide, we treat nature as present across contexts, shaped by relationships and lived experiences. In this sense, nature may refer to expansive reserves, but equally to urban parks or even a private garden.

Following this introduction, we review existing research on nature engagement and mobility in later life. We then outline our analytical framework, integrating concepts from time geography and rural/geographical gerontology. The next section describes the study's geographical context and summarises housing policies relevant to older adults in the selected areas. We then detail our mixed-methods approach, including survey and interview procedures, followed by the results and a concluding discussion that reflects on key findings, contributions, limitations, and suggestions for future research.

Use of nature and the moving patterns of older individuals

Studies from a Swedish context show that many individuals spend more time outdoors during the transition to retirement and into later life (Vilhelmson & Thulin 2022; Vilhelmson *et al*. 2022). Outdoor activity offers a range of health benefits and can also enhance social life and access to nature has been linked to reduced social isolation and improved well-being (Kemperman & Timmermans 2014). Nature environments also offer greater health benefits for walking compared to urban street settings (Kabisch *et al*. 2021). Beyond social interaction, nature can foster place attachment and a positive sense of place, contributing to emotional well-being and continuity in everyday life (Yung Esther *et al*. 2017).

Different types of nature, such as urban green spaces and rural natural landscapes, offer distinct characteristics and support varied activities. These environments often complement one another (Grahn *et al*. 2023), but for those with limited mobility or transport options, having some nature nearby is preferable to none (Kemperman & Timmermans 2014; Yung Esther *et al*. 2017). Although public discourse often prioritises large rural nature areas, Wallin (2023) offers a more nuanced view, showing that urban residents in apartment buildings can have good access to nature (and not only parks) nearby. These nearby environments play a central role in shaping person–place relationships and identity. Moreover, individuals' relationships with nature, and the types of nature they value, can shift over time. As personal circumstances change, such as health-related constraints, preferences and possibilities for nature engagement may also evolve. For some, private or community gardens become increasingly significant as more expansive nature areas become less accessible (Freeman *et al*. 2019). These shifts in nature engagement often coincide with broader life changes, including residential relocation.

Contrary to common assumptions, relocation in later life is relatively frequent, for instance in Sweden (Abramsson & Andersson 2015). According to Litwak and Longino's (1987) life-course migration model, motivations for moving after retirement vary. Some individuals relocate based on lifestyle preferences, while others move to improve accessibility due to health-related constraints. These differences highlight the distinction between preference-driven and constraint-driven relocation (Coulter & Scott 2015).

Geographical patterns also vary. Newly retired individuals often move from central to more peripheral areas (Abramsson & Andersson 2015), while older individuals relocate from rural to urban settings and shift from single-family homes to apartments (Abramsson & Andersson 2012). Most moves among older adults in Sweden occur within the same neighbourhood or municipality, with the oldest individuals typically relocating the shortest distances (Granbom *et al*. 2016).

Although a significant proportion of people relocate in later life, most remain in the same home, often into very old age (Abramsson & Andersson 2012). This trend reflects a growing preference to age in place, often driven by place attachment and established social networks (Wiles *et al*. 2012; Davey *et al*. 2014). According to Abramson and Andersson (2012), having a large garden connected to one's home decreases the probability that a person will move, which might be related to an interest in actively engaging with nature (Freeman *et al*. 2019).

Importantly, many older individuals, just like the general contemporary population in the Global North, live in urban areas due to long-lasting urbanisation trends (Pettersson 2001), and ageing in place often means remaining in urban settings. However, accessing larger nature environments often requires transport when living in an urban setting. While car access remains common well into later life in Sweden, overall mobility tends to decline with age (Elldér *et al*. 2023). This makes proximity to nature increasingly important for supporting continued outdoor activity, even when mobility becomes limited (Kemperman & Timmermans 2014). To support nature engagement despite mobility constraints, urban green spaces must be within walking distance (Yung Esther *et al*. 2017).

Also in rural areas, while nature may be physically closer, mobility constraints can negatively impact their possibilities to actually engage with nature. As Louma-Halkola (2025) argues, there is a distinction between ageing in place and ageing *well* in place, where the latter requires opportunities for outdoor mobility and social connection, not just remaining at home. Here, sufficient transport options are key to enable rural ageing.

A relational framework integrating place, individuals, and constraints

This study integrates concepts from geographical gerontology, particularly rural gerontology, and time geography to explore how place, specifically nature, influences relocation decisions in later life. The framework considers both personal attachment to nature and the structural and individual constraints that shape opportunities to engage with natural environments.

Geographical gerontology examines how place, space, and environment affect experiences and well-being in later life (Andrews *et al*. 2018). It explores how individuals interact with their surroundings and how these interactions inform decisions about ageing in place or relocating (Wiles *et al*. 2012; Golant 2018). The field also emphasises spatial belonging and the role of place in shaping identity

across the life course (Rowles 2018). These relationships often evolve, especially in later life, as new constraints, such as health or mobility limitations, affect engagement with place (Louma-Halkola 2025). However, as Phillips (2018) notes, geographical gerontology has largely focused on urban contexts, often overlooking the distinct experiences of those living in rural or peripheral areas (see also Skinner & Winterton 2018).

Given this study's focus on nature, rural gerontology offers a valuable lens for understanding how rurality intersects with the social, economic, and personal dimensions of later life (Scharf *et al*. 2016). A core principle in this field is that ageing is place-bound, shaped by the geographic and socio-spatial characteristics of rural areas, such as distance from services, financial constraints, and reliance on informal networks (Kafková & Vidovičová 2025).

Importantly, 'rural' is not solely a geographic category (Skinner & Winterton 2018). Deeply embedded meanings of place, routine, and identity influence how individuals experience rural ageing (Kafková & Vidovičová 2025). Understanding rural ageing therefore requires attention to micro-level experiences, including values and identities tied to place (Golant 2018; Skinner & Winterton 2018). Moreover, rural gerontology challenges the binary view of urban versus rural ageing, questioning the assumption that urban ageing represents a normative model to which rural ageing should aspire. Instead, the field emphasises the diversity of rural settings and older populations, spatial inequalities, and the need to integrate lived experiences with structural and policy perspectives. As ageing populations grow across Europe, rural gerontology offers valuable tools for analysing the intersection of age and place and for guiding age-inclusive planning across varied geographic contexts (Phillipson & Scharf 2005).

While gerontological research increasingly acknowledges the role of space in shaping later-life experiences, the temporal dimension has received less attention (Phillips 2018). To understand how engagement with space, and particularly nature, evolves over time, a time-geographical perspective is useful. Time geography emphasises the inseparability of time and space, offering tools to analyse how constraints shape everyday mobility and access (Hägerstrand 1970). Research applying a time–space lens to older adults' activities shows that although retirement often brings more discretionary time, spatial engagement may be restricted by various constraints (Elldér *et al*. 2023). These limitations can affect opportunities to age in place or complicate how that experience unfolds (Golant 2018).

Time geography identifies three types of constraints that shape individuals' spatial opportunities. 'Capability constraints' refer to limitations related to physical, biological, or mental conditions, which often intensify with health issues or disabilities (Ellegård 2019). From a relational perspective, these constraints may shift in response to 'authority constraints', which are external factors such as laws, regulations, and power structures that influence access and mobility (Hägerstrand 1970). Here, geographical gerontology acknowledges that places vary in accessibility and availability for people in later life (Phillips 2018). The third category, 'coupling constraints', arises when individuals must be physically present with others or with specific tools to carry out activities. These constraints are common within households and may also involve interactions with transport systems or assistive devices (Landby 2023).

A relational perspective on place, space, and constraints recognises that barriers to engaging with nature rarely operate in isolation. Instead, they emerge through the interaction of personal and environmental factors. For example, health-related challenges may introduce new constraints, but their impact depends on whether the surrounding environment supports or limits access (Iwarsson & Ståhl 2003). As circumstances shift, individuals may re-evaluate how they perceive and engage with places like nature (Andrews *et al*. 2018).

Geographical context and planning for the ageing population

Places and spaces, such as housing, neighbourhoods, and broader societal structures, play a central role in shaping individuals' opportunities (Phillips 2018). Planning efforts increasingly aim to provide accessible housing that supports ageing in place (Rowles 2018) and promotes age-friendly communities (Golant 2018). This study is situated in Sweden, a country with a long-standing trend of population ageing, high longevity, and strong norms around active ageing (Davey *et al*. 2014).

A proposition from the Swedish Government (2018) states that housing for older adults should be attractive, accessible, and available. What constitutes attractive housing is inherently personal and contextual. A Swedish Government Official Report (SOU 2015) notes that individuals in rural areas often prioritise proximity to nature, while those in urban settings value access to services and cultural amenities. These differing preferences present challenges for municipalities, which are responsible for providing suitable housing that reflects local socio-demographic conditions. However, many municipalities face shortages of accessible housing and lack strategies to meet the evolving needs of an ageing population (National Board of Health and Welfare 2021). Although national reports highlight the importance of housing for older adults, there is no official planning guidance on how to incorporate nature in close proximity to dwellings, despite its recognised value for well-being and mobility.

This study focuses on two municipalities in mid-Sweden: Östersund and Härnösand. Both feature medium-sized urban centres surrounded by smaller villages, with large rural areas characterised by forested landscapes and protected nature environments. Östersund lies near a mountain region, while Härnösand is situated on the east coast (see Figure 1). Each municipality offers access to urban green spaces and larger nature reserves. Östersund has approximately 65,000 residents, and Härnösand around 25,000. In recent decades, both have experienced out-migration to other parts of Sweden, and their overall populations are expected to decline. At the same time, the proportion of residents aged 65 and over is projected to increase (Statistics Sweden 2021). The two municipalities thus constitute interesting cases regarding how the demographic challenges of an ageing population can be met, in the context of nature experiences and outdoor activities as a means to healthy ageing.

Fig. 1. Map of Sweden with the locations of Östersund and Härnösand being squared. Map from iStockphoto.

Härnösand's municipal vision promotes inclusivity and accessibility for all residents. However, official planning documents primarily focus on service provision and access to the city centre, with limited attention to disparities in nature access across socio-demographic groups (Härnösand Municipality 2019). The comprehensive plan acknowledges that many older adults prefer to remain in familiar neighbourhoods, and this preference informs housing development strategies. Urban densification is prioritised in the city centre, alongside a stated commitment to preserving green spaces. The plan sets a goal of ensuring green areas within 300 metres of homes and workplaces and emphasises the importance of maintaining larger protected nature areas, positioning nature conservation as equally important to infrastructure development. While the plan mentions access to nature via cycling and public transport for the general population, it does not address the specific needs of older adults. More broadly, it lacks a nuanced understanding of how socio-demographic factors influence nature access (Härnösand Municipality 2022).

Östersund's comprehensive plan also identifies accessibility as a key component of a socially sustainable society. The municipality acknowledges the need to better accommodate older adults, particularly in relation to housing and the physical environment (Östersund Municipality 2022). It states that all residents should be able to access, live in, and transition to appropriate housing as their needs evolve. Like Härnösand, Östersund prioritises urban densification in its city centre, while emphasising the importance of maintaining green spaces near residential areas to support physical activity. However, unlike Härnösand, the plan does not specify a target distance, such as 300 metres, for proximity to green areas (Östersund Municipality 2022). While the plan promotes general access to nature, it lacks specific strategies addressing the needs of older adults and does not consider socio-demographic variation in nature access.

A mixed-methods research design

Data collection

This mixed-methods study draws on a quantitative survey and twelve semi-structured interviews with individuals in later life. The survey was conducted in both Östersund and Härnösand, while the interviews focused on residents in Östersund. To preserve anonymity, specific neighbourhoods and streets are referred to using fictitious names.

Researchers from the project conducted individual semi-structured interviews in 2020. Participants were recruited through snowball sampling (Tashakkori *et al*. 2021), in collaboration with two senior citizens' organisations and municipal centres for older adults. Due to COVID-19 restrictions, all interviews were conducted by phone. Two researchers participated in each interview; one leading the conversation and the other taking notes. Interviews lasted approximately one hour, were conducted in Swedish, recorded with consent, and later transcribed for analysis.

In total, twelve interviews were conducted with participants aged 75–89, including four men and eight women. At the time of the interviews, eight participants lived alone, and four lived together with a partner. Six of the respondents had their own cars and drove themselves, and one had a car they used only during the summer. Five respondents currently resided in a house, four lived in a flat, and three respondents resided in a retirement home.

Survey data were collected in 2023 using purposive, self-selection sampling (Tashakkori *et al*. 2021), targeting individuals aged 65 and older in Östersund and Härnösand. The survey, distributed by post, explored accessibility, outdoor activity frequency and experiences, perceived health, and factors that enable or hinder participation in outdoor activities. It included both single- and multiple-choice questions, along with open-ended items allowing respondents to elaborate. Recruitment was supported by senior citizens' organisations, which invited individuals to register their interest by providing their name and postal address. Additionally, a Facebook campaign ran for three months, targeting residents aged 65+ in the two municipalities. Registered participants received the survey by regular mail. The final sample consists of 250 respondents.

Survey data

The dependent variable in the survey analysis is the question: 'How important is closeness to nature in your moving decisions?'. Respondents rated their answers on a five-point Likert scale (1 = not important, 5 = very important). An open-ended response option accompanied this question, yielding 96 qualitative answers, which were analysed separately (see below). Independent variables were selected to reflect respondents' socio-demographic characteristics and their current opportunities and routines related to spending time in nature. These variables are presented in Table 1.

Tab. 1. Variables included in the analyses

Variable	Categories (%)
Sex	Woman (74), Man (26)
Age	<75 yrs. (50.8), ≥75 yrs. (49.2)
Marital status	Married/cohabitating (58.3), Widow/-er, living alone (41.7)
Level of education	No university education (35.9), University education (64.1)
Disability/chronic illness	Yes (44.7), No (55.3)
Frequency of visits in nature	<Once/week (18.5), ≥ Once/week (81.5)
Transportation to nature	Walk/bike (65.8), Car (32.7)
Access to nature within 300 m	Yes (82.9), No (17.1)

We selected independent variables based on previous research highlighting factors that influence nature preferences and relocation decisions in later life. For instance, studies suggest that women tend to value nature more highly than men (Macháč *et al*. 2022), and that cohabitation can complicate migration decisions, while widowhood may trigger relocation (Coulter & Scott 2015). Education is also linked to active ageing, with individuals holding higher educational qualifications often leading more active lifestyles and having greater geographical reach (Wanka 2020; Elldér *et al*. 2023). Age is another key factor influencing residential preferences (de Jong *et al*. 2022). Here, it is common that researchers distinguish between the young-old (recent retirees) and the older-old, using 75 years as a general threshold (Vilhelmson *et al*. 2022).

We selected variables related to current opportunities based on the assumption that individuals who frequently visit nature and those with access to nature within 300 metres of their home are more likely to value proximity to nature in future housing decisions. This distance aligns with national guidelines, which recommend that all residents should live within 300 metres of a green area (Swedish National Board of Housing, Building and Planning 2023), making it a relevant inclusion in the survey. We also included a transportation variable, recognising that access to different transport modes influences geographical freedom and the ability to engage with nature (Elldér *et al*. 2023). Combined, the independent variables reflect key categories of time-geographical constraints and capture the socio-demographic characteristics of the study participants.

Analysis

We analysed the interview transcripts and notes by repeatedly reviewing them to identify participants' reflections on relocation decisions and their current living environments. We highlighted relevant passages and compiled them in a separate document. Using this material, we collaboratively

developed a coding framework and conducted a thematic analysis (Braun & Clarke 2022). Themes included the level of importance of having nature nearby to overall well-being (12 codes), the level of importance of second homes for being close to nature (current or previous ownership) (7 codes), moving to a new home to improve proximity to services and family as well as having previous acquaintance with the area (5 codes), and staying for as long as possible in the current home to retain closeness to nature (3 codes).

We used SPSS to analyse the survey data. Due to the relatively small sample size, some variables were recoded into new categories prior to analysis. Age, originally a continuous variable, was grouped into two categories: under 75 and 75 or older. Marital status was recoded to reflect whether respondents lived alone or with a partner. Education was categorised as either having a university degree or not. Frequency of nature visits was originally measured on a five-point scale, ranging from never to daily. For analysis, we merged the two highest frequencies (once a week and daily) into one category, while less frequent visits formed the second category.

We began the analysis by conducting cross-tabulations to generate descriptive statistics on how different factors relate to the importance placed on proximity to nature in relocation decisions (see Appendix 1). We then dichotomised the dependent variable (importance of nature in moving decisions) into two categories: 'low importance' (including responses rated as not important, low, or some importance; 51.3%) and 'high importance' (including responses rated as high or very important; 48.7%). This dichotomisation enabled logistic regression analysis.

We also conducted a thematic analysis of the open-ended responses to the survey question on nature and relocation (Braun & Clarke 2022). Two main themes emerged: (1) nature as a highly important factor in relocation decisions, and (2) nature as secondary to other considerations. The most common response within the first theme was that nature had served as a strong pull factor in choosing the current place of residence (57 codes). This paper primarily focuses on this theme.

One limitation of this study is the relatively small sample, consisting mainly of older adults who are active and spend considerable time in nature. This may influence the level of importance they attribute to nature in relocation decisions. Nonetheless, the findings underscore the relevance of nature as a factor deserving further exploration in future research, ideally using larger, nationwide samples. Moreover, the study focused on two small municipalities with relatively easy access to nature. Preferences may differ in larger urban centres, suburban, rural, or peripheral regions, with implications for spatial planning. Comparative studies across diverse municipal contexts, both within Sweden and internationally, would be valuable.

Future research could also examine the relative importance of various pull factors, such as nature, social ties, and accessibility, to better understand how older adults prioritise different aspects in their relocation decisions. Such insights would help refine planning strategies to support ageing populations more effectively.

Negotiating place: importance of nature in older individuals' (re)location decisions

This section presents findings from both the survey and interview studies. To distinguish between quotes, fictitious names identify interview participants, while survey respondents are referred to as man/woman followed by age. The first sub-section explores the meaning of nature and its proximity. The second examines how the importance of nature in relocation decisions varies depending on socio-demographic factors, current habits, and access to natural environments.

What it means to older individuals to have nature nearby

We did not define 'nature' during data collection, allowing participants to interpret the concept freely. Most referred to specific environments, such as forests, lakes, or mountains, or to activities like berry picking, hiking, and skiing. Survey respondents generally reported frequent visits to nature: 38.2% go daily, and in total 81.5% at least once a week. Daily time in nature was found in the interviews as well, for instance, with some respondents referring to feelings of freedom and that spending time in nature affected their health positively:

> It has become a way of life. It means a lot… being outside and feeling free has a good effect on your health, like better health and adequate fitness to manage… The lifestyle of getting outside, out of the city environment. /…/ It's an important part of my daily activities. (Nils, 76)

Drawing on geographical gerontology (e.g., Andrews *et al*. 2018), Nils' account illustrates how engaging with nature supports both his health and daily routines, while also highlighting the contrast between natural and urban environments. Another participant described nature as essential to her well-being and expressed fear of losing the ability to go outdoors:

> It [nature] is everything. I don't know how I would survive if I couldn't go outside. I fear getting dementia and being locked up. It's a big part of my identity; I have always been outside. (Anita, 80)

Anita's account illustrates how nature shapes personal identity across the life course (Rowles 2018). Although she currently enjoys access to nature, she anticipates future capability constraints (Hägerstrand 1970), revealing how such concerns can influence perceptions of the future even before limitations arise. Her reflections point to the importance of the time aspect, intertwining past and present outdoor experiences with future expectations. Moreover, the geographical dimension also plays a key role here; frequency of visits often depends on proximity. Survey data show that those living within 300 metres of nature (n = 202) visit more often than those further away (n = 42), with mean scores of 3.86 and 3.3 respectively (1 = never, 5 = daily). The difference is statistically significant (P = 0.005, ANOVA).

In open-ended responses the majority of those who answered stated that closeness to nature was a very important factor when they moved to their current home. They cited specific types of nature and activities that they wished to have nearby when making previous relocation decisions: "We built our house on a plot by the sea – an inheritance from my parents. For me, it's very important to live near water. I was raised with that." (Woman, 75). "All my previous homes have been chosen based on their location in relation to outdoor activities. My current home is a good place to age, and is also close to natural areas." (Woman, 72). The quotes of the women above point to how relationships with specific spaces can be continuous over time; even though the exact place of living changes, nature is always close by. For some respondents, closeness to nature was an essential factor not only for the choice of residence but also in the decision to move to the municipality. For instance, a woman aged 77 years old answered: "[I] have a property by the lake, which is why I migrated to Östersund". A similar quote was found in the interview study as well:

> I come from Stockholm, but I've lived here for quite some time now. /…/ I spent a lot of time in nature here, especially in the mountains. That's one of the reasons why I settled in [the county of] Jämtland. (Nils, 76)

For these study participants, the attraction of nature seems stronger than other place characteristics, at least in their initial moving decisions. From the interviews, it was clear that closeness to nature was also an essential reason for staying as long as possible in the current residence, contributing to strong place attachment. This is illustrated by the quotes: "I live in a house and I'm out in the garden. / …/ It is wonderful to be outside. That's why I still live in a house, to be able to be outside, and there's always something to do outside." (Elsa, 89).

> We live in Lilltorp, it's 50 metres from the forest. /…/ I wouldn't want to leave Lilltorp, it would be under force if that were the case. Perhaps you'll grow into it, if you lose your energy and don't want a complicated life. Perhaps then it'll be a natural transition to a different home. (Lars, 75)

Elsa and Lars express a strong preference for rural living and wish to age in place. Elsa's remark 'I still live in a house' suggests that such a lifestyle may be seen as unusual at 89 (see e.g. Scharf *et al*. 2016; Skinner & Winterton 2018). Lars initially insists he would only leave his home by force, but later reflects on potential future capability constraints (Hägerstrand 1970). As with Anita, above, these constraints are anticipated rather than currently experienced.

The importance of nature in older individuals' relocation decisions

While the previous sub-section showed that having nature nearby positively influences how frequently individuals visit natural environments, and that many respondents considered proximity to nature important in past migration and relocation decisions, preferences may shift when contemplating relocation in older age. Table 2 presents how the importance of nature varies across socio-demographic factors and variables related to current routines and opportunities for visiting nature.

Participants who placed less importance on nature in their moving decisions often prioritised other factors. Interviews and open-ended survey responses revealed that limited housing market options and financial constraints made it difficult to choose homes close to nature. These findings highlight issues of inaccessibility that restrict older individuals' choices (Golant 2018; Phillips 2018). This situation exemplifies how authority constraints can influence spatial decisions in later life (Hägerstrand 1970). The results suggest a potential mismatch between preferences and actual relocation decisions. As one woman expressed: "In the current housing market, you need to take what's available, regardless of closeness to nature environments." (Woman, 84).

Among those who emphasised proximity to services, some referred broadly to the city centre, while others specified shops, public transport, healthcare centres, and restaurants. For example, a 71-year-old man stated: "I prioritise closeness to shops, a healthcare centre and restaurants first." On the Likert scale, he indicated that closeness to nature held 'some importance' in future relocation decisions, suggesting that nature remained a consideration, albeit secondary to access to services. Based on these findings, we categorised the response option 'some importance' alongside 'not important' and 'low importance' when dichotomising the variable on the importance of nature in moving decisions.

Tab. 2. Factors affecting the importance of nature in moving decisions, analysed with logistic regression

	Importance of nature for residential relocation					
Independent variables	**Low importance**	**High importance**	**N**	**B**	**S.E.**	**Sig.**
Sex						
Woman	47,8%	52,2%	184	-0.413	0.398	0.299
Man	55,5%	44,5%	63			
Age*						
Younger than 75 y/o	45,2%	54,7%	126	-0.585	0.331	0.077
75 y/o and older	54,5%	45,4%	121			
Current relationship status						
Married/cohabiting	49,7%	50,4%	143	-0.272	0.346	0.432
Widow(er)/living alone	50,5%	48,5%	101			
Education level						
No university education	57,9%	42,1%	88	0.314	0.333	0.346
University education	45,2%	54,8%	157			
Disability or chronic illness						
Yes	50,5%	49,5%	107	-0.375	0.337	0.266
No	48,5%	51,4%	136			
Access to nature within 300 m**						
Yes	45,3%	54,7%	203	-1.196	0.499	0.016
No	70,0%	30,0%	40			
Frequency of visiting nature***						
Less than 1 visit/week	79,1%	20,9%	43	1.335	0.454	0.003
1 visit/week or more	43,3%	56,7%	203			
Transportation to nature***						
Walk/bike	45,1%	54,9%	133	-0.890	0.332	0.007
Car	63,7%	36,3%	66			

Note: the last category of each variable is used as the reference category (= p<0.1, ** = p<0.05, *** = p<0.001). R^2 = 0.228*

Descriptive statistics in Table 2 suggest that women value proximity to nature more than men, and that younger participants place greater importance on nature than older ones. A higher proportion of those living alone, 43 of whom are widowed, reported lower importance of nature in their moving decisions compared to those who are married or cohabiting. Respondents with a university education tended to assign greater value to living close to nature. However, the logistic regression analysis indicates that sex, marital status, education level, and presence of disability did not significantly influence how individuals valued proximity to nature in their relocation decisions.

Interview findings partly contradict these statistical results. Marital status and disability or chronic illness appear to affect the ability to choose where to live. For example, becoming widowed or acquiring a disability may limit housing options, as illustrated in the quotes below:

> My husband died in 2005, and I moved into the city in 2006. [We had] a large house, and then my son inherited that. I moved to Kullagatan since I had lived there before [until 1979]. I was familiar with the area but didn't think much about accessibility then. Most things that suited my life were located close by, like the bank, the church, a store and so on. (Birgitta, 81)

> I moved out closer to nature when I retired, to my second home south of Kvarnvik, where I lived for seven years until I couldn't manage anymore. /…/ I had to make changes and adaptations [when I had a stroke], and in addition to the walker, I had to move to get closer to everything, like the grocery store, hairdresser and so on. /…/ When I had my stroke, I had to realise that it was the end of my pleasant life in nature, since it was no longer a place for me. I had to leave. /…/ I chose this area since I knew it was close to nature, and I knew the area since I lived here before. (Siv, 86)

Although most socio-demographic factors had effects too small to reach statistical significance in the logistic regression, the interviews illustrate how relocation decisions can be triggered by life events that alter an individual's capacity, coupling constraints, and available resources (Hägerstrand 1970), such as disability or widowhood. For Birgitta and Siv, quoted above, their relationship to rural areas and nature changed following the sudden onset of personal constraints. Both chose to return to places they had previously lived, suggesting that individuals maintain connections to multiple places and that life disruptions may prompt a return to familiar, safe environments.

These examples highlight the importance of place attachment and spatial belonging, with proximity to nature forming a key component (Rowles 2018). The quotes also show that relocation decisions may be driven more by constraints related to staying in the current home than by preferences for the new one (*ibid*.). This may help explain the observed association between age and the stated importance of nature in relocation decisions. The results indicate that individuals aged 75 and above are less likely to prioritise proximity to nature compared to younger respondents. However, the low statistical significance limits the strength of this conclusion.

The statistical analysis shows that all three variables related to current routines and opportunities for visiting nature significantly correlate with the importance attributed to nature in relocation decisions. For example, individuals who spend time in nature at least once a week are approximately 3.8 times more likely to value proximity to nature high compared to those who visit less frequently. This highlights the role of habits and suggests that housing preferences and everyday activities are closely linked.

> The primary mode of transportation used to access nature also significantly influences this relationship. Individuals who mainly travel by car tend to place less importance on living close to nature compared to those who walk or cycle. Furthermore, having access to nature within 300 metres of one's home significantly increases the likelihood of valuing proximity to nature in future relocation decisions. This suggests that the preference to live near nature often persists into older age. Interview findings support this interpretation, indicating that transportation and desired proximity to nature are closely connected. Those with access to a car can travel further to reach nature and therefore feel less need to live nearby. In contrast, individuals who primarily walk to nature tend to prefer having it close to home: "Taking the car to get out is not for me. I want to walk out the door and get out in nature. I can do that where I live, it's terrific." (Anita, 80).

> I do not experience any major barriers to visiting several of the nature environments in Östersund. I might [do so] the day I can no longer drive the car or manage to bike anymore. It might then be more difficult to maintain my habits, but I haven't really thought about that. (Nils, 76)

In the open-ended survey question, one participant answered that closeness to nature was not an issue since he had a car, but it could become more critical in the future: "I am 73 years old, and it works now since I have my own car. BUT the day I get health issues/a disability there is nothing for me close by, and then I will be forced to move." (Man, 73). The interview quotes and survey response above highlight that individuals value proximity to nature differently. In relation to time-geographical constraints (Hägerstrand 1970), these findings reflect coupling constraints, such as access to a car for mobility, as well as capability constraints that may not yet affect individuals but are anticipated in the future. Again, this points to changes over time.

Moreover, several interviewees described having previously lived close to nature but later relocating to areas where access to larger natural environments became more limited. However, urban green spaces played an important role in their relocation decisions. One participant, originally from a small village in northern Sweden, moved to Stockholm and lived there for 35 years before relocating to Östersund. Her decision to move was strongly motivated by a desire to be closer to nature:

> I had decided to move to Östersund and Tallmyra when I retired, since I had travelled through Östersund several times and thought it was beautiful. /.../ [Now] I live in a home for the elderly, on the ground floor, so I have my own flowerbed and there are some green spaces around. (Karin, 81)

> Back in the days, we were in the mountains, skiing and walking. Not as much now. I was in the mountains this summer, picking mushrooms, but I do that less than when I was younger. [Now] it doesn't matter much which kind of nature it is, just being outside is the most important. It's an elixir of life. (Anita, 80)

The quotes above demonstrate that the preference to live close to nature often remains, even though the type of nature and outdoor activities may change due to various constraints. In some cases, green spaces can compensate for the loss of access to larger nature environments in previous places of residence. The interviews suggest that individuals often accept these changes, although they may also involve feelings of loss. These findings underscore the enduring significance of relationships to specific spaces, such as nature. Even when adaptations in expectations and surrounding environments are necessary, the emotional and symbolic connection to nature persists (Rowles 2018).

Concluding discussion

This study examined the role of nature in older adults' relocation decisions, using survey and interview data from two Swedish municipalities. The first research question explored what it means to live close to nature in older age. Findings show that proximity to nature is deeply valued, often rooted in lifelong outdoor habits. Some participants even relocated long distances to be closer to nature, underscoring the enduring, often lifelong, relationship between individuals and natural environments. Place attachment emerged as both complex and multidimensional. Several participants returned to areas they had previously lived in after experiencing constraints in rural settings, while others maintained strong ties to specific types of nature, even as their residential locations shifted. These findings suggest that closeness to nature is not only relevant in older age but across the life course.

Survey data revealed a strong correlation between living near nature and frequent nature visits, reinforcing evidence of nature's health benefits for older adults. From a time-geographical perspective (Hägerstrand 1970), proximity reduces time-space constraints, enabling more frequent engagement. While earlier research (e.g., Colley *et al*. 2019) suggests that rural relocation may not always increase outdoor activity due to time limitations, our findings indicate that geographical closeness to nature can mitigate such barriers, regardless of urban or rural contexts.

The second research question addressed how socio-demographic factors and current routines influence the value placed on nature in relocation decisions. While statistical analysis showed limited effects from socio-demographics, interviews revealed that life events, such as disability or widowhood, can restrict housing choices and reshape priorities. The mixed-methods approach was therefore essential in capturing how capability and coupling constraints (Hägerstrand 1970) influence relocation decisions, often shifting focus toward accessibility. Participants frequently emphasised the importance

of nearby green spaces, especially when moving to urban areas or smaller dwellings (Abramsson & Andersson 2012, 2015). Even when activities changed, for example from mountain hikes to gardening or park visits, the desire to engage with nature remained. This highlights the significance of maintaining active and meaningful connections to nature, even in adapted forms.

Current access to nature, transportation, and routines had a stronger influence on the importance of nature in relocation decisions than socio-demographic characteristics. Participants who primarily walked or cycled valued proximity more than those who drove. However, as car use typically declines with age (Elldér *et al*. 2023), proximity becomes increasingly important to maintain nature-related routines. The car, once a coupling resource enabling geographical freedom, may become a coupling constraint when health-related capability constraints arise (Hägerstrand 1970). This interplay between constraints highlights the growing importance of living close to nature to sustain everyday engagement.

By integrating geographical and rural gerontology with time geography, this study examined how older adults' opportunities to live near nature evolve over time. The time-geographical concepts of capability, coupling, and authority constraints help illuminate how life events, such as disability, widowhood, reduced driving ability or limited opportunities to age in place, can shrink individuals' activity spaces. Importantly, participants often anticipated future constraints, such as declining health, and reflected on how these might affect their ability to access nature. This underscores the value of a life course perspective, considering past experiences, present conditions, and imagined futures. Our results showed that some participants moved away from nature-rich rural areas despite a continued desire to live close to nature. This reflects how constraints, not preferences, can drive relocation. Geographical gerontology offers insight into how relationships with nature are formed and sustained, often becoming integral to personal identity (Rowles 2018).

Through the combination of geographical/rural gerontology and time geography, this study highlights the interaction of multiple geographical scales: individual-level constraints (Hägerstrand 1970); local-level relationships between individuals and nature (e.g., Golant 2018; Rowles 2018); and structural-level influences shaped by authority constraints (Hägerstrand 1970), such as housing policies and opportunities to age in place (Golant 2018). This multi-scalar approach enhances our understanding of planning more effectively for an ageing population, while also providing a theoretical contribution. Not least, our study shows that combining rural and geographical gerontology with time geography can enhance a better understanding of how various constraints can shape and implicate individuals' relationships to nature.

Currently, policy documents addressing housing for older adults remain limited, both nationally in Sweden and within the studied municipalities. While the municipalities' comprehensive plans (Härnösand Municipality 2022; Östersund Municipality 2022) mention green space access, they lack specific attention to the needs of older adults, particularly those facing increasing capability constraints. National housing policies focus primarily on ageing in place and accessible dwellings (SOU 2015; National Board of Health and Welfare 2021), without explicitly addressing access to nature.

Östersund and Härnösand reflect many mid-sized Swedish municipalities. The issue of nature access may be even more pressing in larger cities, where densification often takes precedence in spatial planning. In contrast, rural areas offer abundant natural surroundings but pose challenges for ageing in place due to limited public services and individual constraints (Golant 2018; Phillips 2018), pointing to how authority constraints in terms of policies and support systems can affect individuals' mobility freedom (Landby 2023).

The study findings underscore the need for spatial planning that considers both environmental and individual factors. As the ageing population grows, ensuring access to nature and providing housing near green spaces becomes critical for promoting healthy, active ageing and well-being (Foster & Walker 2013; Choi 2022; Jarosz 2023; Verderber *et al*. 2023). For those accustomed to rural environments, continued access through transport or proximity is essential. Our results also challenge urban planning goals centred on densification for environmental sustainability. Increased urban density can undermine social sustainability by limiting equitable access to nature, particularly for individuals with reduced mobility or fewer resources. A comprehensive planning approach should therefore include urban green spaces, accessible housing near nature, both in urban and rural areas,

and reliable transport options, enabling broader access to nature's health benefits (Kemperman & Timmermans 2014).

Finally, this study contributes to the discourse on ageing in place. While existing literature often emphasises social ties and attachment to home (Wiles *et al*. 2012; Davey *et al*. 2014), our findings highlight the importance of relationships with nature. Ageing in place should be feasible for those who value proximity to nature, aligning with research on nature's role in supporting health in later life (Herbert 2020; Husser *et al*. 2020). Building on recent work on outdoor mobility and ageing well in place (Louma-Halkola 2025), we argue that nature plays a central role in this process. This may require services that enable older adults to remain in their homes, even if those homes are not fully accessible (de Jong *et al*. 2022). Ultimately, whether ageing in place or relocating, older adults should have the option to live near nature as part of a socially sustainable society.

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