Place Attachment and Aging in Place: Preferences and Disruptions

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Abstract

This paper examines the links between place attachment and older persons' preferences to age in place, and factors that disrupt these preferences. We use data from the 2001–2021 Household, Income and Labour Dynamics in Australia Survey and paneldata modelling to confirm strong associations between several place attachment dimensions and aging-in-place preferences. Strong ties to children, strong social capital, residence in social housing, homeownership status, housing wealth, and home and neighborhood satisfaction are all positively linked to a stronger preference to age in place. Our findings reveal important differences between older homeowners and older non-owners. For owners, closeness to children is a strong predictor of aging-in-place preferences, although mortgage debt can trigger involuntary moves. For non-owners, tenure security achieved through longer durations at one's address of residence is linked to stronger aging-in-place preferences. However, private renters are more often exposed to involuntary moves. We discuss the policy implications of these disruptions.

Keywords

aging in place, social capital, endowment, homeowner, tenure security

Introduction

Existing studies have provided considerable evidence of the growing preference for older people to remain independent and age in in place for as long as possible (see, for instance, Golant, 2020). Thus, there has been growing interest in the 'place' dimension of aging as the global population as a whole ages (Golant, 2015; Peace, 2022; Rowles & Bernard, 2013; Wiles et al., 2017). While there are many shades to the concept of aging in place, it is generally defined in aging policy as older people living in their community with some level of independence rather than in residential care (World Health Organization, 2015). For older adults, aging in place often necessitates care and support from one's family, friends, and networks to address declining health or other functional incapacities (Pani-Harreman et al., 2022). Thus, over time, the concept of aging in 'place' has evolved from a focus on 'dwelling' attachment to include an attachment to 'place' that involves the wider local community (Thomas & Blanchard, 2009). In a similar vein, Lebrusán and Gómez (2022) posit that place attachment comprises both the home representing one's private space and the neighborhood representing one's social space as an extension of the home. The importance of place attachment as local community attachment for older populations is further intensified by a rise in the number of single older persons living alone. Where once single-person households were relatively young, now they are equally likely to be older.

There is widespread interest in aging in place from both academic and policy circles (Forsyth & Molinsky, 2021; Johansson et al., 2013; World Health Organization, 2015). However, Ahn (2017) argues that the conceptual foundation of the idea of aging in place has not been thoroughly investigated. Lebrusán and Gómez (2022, p. 1) state that "despite its importance, and beyond the consensus that the time spent in a place increases attachment to it, the processes whereby place attachment is constructed by the elderly and the role of the experience of neighborhood are little known".

It is this conceptual structure – as it pertains to the dimensions of place attachment for older populations and their influence on aging-in-place preferences – that is the focus of the present research. Specifically, this paper examines the links between place attachment dimensions and older persons' preferences to age in place, and factors that disrupt these preferences.

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Theoretical Framework and Background Literature

Place attachment is a concept that has been shaped by multiple fields of study, including psychology, human geography, environmental gerontology, and sociology. At its heart, the psychological approach tends towards a view of place attachment as an individual's perception of self as a member of a particular environment. Thus, it is described broadly as a positive bond between individuals and their environment (Altman & Low, 1992), and place attachment thus involves an interplay of affect and emotions, knowledge and beliefs, and also behaviors and actions in reference to a place (Altman & Low, 1992; Scannell & Gifford, 2010). In this context, place attachment enables lifestyle activities and the completion of life course goals (Lewicka, 2011). Scannell and Gifford (2010) extended this general notion by emphasizing that place attachment should be viewed as a multidimensional concept across the dimensions of 'person', 'process', and 'place' - a tripartite model. However, the study notes that the most important dimension of place attachment is likely to be 'place' itself.

The emphasis in our study is on the role of 'place', which in itself comprises multidimensional elements. We do not explore the wider range of cognitive issues that form the core of the 'process' dimension of attachment, nor the cultural and experimental elements of the 'person' dimension. However, we deconstruct the way in which 'place' works as a critical factor in creating and affecting place attachment, which is the dominant concern in the existing literature.

Studies from various fields generally agree that within 'place', both social and physical dimensions play important roles, including Scannell and Gifford (2010) and Clark et al. (2017) which are studies in psychology and human geography respectively. The physical dimension is obvious, but a social conception of the link between an individual and place is based on one's relationship with people in the setting that links their lives together (Coulter et al., 2016; Elder et al., 2003). Studies in the field of environmental and geographical gerontology have highlighted similar themes, emphasizing the growing attachment to the social and physical dimensions of place that accompanies aging and highlighting the importance of family and neighbors as forming the basis for the social dimension of place attachment (Buffel et al., 2014; Eriksson et al., 2022; Gardner, 2011; Wiles et al., 2009).

We extend the existing conceptualization of 'place' as comprising social and physical elements by positing that economic elements can also influence an individual's attachment to the place that one lives in. We do so by drawing from the field of behavioral economics, where place attachment can be interpreted from the perspective of attachment to an owned asset – the owned home. This attachment creates an endowment effect, which households are unwilling to lose for just its exchange value in the market (Kahneman & Tversky, 1979). Thus, the aversion to losing the home creates an attachment to the place where the home is situated.

Within this theoretical framework, we discuss the roles of key social, physical and economic dimensions that have been highlighted as important factors that create place attachment in the existing literature – family connections, social capital, physical attachment (measured as satisfaction with the built environment) and endowment effects.

Family Relationships and the Role of Connection (Social Dimension)

Even though some young adults move long distances, the literature is filled with a plethora of studies that emphasize family connections as a powerful factor in decisions to move or stay (Hedman, 2013; Hickman, 2010). Families often stay, or move back to, communities where there are extended family linkages. Clark and Lisowski (2017) show that family roots are important factors in place attachment and improvements in life expectancy have emphasized these intergenerational connections, and by extension the role of the local community. There are now many more two and three-generational families, and this has created a context in which being in the same place has benefits for family connections.

The literature takes up the nature of the complex relationship between aging parents and children, and how this affects the former's residential mobility decisions (Clark & Wolf, 1992; De Jong et al., 1995; Hayward, 2016; Sergeant & Ekerdt, 2008; Silverstein, 1995). Studies point to motivations based on both altruism and reciprocity, with adult children contributing to caregiving and help for aging parents, especially when the latter become widowed (Ha et al., 2006), while aging parents are an important source of childcare for their grandchildren (Di Gessa et al., 2016). The research has also found strong interdependence in flows of time and money support between parents and their adult children (Silverstein & Giarrusso, 2010). In the United States, this pattern – known as time-for-money exchange – has held up well across several investigations (Silverstein & Parker, 2002).

Several studies have also highlighted the importance of spatial association in enabling aging in place. The very role of caregiving, doing household chores, preparing meals, shopping, providing companionship, checking up regularly, arranging and supervising activities, and accessing outside services is much easier if adult children are living near their aging parents. Painter and Lee (2009) and Lee and Painter (2014) found clear evidence that older parents are more likely to remain in their home if their children lived in the same state. Similarly, Mulder and Vandermeer (2009) showed that there is a strong impact of distance on support exchange. The likelihood of receiving support from family members living 40 km or more away is estimated to be much less than from those living within about 5 km.

Social Capital within Neighborhoods (Social Dimension)

We focus on social capital as an important measure of what individuals gain from their interactions with each other, and how they perceive interaction in the neighborhood. Because social capital is realized when people interact, social capital tends to have an individual focus, although the tendency is also to acknowledge the wider social setting affecting the nature and quality of interactions. Social cohesion examines the same issues but from a community or societal perspective. That said, social cohesion and social capital are often used synonymously, though in fact, there are subtle differences in their connotations (Kawachi et al., 1997). The original ideas in social capital as outlined by Coleman (1988) did emphasize interaction, but it was initially seen as a community level construct which allowed citizens to resolve collective problems, provided a context in which repeated interactions make social transactions less costly, and improved overall well-being by widening the awareness of the ways in which our lives are linked (Putnam, 1995). For some, social capital and social networks are dimensions of social cohesion. As suggested above, there is a tendency to view social capital as focusing on the individual and social cohesion focusing on the community level. At the community level, social cohesion is about volunteering and participation, networking, and involvement. At the individual level, personal interaction, helping one another, and doing things together are the individual elements of social cohesion.

Although we can focus on social capital as an individual level dimension, and social cohesion as a community level dimension, to reiterate a comment earlier, the distinctions shade into one another, and the terms are frequently used interchangeably (Kawachi, et al., 1997). Because interactions are central in forming social capital and social cohesion, neighborhoods take on an important role, because it is in these smaller spaces that neighborhood social capital as capital obtained through support from indirect ties and group membership, and defined neighborhood social cohesion as interdependencies among neighbors. Still, the measurements in that paper, and in other papers, include a wide range of individual measures which capture not just socializing but notions of trust and belonging. Nonetheless, both express the ideas of shared values and expectations among neighbors.

There is also an extensive literature on social networks, both in general and from the perspective of the elderly (see for instance, De Donder et al., 2012), and there is substantial evidence to use measures of social networks to explain agingin-place preferences (see for instance, Tang & Lee, 2011). Ajrouch et al. (2001) defined a social network in terms of a structure of individuals with a specified relationship, frequency of contact and geographic proximity to a focal person. It is commonly treated as a form of social capital, as it influences the exchange of support over the life course (Coleman, 1988). From the perspective of this study, we are capturing links which matter to people in the neighborhood and who are more likely to want to stay because of these links.

Endowment Effects (Economic Dimension)

A third dimension of interpreting place attachment as a driver of aging in place is the way in which attachment to one's owned home plays a role in the decision to move or stay. What is known about residential mobility is that people do not generally undertake a change of residence without thought and planning, especially owners who hold their home as an economic asset. This endowment effect is fundamental in creating an aversion to loss, as households become accustomed to their possession and are unwilling to lose it for just its exchange value in the market (Kahneman & Tversky, 1979). The current dwelling becomes a reference point against which to evaluate alternatives and strongly biases choices in favour of the reference situation, which in our case is staying put (Clark & Lisowski, 2017).

While endowment effects are typically applicable to assets that are owned, consumer psychology studies have referred to the phenomenon of psychological ownership, where individuals demonstrate an attachment to assets they do not legally own (Morewedge, 2021). In the case of one's place of residence, Bagga et al. (2019) argued that while the endowment effect in rented properties is lower than in owned properties, it is still higher than for a borrowed property that requires negligible investment¹. Clark and Lisowski (2017, p. 2) posits that both owners and renters accumulate a 'store of locational advantages and disadvantages' which increases as the duration of residence at the same place increases. This store – which increases with time – forms an endowment which would be lost by a residential move out of the area, and which may not be offset fully by the endowment offered by a new location.

Satisfaction with the Home and Neighborhood (Physical Dimension)

Golant (2019) posits that the built environments of older people's communities and the ways older people access their environments can strongly influence their ability to age in place successefully. Other studies have also found that both housing satisfaction and neighborhood satisfaction are directly linked to subjective well-being (Mouratidis, 2020). With respect to the neighborhood itself, Ma et al. (2018) showed that satisfaction with key neighborhood characteristics including safety, the physical environment, and travel conveniences were all important in life satisfaction in a study of neighborhoods in Beijing. Satisfaction with the home and neighborhood appear to be strong contexts for the mobility decisions of those who intend to stay – reiterating their role in place attachment (Clark & Lisowski, 2017).

Key Hypotheses and Contributions

Against the backdrop of the existing literature, we test three hypotheses in our study.

First, we hypothesize that the social, economic and physical dimensions of place attachment have varying degrees of impact on older adults' preferences to age in place. The preceding literature review shows that there already exists research on different place attachment dimensions. However, we argue that there is a need to consider the *relative* importance of these elements within the aging-in-place paradigm. By exploring the complex roles of various place attachment dimensions comprising family, social, economic, and physical spheres, we provide an enriched conceptual structure that sheds light on the varying degrees of importance of each dimension.

Second, we hypothesize that there is a discrepancy between the mobility preferences of older people (as expressed by a strong desire to age in place) and their actual mobility behaviour. It turns out that not all staying is voluntary, and while it may be a widely expressed preference of older adults, it is not attainable by all (Strohschein, 2012; Woodhead et al., 2015). On the other hand, some older individuals who prefer to move may abandon their mobility desires over time, resulting in them being 'stuck in place' rather than aging in place (Coulter, 2013; Erickson et al., 2011). To investigate disruptions to mobility preferences, we compare older adults' expressed preferences for aging in place with their actual residential mobility decision one year later. We are especially interested in 'disruptors' to mobility preferences, i.e., what factors disrupt preferences to age in place by forcing a decision to move one year later, and what factors disrupt preferences to move by forcing a decision to stay one year later? Understanding these disruptors can offer useful insights for policies seeking to assist older people to live in their preferred areas in later life. This is important because the impacts of home and place for personal well-being are greater in later life, when an individuals' sensitivity or vulnerability to their environment is amplified (Wahl, 2017).

Third, we posit that the place attachment dimensions influencing aging-in-place preferences of older owners differ from renters. Clark et al. (2017) suggests that people will feel more attached to their area if they are homeowners; however, the moderating influence of homeownership is not explicitly tested. The issue is relevant because in mortgage-backed homeownership systems such as Australia and the United States, mortgage debt among the older population is on the rise (Smith et al., 2022). Furthermore, while the majority of older populations in Anglo-Saxon countries and many European countries are homeowners, there is a growing literature documenting loss of homeownership in later life (Colic-Peisker et al., 2015; Ong et al., 2015) and the tenure insecurity concerns of older renters (Bates et al., 2019; Wood & Ong, 2017).

Research Design

Data, Sample and Measurement

We draw on the 2001–2021 Household, Income and Labour Dynamics in Australia (HILDA) Survey, a nationally representative panel study. In the initial 2001 wave, interviews were conducted on over 7600 households comprising about 14,000 fully responding adults. In each subsequent wave, existing and

new adult members of participant households completed annual interviews and self-completion questionnaires on a rich variety of subjects. Participants that leave an original HILDA household continue to be tracked at their new household, and other members of that new household become participants in the survey. Additionally, a top-up sample was added to the survey in wave 11 (2011).

The HILDA survey design is closely based on the design of other long-running panel datasets such as the British Household Panel Survey (BHPS) and German Socio-Economic Panel (GSOEP). Its wave-by-wave re-interview rates have been rising steadily, hitting over 96% from wave 9 onwards (Watson & Wooden, 2020). It is ranked second after the Panel Survey of Income Dynamics in sample retention performance among seven panel surveys assessed in Watson et al. (2019).²

In the present study, we define older Australians as respondents aged 55 years and over in each year of the survey. The youngest of baby boomers born during 1946–1965 turned 55 years in the second last year of our study timeframe (2020). Thus, the study captures respondents representing the baby boomer generation as well as the generation born prior to 1946. On pooling all 21 waves together, our modelling sample consists of 63,847 person-year observations of older respondents.

The key response concerns preference to age in place. The HILDA Survey contains a question reflecting the World Health Organization's definition of aging in place. The question asks all respondents living in private dwellings the following: 'Now think about the local area in which you live. How strong is your preference to continue living in this area?.' Respondents are asked to choose from five preferences on an ordinal scale indicating a: 'Strong preference to leave', 'Moderate preference to leave', 'Unsure/no preference to stay' and 'Strong preference to stay'. The stronger the preference to remain in the local area, the greater the preference to age in place.

Family connections are proxied by the physical distance of older persons to the residence of their closest child, which can be a non-resident child living independently, or a resident child the older person resides with. Studies such as Mulder and Malmberg (2014) and Clark et al. (2017) suggest that when family members live close by, attachment to place is inter-twined with attachment to family, lowering the chances of moving out of the area. However, distance does not necessarily represent the degree of emotional family attachment. Hence, we include a variable representing the level of satisfaction the older person has in regard to relationship with one's children. The satisfaction responses are rated on an ordinal scale of one-unit increments between 0 representing totally dissatisfied and 10 representing totally satisfied.

Social capital measures are drawn from questions asking about interactions with people in the neighborhood. We draw our measures of social capital from existing work such as Clark et al. (2017), Paldam (2000) and Lochner et al. (1999) which highlight measures reflecting interpersonal trust and reciprocity as important social capital measures. Thus, we include variables representing the frequency of neighbors doing things together, neighbors helping one another, or conversely, the incidence of hostile and aggressive neighbors. The response options range from 'never happens' to 'very common'. These neighborhood variables are available in every wave from waves 1 to 4, but then every alternative wave afterwards. To avoid losing an excessive number of cases, we impute missing values for neighborhood variables, considering whether an older person has moved neighborhoods between adjacent waves as a move changes the set of neighbors (and therefore social capital experience) that a person faces.³ Furthermore, we adopt a broader social network variable that refers to the frequency of face-to-face contact that one has with one's circle of friends and relatives.

In relation to the economic dimension, the literature on endowment effects and residential mobility note that the former can be captured through a mix of variables representing owner-occupation status and duration at one's current residence (Clark et al., 2023; Clark & Lisowski, 2017), which we include in our model. However, we extend existing work by including a series of detailed housing tenure binary indicators that capture more nuance than the traditional own-rent binary divide. Specifically, the housing tenure variables capture tenure security, with outright owners, mortgagors and social renters enjoying greater tenure security (akin to psychological ownership) than private renters and those living rent-free. We further posit that for owners, the endowment effect increases as the equity in the owned home rises, reflecting the greater endowment effect of asset ownership. Home equity is measured as the net of the respondents perceived home value and their reported mortgage debt. We distinguish between those possessing low, middle and high levels of home equity by ranking all homeowner households in HILDA each wave by their home equity, and dividing into tertiles. Individual members of our modelling sample are then allocated their corresponding household equity tertile within each wave.

Our final measure of note concerns the physical dimension, which is proxied by satisfaction with one's home and neighborhood. The satisfaction responses are rated on an ordinal scale of one-unit increments between 0 (totally dissatisfied) and 10 (totally satisfied). We draw on Hidalgo and Hernández's (2001) environmental psychology study on place attachment, which recognise that satisfaction is a measure of connectedness to place.

We draw on the existing literature to specify a series of standard controls that impact upon the mobility outcomes of older persons. Demographic controls include age, gender, country of birth and marital status; socio-economic controls include educational attainment, employment status and equivalized household income; geographical controls comprise residence in a major city and the socio-economic status of the neighborhood in which one resides; health covariates measure mental health, the presence of a long-term disability, and physical functioning status. We include the ratio of bedrooms to persons in the dwelling as a measure of dwelling space utilization. All model specifications include state and time fixed effects.

Supplemental material table S1 documents the extent to which each variable is affected by missing values in the analysis. Reassuringly, the majority of variables only suffer from missing values in 1% of cases, though a minority of variables are affected by missing values in up to 10% of cases. None of the variables included in the analysis are affected by missing values in excess of 10% of cases.

Analytic Strategy – Models of Preference to Age in Place and Disruption to Preferences

Exploiting the longitudinal nature of the data, we estimate a series of random-effects panel-data models.⁴ We begin by estimating a random-effects ordered logistic regression predicting preference to age in place on the full sample of older persons. The preference variable is ordered so that 1 represents a strong preference to leave the local area and 5 represents a strong preference to stay in the local area. If a predictor's odds ratio is greater (less) than 1, it indicates that the predictor is linked to a stronger (weaker) preference to age in place.

Because we are also interested in exploring the link between homeownership status and aging-in-place preferences, the model on the full sample is re-run with a series of interactions between the place attachment predictors and a dummy that equals to 1 if the observation belongs to a homeowner, and 0 if the observation relates to a non-owner. The un-interacted place attachment predictors reflect the links between place attachment and non-owners' aging in place preferences. The sum of the un-interacted and interacted predictors reflect the links between place attachment and owners' aging in place preferences. Wald tests are applied to test the joint significance of the sum of the un-interacted and interacted predictors to detect whether each place attachment predictor is significant for owners.

We then estimate two models of disruptions to aging-inplace preferences. One model is based on a subset of older persons who indicated a moderate-to-strong preference to continue living in the local area in wave t, but who had moved out of the local area by the following wave t+1. Another model is based on a subset of older persons who indicated a moderate-to-strong preference to leave the local area in wave t, but who were still living in the same local area in wave t+1.

The disruption models require additional considerations over the preference to age in place model. First, they necessitate the inclusion of additional covariates that capture significant life events that have occurred between wave t and t+1, and that may spur a disruption of preferences. Second, while the HILDA Survey's question about preferences to continue living in the local area simply capture preferences to "continue living in this area", we must also define an actual move out of the local area. For mobility decisions, our spatial unit representing one's local area is the Statistical Area level 2 (SA2) (ABS, 2023). Each SA2 represents a community that is socially and economically connected, and usually comprises a limited number of suburbs or rural localities. For our purposes, a neighborhood move occurs if the person changes SA2 between wave *t* and t + 1.

Results

Statistical Links Between Place Dimensions and Aging-in-Place Preferences

As reported in Table 1, our initial descriptive findings further establish a prevalence of preferences to age in place. Even without controls, we find that the majority (67%) of our sample have a strong preference to continue living in their local area, with the shares declining steadily to 19% reporting a moderate preference to stay, 8% unsure or indifferent, and 4% and 2% reporting moderate and strong preferences to leave respectively.

We also find clear statistical links between all place attachment dimensions and aging-in-place preferences. Having strong connections with family are positively linked to a preference to age in place. For instance, 44% of those with a strong preference to stay have a closest child who is non-resident and living less than 20 km away, while only 27% of those with a strong preference to leave share a similar experience. Similarly, nearly 60% of the former are highly satisfied with their relationship with their children, as opposed to 43% of the latter. Preference to stay is positively correlated with strong social capital in the form of frequent occurrences of neighbors doing things together, neighbors helping each other, and social contact, and negatively associated with frequent hostile or aggressive neighbors. Endowment effects are linked to a strong preference to stay, as evidenced by higher shares of homeownership, higher mean housing equity, and longer duration at one's current address among those with a strong preference to stay. There is also a positive association between preference to age in place and satisfaction with one's neighborhood or home.

What are the Key Place Attachment Predictors of Older Adults' Preferences to Age in Place?

The statistical links reported in Table 1 may reflect confounding influences, so we implement panel-data modelling to isolate the impact that each place attachment variable has on aging-in-place preferences. The model odds ratios also shed light on the magnitude of impact that each place attachment dimension has on the preference to age in place. Table 2 presents the odds ratios for all older persons without interacted predictors. While not reported in the table, the model predictors include the full range of model covariates listed in supplemental material table S2 and the coefficients for all predictors are available in supplemental material table S3.

The model reconfirms the clear associations between the place attachment dimensions and aging-in-place preference highlighted in the previous table. Relative to those without children, the odds of reporting a higher ranking of preference to stay rises by 42% if the older person has a child living close by within 5 km. After controlling for distance to children, the preference to stay is depressed if satisfaction with children declines from being totally satisfied to a lower score range, though this is only mildly significant.

Social capital also exerts a strong effect on preference to stay or leave. For instance, when one has neighbors who do things together or help out frequently, the odds of preferring to stay more than doubles. Frequent encounters with hostile or aggressive neighbors, on the other hand, reduces the odds of preferring to stay by two-thirds. Additionally, a lack of face-to-face social contact reduces the odds of preferring to stay.

Endowment effects are reflected through the housing tenure, home equity and duration variables. The results show that outright owners, mortgagors and social housing tenants are significantly more likely to prefer to age in place relative to a private renter. The tenure security provided by social housing is a particularly strong influence on preference to stay, with the odds of reporting a higher preference-to-stay score rising by 61% relative to private renting despite social housing tenants not owning the housing that they live in. Importantly, among owners, we show that those in the middle and high home equity tertiles are more likely to prefer to age in place than those having low equity, suggesting that asset ownership is an important contributor to the endowment effect. On the other hand, the odds of preferring to stay is reduced as duration at one's place of residence lengthens.

As expected, physical dimensions are important. Our model shows that an increase in home and neighborhood satisfaction score of one point raises the odds of preferring to stay by one-third.

Does Place Attachment Affect Older Homeowners' Preferences to Age in Place Differently from Non-Owners?

Table 3 presents a model that interacts the place attachment predictors by a homeownership dummy. The odds ratios derived from the un-interacted coefficients show the links between place attachment and non-owners' aging-in-place preferences. The odds ratios derived from the sum of the un-interacted and interacted coefficients show the links between place attachment and owners' aging-in-place preferences. The model highlights two key differences between nonowners and owners.

Firstly, the presence of resident children, distance to nonresident children and satisfaction with children do not influence non-owners' preferences to age in place. However, these

| | leave | leave | preference | stay | stay |
|---|---------|---------|------------|---------|---------|
| N person-year observations | 1106 | 2411 | 5,505 | 12,257 | 43,847 |
| Percentage of total person-year observations | 2% | 4% | 8% | %6 I | 67% |
| Objective family relationships | | | | | |
| Is childless | 11.6% | 11.8% | 11.3% | 11.4% | 9.7% |
| Closest child resides with parent | 19.3% | 18.9% | 19.6% | 20.2% | 17.8% |
| Closest child is non-resident and lives <20 km away | 27.1% | 33.0% | 37.2% | 38.2% | 43.9% |
| Subjective family relationships | | | | | |
| Highly satisfied with relationship with children ^a | 43.3% | 44.7% | 46.0% | 47.3% | 59.4% |
| Mean satisfaction with children (/10) | 7.8 | 8.0 | 8. I | 8.3 | 8.7 |
| Social capital (occurrence fairly or very common) | | | | | |
| Neighbors do things together | 18.9% | 23.3% | 21.6% | 28.9% | 41.4% |
| Neighbors help each other | 40.8% | 50.8% | 46.1% | 60.3% | 73.3% |
| Neighbors are hostile or aggressive | 19.3% | 10.0% | 7.4% | 4.4% | 1.9% |
| Face-to-face social contact with friends/relatives at | 40.6% | 48.7% | 47.1% | 53.5% | 60.3% |
| least once a week | | | | | |
| Endowment effects | | | | | |
| Time at current address 10+ years | 52.3% | 56.7% | 53.8% | 60.9% | 63.1% |
| Homeowner | 72.7% | 82.2% | 78.9% | 85.0% | 87.5% |
| Real home equity (\$'000) (owners only) ^b | \$587.5 | \$590.9 | \$542.4 | \$670.3 | \$722.7 |
| Satisfaction with the home and neighborhood | | | | | |
| Mean satisfaction with place (/10) | 6.0 | 6.9 | 7.3 | 7.8 | 8.6 |
| Mean satisfaction with home (/10) | 6.6 | 7.3 | 7.7 | 8.0 | 8.8 |
| Mean bedrooms per person | 1.7 | 1.7 | 1.7 | I.8 | 8.I |

Table 1. Dimensions of Place Attachment, Per Cent of Each Aging-In-Place Preference Group Unless Otherwise Stated.

Notes: Summary statistics for other model covariates are reported within supplemental material table S1. For each variable, tests of equality between samples are rejected at the .1% level (p < .001 via Pearson's χ^2 tests for the categorical variables, and linear regression main effects tests for the continuous variables). ^aRated satisfaction with children a 9 or 10, on an ordinal scale in which 0 represented total dissatisfaction and 10 represented total satisfaction.

| | Odds ratio (SE) |
|--|-----------------|
| Distance to closest non-resident child | |
| No children | 1.000 (.000) |
| Resident child 0 km | 1.235 (.147) |
| <5 km | 1.418 (.170) |
| 5–19 km | 1.108 (.130) |
| 20–99 km | .931 (.114) |
| 100+ km or overseas | .819 (.102) |
| atisfaction - relationship with children | |
| No children | 1.000 (.000) |
| 9–10 (10 represents total satisfaction) | 1.000 (.000) |
| 7–8 | .925 (.031) |
| 5–6 | .892 (.052) |
| 0–4 (0 represents total dissatisfaction) | .907 (.074) |
| leighbors do things together | |
| Never happens | 1.000 (.000) |
| Very rare | 1.379 (.087) |
| Not common | 1.527 (.104) |
| Fairly or very common | 2.113 (.165) |
| leighbors help each other | |
| Never or very rarely happens | 1.000 (.000) |
| Not common | 1.025 (.060) |
| Fairly common | 1.553 (.099) |
| Very common | 2.403 (.190) |
| leighbors are hostile or aggressive | |
| Never happens | 1.000 (.000) |
| Very rare | .733 (.032) |
| Not common | .561 (.029) |
| Fairly or very common | .343 (.034) |
| ace-to-face contact with friends/relatives | |
| At least once a week | 1.000 (.000) |
| Rarer than once a week | .862 (.025) |
| ïme at current address | |
| <5 y | 1.000 (.000) |
| 5–9 y | .823 (.043) |
| 10+ y | .718 (.046) |
| lousing tenure ^b | |
| Private renter | 1.000 (.000) |
| Social renter | 1.605 (.274) |
| Rent free/Life tenure | 1.284 (.181) |
| Mortgagor - low home equity | 1.326 (.141) |
| Mortgagor - mid home equity | 1.469 (.155) |
| Mortgagor - high home equity | 1.784 (.204) |
| Outright owner - low home equity | 1.269 (.142) |
| Outright owner - mid home equity | 1.599 (.153) |
| Outright owner - high home equity | I.566 (.153) |
| ate repayment of mortgage or rent | .911 (.074) |
| atisfaction - place | 1.360 (.016) |
| atisfaction - home | I.374 (.016) |
| edrooms per person in dwelling | .964 (.036) |
| lobservations | 63,847 |
| J individuals | 9209 |
| 1cfadden Pseudo-R2 | .069 |
| Wald (Chi2) | 3695.2*** |

| Table 2. Random-Effects Ordered Logistic Regression Predicting | Preference to Stay in Area, all Older Persons (Covariates Hidden) ^a . |
|--|--|
|--|--|

Source: Authors own calculations using waves 1 to 21 of the HILDA survey.

Notes: ***p < .001, **p < .01, *p < .05. Standard errors in parentheses and robust to individual clusters.

^aWhile not reported in the table, the model predictors include the full range of model covariates listed in supplemental material table S1. Refer to supplemental material table S2 for the complete model results.

^bLevels of home equity are determined by ranking all homeowner households in HILDA each wave by their home equity and dividing into tertiles. Individual members of our modelling sample are then allocated their corresponding household equity tertile within each wave.

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| | Separate main interaction e | | Combined main & interaction | |
|---|--------------------------------|-------------|-----------------------------|-------|
| | Odds ratio (SE | E) | Odds ratio | (SE) |
| Main effects [effect for non-owners] | | | | |
| Distance to closest non-resident child | | | | |
| No children | 1.000 (.000) | | 1.000 (.000) | |
| Resident child 0 km | .976 (.235) | | 1.308 (.174) | * |
| <5 km | 1.124 (.268) | | 1.475 (.197) | ** |
| 5–19 km | .890 (.204) | | 1.156 (.151) | |
| 20–99 km | .813 (.208) | | .953 (.128) | |
| 100+ km or overseas | .875 (.223) | | .816 (.111) | |
| Satisfaction - relationship with children | | | | |
| No children | 1.000 (.000) | | 1.000 (.000) | |
| 9–10 (10 represents total satisfaction) | 1.000 (.000) | | 1.000 (.000) | |
| 7–8 | 1.027 (.097) | | .906 (.033) | ** |
| 5–6 | .945 (.127) | | .885 (.056) | |
| 0–4 (0 represents total dissatisfaction) | 1.190 (.222) | | .827 (.076) | * |
| Neighbors do things together | | | | |
| Never happens | 1.000 (.000) | | 1.000 (.000) | |
| Very rare | 1.275 (.173) | | 1.406 (.098) | **** |
| Not common | 1.357 (.206) | * | 1.576 (.118) | **** |
| Fairly or very common | 2.062 (.356) | *** | 2.144 (.183) | *** |
| Neighbors help each other | | | | |
| Never or very rarely happens | 1.000 (.000) | | 1.000 (.000) | |
| Not common | 1.010 (.134) | | 1.014 (.066) | |
| Fairly common | 1.973 (.280) | *** | 1.462 (.103) | *** |
| Very common | 3.188 (.624) | *** | 2.251 (.193) | *** |
| Neighbors are hostile or aggressive | | | | |
| Never happens | 1.000 (.000) | alalak | 1.000 (.000) | *** |
| Very rare | .658 (.078) | **** *** | .746 (.034) | *** |
| Not common | .456 (.059) | *** | .590 (.033) | *** |
| Fairly or very common | .294 (.059) | Joiok | .345 (.038) | 10101 |
| Face-to-face contact with friends/relatives | | | | |
| At least once a week Rarer than once a week | 1.000 (.000) | *** | 1.000 (.000) | *** |
| Time at current address | .723 (.056) | | .890 (.027) | |
| | 1.000 (.000) | | 1.000 (.000) | |
| <5 y 5–9 y | 1.346 (.145) | ** | .707 (.042) | *** |
| 10+ y | 1.745 (.243) | *** | .598 (.041) | *** |
| Late repayment of mortgage or rent | 1.75 (.25) | | .578 (140.) | |
| No | 1.000 (.000) | | 1.000 (.000) | |
| Yes | .771 (.111) | | .967 (.093) | |
| Satisfaction – Place | 1.303 (.033) | *** | 1.377 (.018) | *** |
| Satisfaction – Home | 1.336 (.032) | *** | 1.388 (.018) | *** |
| Bedrooms per person in dwelling | .985 (.069) | | .973 (.042) | |
| Interaction effects [additional effect for owners] | | | | |
| Homeowner status | | | | |
| Non-owner | 1.000 (.000) | | | |
| Owner | .253 (.137) | * | | |
| Distance to closest non-resident child # homeowner status | | | | |
| Resident child 0 km & owner | 1.341 (.356) | | | |
| <5 km & owner | 1.313 (.346) | | | |

 Table 3.
 Random-Effects Ordered Logistic Regression Predicting Preference to Stay in Area, all Predictors Interacted With Homeowner Status, all Older Persons.

Table 3. (continued)

| | Separate main effect & interaction effect | Combined main effect & interaction effect ^a |
|--|--|---|
| | Odds ratio (SE) | Odds ratio (SE) |
| 5–19 km & owner | 1.299 (.328) | |
| 20–99 km & owner | 1.173 (.327) | |
| 100+ km or overseas & owner | .932 (.258) | |
| Satisfaction - relationship with children # homeowner status | | |
| 9–10 (10 represents total satisfaction) & owner | 1.000 (.000) | |
| 7–8 & owner | .883 (.090) | |
| 5–6 & owner | .937 (.139) | |
| 0–4 (0 represents total dissatisfaction) & owner | .695 (.147) | |
| Neighbors do things together # homeowner status | | |
| Very rare & owner | 1.103 (.166) | |
| Not common & owner | 1.162 (.194) | |
| Fairly or very common & owner | 1.040 (.197) | |
| Neighbors help each other # homeowner status | | |
| Not common & owner | 1.004 (.147) | |
| Fairly common & owner | .741 (.116) | |
| Very common & owner | .706 (.149) | |
| , Neighbors are hostile or aggressive # homeowner status | | |
| Very rare & owner | 1.135 (.142) | |
| Not common & owner | 1.296 (.181) | |
| Fairly or very common & owner | 1.175 (.265) | |
| Face-to-face contact with friends/relatives # homeowner status | | |
| Rarer than once a week & owner | 1.231 (.102) * | |
| Time at current address # homeowner status | | |
| 5–9 y & owner | .526 (.064) *** | |
| 10+ y & owner | .343 (.052) *** | |
| Late repayment of mortgage or rent # homeowner status | | |
| Yes & owner | 1.256 (.216) | |
| Satisfaction – Place # homeowner status | 1.057 (.030) | |
| Satisfaction – Home # homeowner status | 1.040 (.028) | |
| Bedrooms per person in dwelling # homeowner status | .989 (.080) | |
| N observations | 63,847 | |
| N individuals | 9209 | |
| Mcfadden Pseudo-R2 | .071 | |
| Wald (Chi2) | 3935.6*** | |

Source: Authors own calculations using waves I to 21 of the HILDA survey.

Notes: ***p < .001, **p < .01, *p < .05. Standard errors in parentheses and robust to individual clusters. While not reported in the table, the model predictors include the main and interaction effects of the full range of model covariates listed in supplemental material table S1.

^aIn this column, the significance stars reject the null hypothesis that the sum of coefficients for the main and interaction effect of a variable is equal to zero.

family connections are important to homeowners, whose odds of preferring to age in place are raised by 31% and 48% when resident children are present and when children live less than 5 km away respectively. The findings may reflect the fact that the homeowning elderly parent is better positioned to transfer wealth to adult children than renting parents. Hence, the parent-donor is more likely to expect their children-recipients to provide care for them in exchange for the wealth transfer. The fact that donors often do not have pure altruistic movies is well-established in the literature on intergenerational reciprocity (see Cox & Rank, 1992; Laferrère, 1999; Zhang & Bian, 2021). This may translate into older homeowners exhibiting a stronger preference to live near their children. On the other hand, a more altruistic perspective can be derived from Steele et al. (2022). The study finds that homeowning parents are more likely than renters to give both financial and practical support to their adult children. However, the study found that this provision of support can be hampered if parents and adult children do not live in close proximity. Therefore, we infer that the stronger desire or capacity of homeowning parents to give support to their adult children can result in a stronger expressed desire to live near their children than

| | Odds ratio (SE) | |
|--|---------------------------------------|-----|
| Separated from spouse (t to t + 1) | 4.324 (.710) | *** |
| Death spouse/child or close family (t to $t + 1$) | 1.038 (.095) | |
| Major health - family (t to t + 1) | .922 (.077) | |
| Major health - personal (t to t + 1) | .947 (.091) | |
| Major improvement in finances (t to t + 1) | 1.975 (.272) | *** |
| Major worsening in finances (t to t + 1) | .886 (.189) | |
| Changed job, fired, or made redundant (t to t + 1) | 1.744 (.223) | *** |
| Retired (t to $t + 1$) | 1.615 (.184) | *** |
| Victim of physical or property crime (t to $t + 1$) | 1.140 (.199) | |
| Distance to closest non-resident child | | |
| No children | 1.000 (.000) | |
| Resident child 0 km | 1.030 (.157) | |
| <5 km | 1.253 (.183) | |
| 5–19 km | 1.283 (.186) | |
| 20–99 km | 1.607 (.241) | ** |
| 100+ km or overseas | 2.015 (.290) | *** |
| Satisfaction - relationship with children | · · · · · · · · · · · · · · · · · · · | |
| No children | 1.000 (.000) | |
| 9–10 (10 represents total satisfaction) | I.000 (.000) | |
| 7–8 | .939 (.070) | |
| 5–6 | .784 (.107) | |
| 0–4 (0 represents total dissatisfaction) | .969 (.170) | |
| Neighbors do things together | (), | |
| Never happens | 1.000 (.000) | |
| Very rare | .795 (.096) | |
| , Not common | .775 (.094) | * |
| Fairly or very common | .683 (.090) | ** |
| Neighbors help each other | · · · · · · · · · · · · · · · · · · · | |
| Never or very rarely happens | 1.000 (.000) | |
| Not common | 1.077 (.135) | |
| Fairly common | 1.138 (.141) | |
| Very common | 1.418 (.196) | * |
| Neighbors are hostile or aggressive | | |
| Never happens | 1.000 (.000) | |
| Very rare | .893 (.064) | |
| Not common | .932 (.084) | |
| Fairly or very common | .903 (.183) | |
| Face-to-face contact with friends/relatives | | |
| At least once a week | 1.000 (.000) | |
| Rarer than once a week | 1.234 (.077) | *** |
| Time at current address | | |
| <5 y | 1.000 (.000) | |
| 5–9 у | .787 (.071) | ** |
| 10+ y | .590 (.047) | *** |
| Housing tenure | | |
| Private renter | 1.000 (.000) | |
| Social renter | .212 (.059) | *** |
| Rent free/Life tenure | .426 (.078) | *** |
| Mortgagor - low home equity | .408 (.056) | *** |
| Mortgagor - mid home equity | .329 (.048) | *** |
| Mortgagor - high home equity | .305 (.049) | *** |

Table 4. Random-Effects Logistic Regression Estimating Disruption Amongst Those With a Preference to Stay (Preferred to Stay at t but Moved by t+1), all Older Persons.

П

(continued)

Table 4. (continued)

| | Odds ratio (SE) |) |
|------------------------------------|-----------------|------|
| Outright owner - low home equity | .276 (.047) | *** |
| Outright owner - mid home equity | .282 (.031) | *** |
| Outright owner - high home equity | .265 (.030) | *** |
| Late repayment of mortgage or rent | | |
| No | 1.000 (.000) | |
| Yes | 1.003 (.157) | |
| Satisfaction - place | .955 (.027) | |
| Satisfaction - home | .855 (.020) | **** |
| Bedrooms per person in dwelling | 1.120 (.056) | * |
| N observations | 46,798 | |
| N individuals | 7768 | |
| Mcfadden Pseudo-R2 | .081 | |
| Wald (Chi2) | 1058.9*** | |

Source: Authors own calculations using waves 1 to 21 of the HILDA survey. Notes: ***p < .001, *p < .01, *p < .05. Standard errors in parentheses and robust to individual clusters. While not reported in the table, the model predictors include the full range of model covariates listed in supplemental material table SI.

| Table 5. Random-Effects Logistic Regression Estimating Disruption Amongst Those With a Preference to Move (Preferred to Move at t but |
|---|
| Stayed Between t and $t + 1$, all Older Persons. |

| | Odds ratio (SE) |
|--|-----------------|
| Separated from spouse (t to t + 1) | .307 (.133) ** |
| Death spouse/child or close family (t to $t + 1$) | 1.250 (.234) |
| Major health - family (t to t + 1) | .969 (.159) |
| Major health - personal (t to t + 1) | 1.151 (.214) |
| Major improvement in finances (t to $t + 1$) | .589 (.157) * |
| Major worsening in finances (t to $t + 1$) | 1.798 (.572) |
| Changed job, fired, or made redundant (t to t + 1) | .453 (.112) ** |
| Retired (t to $t + 1$) | .318 (.067) *** |
| Victim of physical or property crime (t to $t + I$) | 1.295 (.429) |
| Distance to closest non-resident child | |
| No children | 1.000 (.000) |
| Resident child 0 km | .803 (.259) |
| <5 km | .802 (.262) |
| 5–19 km | .597 (.193) |
| 20–99 km | .575 (.182) |
| 100+ km or overseas | .499 (.149) * |
| Satisfaction - relationship with children | |
| No children | 1.000 (.000) |
| 9–10 (10 represents total satisfaction) | 1.000 (.000) |
| 7–8 | .998 (.152) |
| 5–6 | 1.028 (.220) |
| 0–4 (0 represents total dissatisfaction) | .990 (.272) |
| Neighbors do things together | |
| Never happens | 1.000 (.000) |
| Very rare | .872 (.167) |
| Not common | 1.048 (.218) |
| Fairly or very common | .720 (.179) |
| Neighbors help each other | |
| Never or very rarely happens | 1.000 (.000) |
| Not common | 1.350 (.252) |

(continued)

Table 5. (continued)

| | Odds ratio (SE) |
|---|------------------|
| Fairly common | 1.403 (.275) |
| Very common | I.776 (.490) * |
| Neighbors are hostile or aggressive | |
| Never happens | 1.000 (.000) |
| Very rare | 1.131 (.184) |
| Not common | .925 (.161) |
| Fairly or very common | 1.223 (.306) |
| Face-to-face contact with friends/relatives | |
| At least once a week | 1.000 (.000) |
| Rarer than once a week | 1.212 (.156) |
| Time at current address | |
| <5 y | 1.000 (.000) |
| 5–9 y | 1.122 (.204) |
| 10+ y | 1.863 (.316) *** |
| Housing tenure | |
| Private renter | 1.000 (.000) |
| Social renter | 3.959 (1.812) ** |
| Rent free/Life tenure | 1.809 (.692) |
| Mortgagor - low home equity | 2.293 (.665) *** |
| Mortgagor - mid home equity | 2.405 (.729) ** |
| Mortgagor - high home equity | 3.194 (1.142) ** |
| Outright owner - low home equity | 1.605 (.492) |
| Outright owner - mid home equity | 2.241 (.554) ** |
| Outright owner - high home equity | 1.525 (.391) |
| Late repayment of mortgage or rent | |
| No | 1.000 (.000) |
| Yes | 1.444 (.461) |
| Satisfaction - place | .920 (.033) * |
| Satisfaction - home | 1.043 (.037) |
| Bedrooms per person in dwelling | .828 (.086) |
| N observations | 2927 |
| N individuals | 1339 |
| Mcfadden Pseudo-R2 | .121 |
| Wald (Chi2) | 239.5*** |

Source: Authors own calculations using waves I to 21 of the HILDA survey.

Notes: ***p < .01, **p < .01, *p < .05. Standard errors in parentheses and robust to individual clusters. While not reported in the table, the model predictors include the full range of model covariates listed in supplemental material table S1.

renters. Controlling for distance to children, the negative link between satisfaction with children and the desire to age in place is only observed for owners and not non-owners.

Secondly, a longer duration at one's place of residence increases a non-owner's preference to age in place. In contrast, owners are less likely to desire to age in place as their residence duration lengthens. This likely points to the value that renters place on tenure security. On the other hand, the contrasting patterns for homeowners may reflect the growing physical strain of maintaining one's owned home as one ages. This responsibility tends to fall on property owners, so is less of a burden for renters. Indeed, Ong Vifor et al. (2023) finds that relative to renters, homeowners' satisfaction with their homes peak at age 60 after which it declines as the homeowner ages.

What are the Key Predictors of Disruptions to Aging-in-Place Preferences?

Table 4 reports model findings on disruptions to preference to stay in the local area, i.e., among those with a reported preference to stay at *t* in the local area, we model predictors that cause them to leave the local area by t + 1. We ask two questions. First, to what extent do major life events in the past

year – both positive and negative – disrupt preferences to staying in the local area? Second, to what extent are these disruptions alleviated by place attachment factors?

Among all major life events reported in the table, marital separation exerts the strongest disruptive effect on preference to stay. The odds of moving out of the local area despite reporting a preference to stay in the area quadruples when marital separation takes place. When a major improvement in finances occurs, there is a doubling in the odds of moving out of the local area one year after reporting a preference to stay. Employment disruptions in the form of a change of jobs, being fired, redundancy, and retirement lead to a 60–70% increase in the odds of moving despite reporting a preference to stay in the local area.

Disruptions to preferences to staying in the local area appear to be amplified by a number of place attachment factors. If one's children lives 20 km or further away, the older person is predicted to move despite (presumably to be closer to their children) despite a preference to stay. Disruptions to preferences to age in place are also exacerbated if one has infrequent face-to-face social contact (less than once a week).

The odds ratios attached to housing tenure and home equity are all much lower than 1, indicating that the odds of disruptions are augmented when one is living in the private rental sector, which tends to more insecure than other tenures. However, it is also noteworthy that at each home equity tertile, mortgagors exhibit higher odds of disruptions to aging-in-place preferences than outright owners. The results suggest that the presence of a debt owed against the home may trigger unwanted moves.

What are the Key Predictors of Disruptions to Preferences to Leave the Local Area?

Table 5 investigates factors related to older persons being stuck in place, i.e., those who report a preference to leave the local area at t, but are still living in the same area one year later.

Housing tenure and duration play important roles. While homeowners and social housing tenants enjoy the benefits of tenure security, they are also more likely to become stuck in place. This effect is particularly pronounced for social renters, whose odds of being stuck in place is nearly four times the odds for private renters. The endowment effect captured within home equity increases the risk of being stuck in place for mortgagors, though this is less obvious for outright owners. A longer duration at one's place of residence also increases the chances of being stuck in place.

The results suggest, however, that older persons are prepared to make major changes to their engagement in the workforce via a job change, enduring job loss, or retirement to support their desires to move. Intentions to move are also more likely to be realized if a marital separation ensues.

Discussion and Conclusion

Our paper confirms strong associations between a range of place attachment dimensions and aging-in-place preferences by older persons. Ties to children, strong social capital, homeownership status, and home and neighborhood satisfaction are all positively linked to a stronger preference to age in place.

However, clear distinctions emerge between owners and non-owners in the place attachment dimensions that affect aging-in-place preferences. For owners, closeness to their children are strong predictors of their preference to age in place. On the other hand, for non-owners, endowment effects matters, as reflected by lengthy periods at the current address and enjoyment of tenure security in the social housing sector.

We uncover discrepancies between mobility preferences and behaviors among older persons. As noted by Strohschein (2012), not all adults are able to meet their preference to age in place. We also find that some become stuck in place, abandoning their desires to move (see also Coulter, 2013; Erickson et al., 2011). Our analysis on disruptions presents important findings which will inform policies that seek to support older persons to meet their aging-in-place and mobility preferences.

To provide some context to the remaining policy discussion, we highlight some key features of the Australian housing system. Australia is a 'homeownership society,' where the majority of the population are homeowners. Like many other countries, older Australian owners have made huge windfall gains from the housing market boom of the late 1990s and early 2000s. Older homeowners therefore have significantly more wealth than older renters, and the former benefit greatly from tax settings that preference the ownership of property assets (Ong, 2016; Ong ViforJ, 2023). On the other hand, Australia's private rental sector is lightly regulated relative to many other countries such as Germany and Switzerland, and concerns regarding housing insecurity is pronounced in the Australian private rental sector (Bate, 2021; Hulse & Haffner, 2014).

Against this policy context, it is clear that older homeowners enjoy more protections against disruptions to their preferences to age in place than non-owners. The latter may find that their main protection to aging-in-place disruptions lies in the security of their tenure, as evidenced through the protective effects of social renting and a long duration at one's place of residence. This finding presents a strong case for private rental sector reforms to improve security in the private rental sector in Australia, as has been highlighted by various other studies concerned with the plight of older renters (Bates et al., 2019; Colic-Peisker et al., 2015).

Second, while tenure security appears to mitigate disruptions to aging-in-place preferences, those residing in more secure tenures such as homeownership (especially mortgaging) and social housing are also more prone to being stuck in place. The search and transaction costs associated with moving are typically higher for homeowners than private renters (Caldera-Sánchez & Andrews, 2011). It may be the case that older mortgagors face difficulties securing new mortgage loans upon moving, and the constraint of rising prices can result in a postponed move too. For social renters, the difficulty in securing accommodation in the private rental market will likely discourage moves that would require sacrificing the tenure security offered by social housing. Furthermore, social housing is highly rationed in Australia and applicants are typically subject to long wait lists (Clarke et al., 2020), which can result in involuntary immobility by social housing tenants who wish to move. Reforms to reduce owners' transaction costs of moving, an expansion in the supply of social housing, and policy efforts to improve rental affordability will likely alleviate the odds of being stuck in place in old age.

Finally, the effect of mortgage debt as a trigger for involuntary moves in later life is noteworthy. Our findings suggest that financial products that work through increasing debt (e.g. reverse mortgages) may be counter-productive as the presence of mortgage debt in old age increases the likelihood of being exposed to involuntary moves among those who prefer to age in place. Importantly, countries such as Australia and the United States have witnessed a steady rise in the share of older homeowners holding mortgage debt (Smith et al., 2022), with documented adverse impacts on well-being in old age (Ong ViforJ et al., 2023). This reinforces the need to address the growing numbers facing financial risks through mortgage indebtedness in later life.

Our study has some limitations that could be addressed in future studies. We do not investigate how the factors influencing aging-in-place preferences, and disruptions to such preferences, vary between low- and high-income older persons. The importance of financial constraints among older persons deserves further in-depth investigation as existing studies have shown that they pose a major constraint to older people realising their mobility preferences (Coulter, 2013). Additionally, our study does not delve into urban-rural differences in older people's aging-in-preferences. This area of future research is important because studies such as Erickson et al. (2011) have factors such as large distances to health services, and a decline in population and economic activities in rural areas can reduce the viability of remaining in the area. Finally, there is a need to investigate how the institutional context influences aging-in-place preferences and whether these preferences are likely to be disrupted. As noted earlier, the Australian private rental sector is lightly regulated in comparison to many other countries (Bate, 2021; Hulse & Haffner, 2014). Thus, aging-in-place preferences may not vary as widely between owners and private renters in institutional contexts that vary from Australia's.

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Supplemental Material

Supplemental material for this article is available online.

Notes

- 1. A borrowed property could be a rent free dwelling.
- Refer to supplemental material section S1 for a more detailed description of the HILDA Survey, including its sampling method and sample attrition issues.
- 3. Refer to supplemental material section S2 for the algorithm applied.
- 4. See supplemental material section S3 for an explanation of our choice of random-effects.

References

- ABS (2023). Australian statistical geography standard (ASGS). Australian Bureau of Statistics. https://www.abs.gov.au/ statistics/statistical-geography/australian-statistical-geographystandard-asgs
- Ahn, M. (2017). Introduction to special issue: Aging in place. *Housing and Society*, 44(1–2), 1–3. https://doi.org/10.1080/ 08882746.2017.1398450
- Ajrouch, K. J., Antonucci, T. C., & Janevic, M. R. (2001). Social networks among blacks and whites: The interaction between race and age. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 56(2), S112–S118. https://doi. org/10.1093/geronb/56.2.S112
- Altman, I., & Low, S. M. (Eds.), (1992). Place attachment: Plenum.
- Bagga, C. K., Bendle, N., & Cotte, J. (2019). Object valuation and non-ownership possession: How renting and borrowing impact willingness-to-pay. *Journal of the Academy of Marketing Science*, 47, 97–117. https://doi.org/10.1007/s11747-018-0596-3

- Bate, B. (2021). Making a home in the private rental sector. International Journal of Housing Policy, 21(3), 372–400. https://doi. org/10.1080/19491247.2020.1851633
- Bates, L., Wiles, J., Kearns, R., & Coleman, T. (2019). Precariously placed: Home, housing and well-being for older renters. *Health* & *Place*, 58, 102152. https://doi.org/10.1016/j.healthplace. 2019.102152
- Buffel, T., De Donder, L., Phillipson, C., De Witte, N., Dury, S., & Verté, D. (2014). Place attachment among older adults living in four communities in Flanders, Belgium. *Housing Studies*, 29(6), 800–822. https://doi.org/10.1080/02673037.2014.898741
- Caldera-Sánchez, A., & Andrews, D. (2011). To move or not to move: What drives residential mobility rates in the OECD? OECD economics department working papers No. 846. OECD. https:// www.oecd-ilibrary.org/content/paper/5kghtc7kzx21-en
- Clark, R.L., & Wolf, D.A. (1992). Proximity of children and elderly migration. In A. Rogers, W.H. Frey, P. Rees, A. Spear Jr., & A. Warnes (Eds.), *Elderly migration and population redistribution:* A comparative study (pp. 77–96). Belhaven Press.
- Clark, W.A.V., Duque, R., & Palomares, I. (2017). Place attachment and the decision to stay in the neighborhood. *Population, Space* and Place, 23(2), e2001. https://doi.org/10.1002/psp.2001
- Clark, W. A. V., & Lisowski, W. (2017). Decisions to move and decisions to stay: Life course events and mobility outcomes. *Housing Studies*, 32(5), 547–565. https://doi.org/10.1080/ 02673037.2016.1210100
- Clark, W. A. V., Ong ViforJ, R., & Phelps, C. (2023). Personality traits, risk aversion and endowment effects on residential mobility outcomes. *Personality and Individual Differences*, 203, 112035. https://doi.org/10.1016/j.paid.2022.112035
- Clarke, A., Parsell, C., & Vorsina, M. (2020). The role of housing policy in perpetuating conditional forms of homelessness support in the era of housing first: Evidence from Australia. *Housing Studies*, 35(5), 954–975. https://doi.org/10.1080/ 02673037.2019.1642452
- Coleman, J. S. (1988). Social capital in the creation of human capital. American Journal of Sociology, 94, S112–S118. http://www. jstor.org/stable/2780243
- Colic-Peisker, V., Ong, R., & Wood, G. (2015). Asset poverty, precarious housing and ontological security in older age: An Australian case study. *International Journal of Housing Policy*, 15(2), 167–186. https://doi.org/10.1080/14616718.2014.984827
- Coulter, R. (2013). Wishful thinking and the abandonment of moving desires over the life course. *Environment and Planning A: Economy* and Space, 45(8), 1944–1962. https://doi.org/10.1068/a45314
- Coulter, R., Van Ham, M., & Findlay, A. M. (2016). Re-Thinking residential mobility: Linking lives through time and space. *Progress in Human Geography*, 40(3), 352–374.
- Cox, D., & Rank, M. (1992). Inter-vivos transfers and intergenerational exchange. *The Review of Economics and Statistics*, 74(2), 305–314.
- Cramm, J. M., Van Dijk, H. M., & Nieboer, A. P. (2013). The importance of neighborhood social cohesion and social capital for the well being of older adults in the community. *The Gerontologist*, 53(1), 142–152. https://doi.org/10.1093/geront/gns052

- De Donder, L., De Witte, N., Buffel, T., Dury, S., & Verté1, D. (2012). Social capital and feelings of unsafety in later life: A study on the influence of social networks, place attachment, and civic participation on perceived safety in Belgium. *Research on Aging*, 34(4), 425–488. https://doi.org/10.1177/0164027511433879
- De Jong, G. F., Wilmoth, J. M., Angel, J. L., & Cronwell, G. T. (1995). Motives and the geographical mobility of very old Americans. *Journal of Gerontology*, 50(6), S395–S404. https:// doi.org/10.1093/geronb/50B.6.S395
- Di Gessa, G., Glaser, K., & Tinker, A. (2016). The impact of caring for grandchildren on the health of grandparents in Europe: A lifecourse approach. *Social Science and Medicine*, 152, 166–175. https://doi.org/10.1016/j.socscimed.2016.01.041
- Elder, G. H., Johnson, M. K., & Crosnoe, R. (2003). The emergence and development of life course theory. In J. T. Mortimer, & M. J. Shanahan (Eds.), *Handbook of the life course* (pp. 3–19). Kluwer Academic Publishers.
- Erickson, L. D., Call, V. R. A., & Brown, R. B. (2011). SOS satisfied or stuck, why older rural residents stay put: Aging in place or stuck in place in rural Utah. *Rural Sociology*, 77(3), 408–434. https://doi.org/10.1111/j.1549-0831.2012.00084.x
- Eriksson, E., Wazinski, K., Wanka, A., Kylén, M., Oswald, F., Slaug, B., Iwarsson, S., & Schmidt, S. M. (2022). Perceived housing in relation to retirement and relocation: A qualitative interview study among older adults. *International Journal of Environmental Research and Public Health*, 19(20), 13314. https://doi. org/10.3390/ijerph192013314
- Forsyth, A., & Molinsky, J. (2021). What is aging in place? Confusions and contradictions. *Housing policy debate*, 31(2), 181–196. https://doi.org/10.1080/10511482.2020.1793795
- Gardner, P. J. (2011). Natural neighborhood networks important social networks in the lives of older adults aging in place. *Journal of Aging Studies*, 25(3), 263–271. https://doi.org/10. 1016/j.jaging.2011.03.007
- Golant, S. M. (2015). *Aging in the right plac*: Health Professions Press.
- Golant, S. M. (2019). Stop bashing the suburbs: Mobility limitations of older residents are less relevant as connectivity options expand. *Journal of Aging Studies*, 50, 2–9. https://doi.org/10. 1016/j.jaging.2019.100793
- Golant, S. M. (2020). The distance to death perceptions of older adults explain why they age in place: A theoretical examination. *Journal of Aging Studies*, 54, 100863. https://doi.org/10.1016/j. jaging.2020.100863
- Ha, J. H., Carr, D., Utz, R. L., & Nesse, R. (2006). Older adult-s'perceptions of intergenerational support after widowhood: How do men and women differ? *Journal of Family Issues*, 27(1), 3–30. https://doi.org/10.1177/0192513X05277810
- Hayward, L. M. (2016). Mid-life patterns and the residential mobility of older men. *Canadian Journal on Aging*, 23(1), 73–89.
- Hedman, L. (2013). Moving near family? The influence of extended family on neighbourhood choice in an intraurban context. *Population, Space and Place, 19*(1), 32–45.
- Hickman, P. (2010). Understanding residential mobility and immobility in challenging neighbourhoods (Research Paper 8).

Centre for Regional Economic and Social Research. https:// research.shu.ac.uk/cresr/living-through-change/reports.html

- Hidalgo, M. C., & Hernández, B. (2001). Place attachment: Conceptual and empirical questions. *Journal of Environment Psychology*, 21(3), 273–281. https://doi.org/10.1006/jevp.2001. 0221
- Hulse, K., & Haffner, M. (2014). Security and rental housing: New perspectives. *Housing Studies*, 29(5), 573–578. https://doi.org/ 10.1080/02673037.2014.921418
- Johansson, K., Rudman, D. L., Mondaca, M., Park, M., Luborsky, M., Josephsson, S., & Asaba, E. (2013). Moving beyond 'aging in place' to understand migration and aging: Place making and the centrality of occupation. *Journal of Occupational Science*, 20(2), 108–119. https://doi.org/10.1080/14427591.2012. 735613
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decisions under risk. *Econometrica*, 47(2), 263–291. https://doi. org/10.2307/1914185
- Kawachi, I., Kennedy, B. P., & Lochner, K. (1997). Long live community: Social capital as public health. *American Prospect*, 35, 56–59.
- Laferrère, A. (1999). Intergenerational transmission models: A survey. The Geneva Papers on Risk and Insurance, 24(1), 2–26.
- Lebrusán, I., & Gómez, M. V. (2022). The importance of place attachment in the understanding of ageing in place: "The stones know me". *International Journal of Environmental Research* and Public Health, 19(24), 17052. https://doi.org/10.3390/ ijerph192417052
- Lee, K., & Painter, G. (2014). Housing tenure transitions of older households: What is the role of child proximity. *Real Estate Economics*, 42(1), 109–152. https://doi.org/10.1111/reec.12018
- Lewicka, M. (2011). Place attachment: How far have we come in the last 40 years. *Journal of Environmental Psychology*, 31(3), 207–230. https://doi.org/10.1016/j.jenvp.2010.10.001
- Lochner, K., Kawachi, I., & Kennedy, B. P. (1999). Social capital: A guide to its measurement. *Health & Place*, *5*(4), 259–270. https://doi.org/10.1016/S1353-8292(99)00016-7
- Ma, J., Dong, G., Chen, Y., & Zhang, W. (2018). Does satisfactory neighborhood environment lead to a satisfying life? An investigation of the association between neighbourhood environment and life satisfaction in beijing. *Cities*, 74, 229–239. https://doi.org/10.1016/j.cities.2017.12.008
- Morewedge, C. K. (2021). Psychological ownership: Implicit and explicit. *Current Opinion in Psychology*, 39, 125–132. https:// doi.org/10.1016/j.copsyc.2020.10.003
- Mouratidis, K. (2020). Commute satisfaction, neighborhood satisfaction, and housing satisfaction as predictors of subjective wellbeing and indicators of urban livability. *Travel Behaviour and Society*, 21, 265–278. https://doi.org/10.1016/j.tbs.2020.07.006.
- Mulder, C. H., & Malmberg, G. (2014). Local ties and family migration. *Environment and Planning A*, 46(9), 2195–2211. https://doi.org/10.1068/a130160p
- Mulder, C. H., & VanderMeer, M. J. (2009). Geographical distances and support from family members. *Population, Space and Place*, 15(4), 381–399. https://doi.org/10.1002/psp.557

- Ong, R. (2016). Financing aged care: The role of housing wealth and intergenerational relationships. In H. Kendig, P. McDonald, & J. Piggott (Eds.), *Population ageing and Australia's future* (pp. 281–302). ANU Press.
- Ong ViforJ, R. (2023). Australia's housing system and intergenerational sustainability. In A. Podger, J. Hall, & M. Woods (Eds.), More than Fiscal: The intergenerational report, Sustainability and public policy in Australia, Academy of the social Sciences. ANU Press.
- Ong ViforJ, R., Suenaga, H., & Brierty, R. (2023). Homeownership and subjective well-being: Are the links heterogeneous across location, age and income? Urban Studies, *Advance* online publication. https://doi.org/10.1177/00420980231190479
- Ong, R., Wood, G., & Colic-Peisker, V. (2015). Housing older Australians: Loss of homeownership and pathways into housing assistance. Urban Studies, 52(16), 2979–3000. https://doi.org/ 10.1177/0042098014550955
- Painter, G., & Lee, K. (2009). Housing Tenure transitions of older households: Life cycle, demographic, and familial factors. *Regional Science and Urban Economics*, 39(6), 749–760. https://doi.org/10.1016/j.regsciurbeco.2009.07.006
- Paldam, M. (2000). Social capital: One or many? Definition and measurement. *Journal of Economic Surveys*, 14(5), 629–653.
- Pani-Harreman, K. E., van Duren, J. M., Kempen, G. I., & Bours, G. J. (2022). The conceptualisation of vital communities related to ageing in place: A scoping review. *European Journal of Ageing*, 19(1), 49–62. https://doi.org/10.1007/s10433-021-00622-w
- Peace, S. (2022). The environments of ageing: Space, place and materiality. Policy Press. https://doi.org/10.1332/policypress/ 9781447310556.001.0001
- Putnam, R. D. (1995). Tuning in, tuning out: The strange disappearance of social capital in America. *PS: Political Science and Politics*, 28(4), 664–683. https://doi.org/10.2307/420517
- Rowles, G. D., & Bernard, M. (2013). Environmental gerontology: Making meaningful places in old age. Springer Publishing Company.
- Scannell, L., & Gifford, R. (2010). Defining place attachment: A tripartite organizing framework. *Journal of Environmental Psychology*, 30(1), 1–10. https://doi.org/10.1016/j.jenvp.2009.09.006
- Sergeant, J. F., & Ekerdt, D. J. (2008). Motives for residential mobility in later life: Post-move perspectives of elders and family members. *International Journal of Aging and Human Development*, 66(2), 131–154.
- Silverstein, M. (1995). Stability and change in temporal distance between the elderly and their children. *Demography*, 32(1), 29–45.
- Silverstein, M., & Giarrusso, R. (2010). Aging and family life: A decade review. *Journal of Marriage and Family*, 72(5), 1039–1058. https://doi.org/10.1111/j.1741-3737.2010.00749.x
- Silverstein, M., & Parker, M. G. (2002). Leisure activities and quality of life among the oldest old in Sweden. *Research on Aging*, 24(5), 528–547. https://doi.org/10.1177/0164027502245003
- Smith, S. J., Clark, W. A., Ong ViforJ, R., Wood, G. A., Lisowski, W.,
 & Truong, N. K. (2022). Housing and economic inequality in the long run: The retreat of owner occupation. *Economy and*

Society, 51(2), 161–186. https://doi.org/10.1080/03085147. 2021.2003086

- Steele, F., Zhang, S., Grundy, E., & Burchardt, T. (2022). Longitudinal analysis of exchanges of support between parents and children in the UK. arXiv: 2212.02209). arXiv. https://doi.org/ 10.48550/arXiv.2212.02209
- Strohschein, L. (2012). I want to move, but cannot: Characteristics of involuntary stayers and associations with health among Canadian seniors. *Journal of Aging and Health*, 24(5), 735–751. https://doi.org/10.1177/0898264311432312
- Tang, F., & Lee, Y. (2011). Social support networks and expectations for aging in place and moving. *Research on Aging*, 33(4), 444–464. https://doi.org/10.1177/0164027511400631
- Thomas, W., & Blanchard, J. (2009). Moving beyond place: Aging in community. *Generations*, 33(2), 12–17. https://www.jstor.org/ stable/26555645
- Wahl, H. (2017). Theories of environmental influences on aging and behavior. In N. Pachana (Ed.), *Encyclopedia of geropsychology* (pp. 811–818). Springer.
- Watson, N., Leissou, E., Guyer, H., & Wooden, M. (2019). Best practices for panel maintenance and retention. In T. P. Johnson, B. E. Pennell, I. A. L. Stoop, & B. Dorer (Eds.), Advances in comparative survey methods: Multicultural, multinational and multiregional contexts (3MC) (pp. 597–622). Wiley. https://doi. org/10.1002/9781118884997.ch29
- Watson, N., & Wooden, M. (2020). The household, income and Labour dynamics in Australia (HILDA) survey. *Journal of Economics and Statistics*, 24(1), 131–141. https://doi.org/10. 1515/jbnst-2020-0029
- Wiles, J. L., Allen, R. E. S., Palmer, A. J., Hayman, K. J., Keeling, S., & Kerse, N. (2009). Older people and their social spaces: A study of well-being and attachment to place in Aotearoa New Zealand. *Social Science and Medicine*, 68(4), 664–671. https:// doi.org/10.1016/j.socscimed.2008.11.030
- Wiles, J. L., Rolleston, A., Pillai, A., Broad, J., The, R., Gott, M., & Kerse, N. (2017). Attachment to place in advanced age: A study of the LiLACS NZ cohort in. *Social Science and*

Medicinem, 185, 25–37. http://dx.doi.org/10.1016/j.socscimed. 2017.05.006

- Wood, G. A., & Ong, R. (2017). The Australian housing system: A quiet revolution? *The Australian Economic Review*, 50(2), 197–204. https://doi.org/10.1111/1467-8462.12220
- Woodhead, C., Aschan, L., Lynskey, M. T., Polling, C., Goodwin, L., & Hatch, S. L. (2015). Exploring evidence for a prospective relationship between common mental disorder and meeting residential mobility preferences. *Health & Place*, 32, 19–28. https://doi.org/10.1016/j.healthplace.2014.12.013
- World Health Organization (2015). World report on ageing and health. https://www.who.int/publications/i/item/9789241565042
- Zhang, L., & Bian, Y. (2021). Parental "love" on time: Strength and timing in homeownership transfer. *Journal of Housing and the Built Environment*, 36, 113–129. https://doi.org/10.1007/ s10901-019-09688-6

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