

Assessing the levels of loneliness and satisfaction with accommodation among older adults in England

Andrea Nasuto^{*12}, Richard Dunning¹ and Les Dolega¹²

¹Department of Geography, University of Liverpool

²Geographic Data Science Lab, University of Liverpool

GISRUK 2023

Summary

The population of England is rapidly aging and policymakers face a challenge in providing suitable housing for older adults to "age in place." Two major areas of concern are housing and loneliness. There is a lack of understanding of differences in housing satisfaction and loneliness among older adults, as well as their spatial distribution. This research provides estimates of housing satisfaction and loneliness in the population aged 50 and older at the LSOA level in England, and identifies the key drivers of these phenomena through the use of small-area estimation methods.

KEYWORDS: loneliness, housing satisfaction, ageing population, small-area estimation, spatial microsimulation

1. Introduction

The population of England is rapidly aging with a significant impact on health and wellbeing, as well as on the fiscal sustainability of service provision (ONS, 2018b). Policies such as aging-in-place are becoming increasingly important, but their success depends on appropriate local service provision and housing (WHO, 2007). This research addresses two aspects of the 'aging in place' framework: housing satisfaction and loneliness among the 50+ population in England. The English Housing Survey (EHS) and the English Longitudinal Study of Ageing (ELSA) are nationwide survey that measures respectively accommodation satisfaction and loneliness. However, they spatial and statistical cover is largely limited thus we do not have a granular understanding of the phenomena in England. We use small area estimation (SAE) methods to generate synthetic and privacy-safe estimates of accommodation satisfaction and loneliness for each LSOA in England. SAE models also allow us to identify the key drivers of both elements and thus inform policymakers accordingly. We also leverage the Ageing in Place classification (AiPC) developed by Yang et al. (2022) to improve the performance of our SAE models. Additionally, the AiPC enriches our analysis by offering multidimensional profiles of the ageing population and expanding our understanding of the heterogeneity of this demographic group across a series of factors including digital, mobility and civic participation.

2. Research Design

The research draws from multiple data sources including the EHS, ELSA, the AiPC classification and the ONS Census. Specifically, we use UK Data Service safe-guarded EHS and ELSA datasets to build two logistic regression model to estimate respectively housing satisfaction (EHS) and loneliness (ELSA) in our targeted population. These two models constitute the pillars of the small-area estimation methodology required to generate synthetic data across all 32,844 LSOA in England. Small area estimation (SAE) is a well-established technique that generates synthetic data based on survey data. Our methodological approach follows a methodology applied by ONS (ONS, 2017) to model individual-level outcome variables using area-level predictors. In other words, we employ Census area-level data to predict the actual probability of being (dis)satisfied with the existing accommodation and

* andrea.nasuto@liverpool.ac.uk

feeling lonely for each LSOA in England. In addition to these predictors, we use the AiPC geodemographic to expand our understanding of the ageing population group and improve the performances of our models.

3. Results

Our research finds that older people in England are largely satisfied with their current housing, with an average of only 7.69% of older people households being dissatisfied with their accommodation. However, there is significant spatial variation in housing dissatisfaction across England, with higher levels in urban areas and lower levels in rural areas. Our model shows that multiple factors are driving these differential levels, including housing ownership, age, long-term illness or disability, crime deprivation, and barriers to housing and services. Factors such as housing ownership and age appear to play a significant role in these patterns, with homeowners and older age groups having higher levels of satisfaction. On the other hand, a higher share of the 50+ population with long-term illnesses or disabilities is associated with higher levels of dissatisfaction.

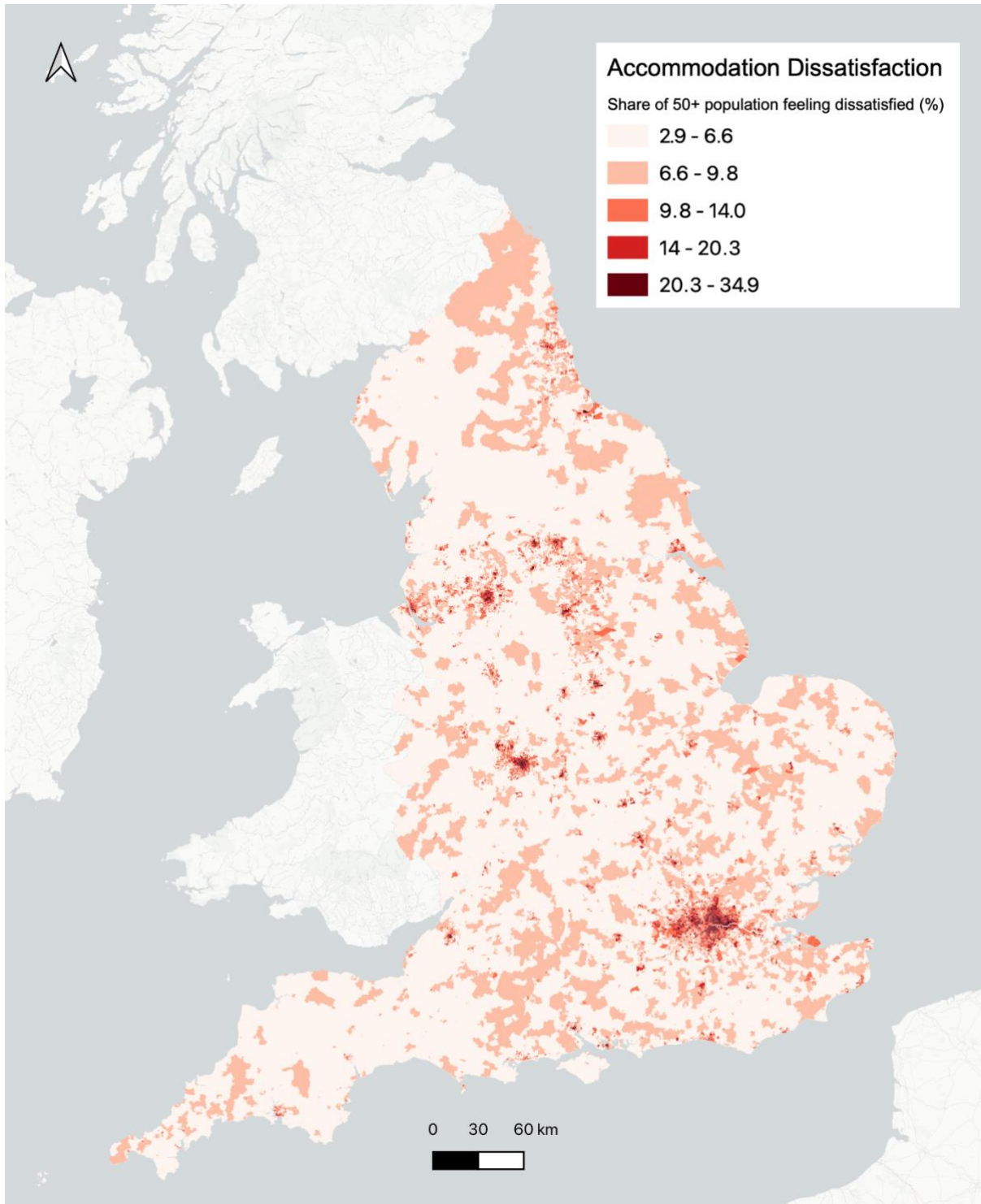


Figure 1 Share of the estimated 50+ population dissatisfied with their accommodation at LSOA level in England

Similarly to housing satisfaction, the research estimates that 6.94% of the 50+ population in England feels lonely. The model used to generate these estimates includes six predictors: the share of the 50+ population being divorced or separated, the share of the 50+ population being widowed, the share of the 50+ population being in poor health, the share of the 50+ population being in fair health, the share of the 50+ population having a limiting long-term illness or disability, and the share of the 50+ population aged between 75 and 84 years old. The proportion of residents being widowed is the strongest predictor of loneliness at the LSOA level. Having poor or fair health and being divorced or

separated can also increase levels of loneliness. Areas with higher proportions of residents aged between 75 to 84 years old show lower levels of loneliness. Spatially, large urban centers have more prevalent loneliness among the 50+ population while rural areas have less. Urban centers have better access to services and higher population density which can foster a better aging in place process. However, access to services in more peripheral urban areas is limited and less affluent urban areas can signal higher levels of loneliness.

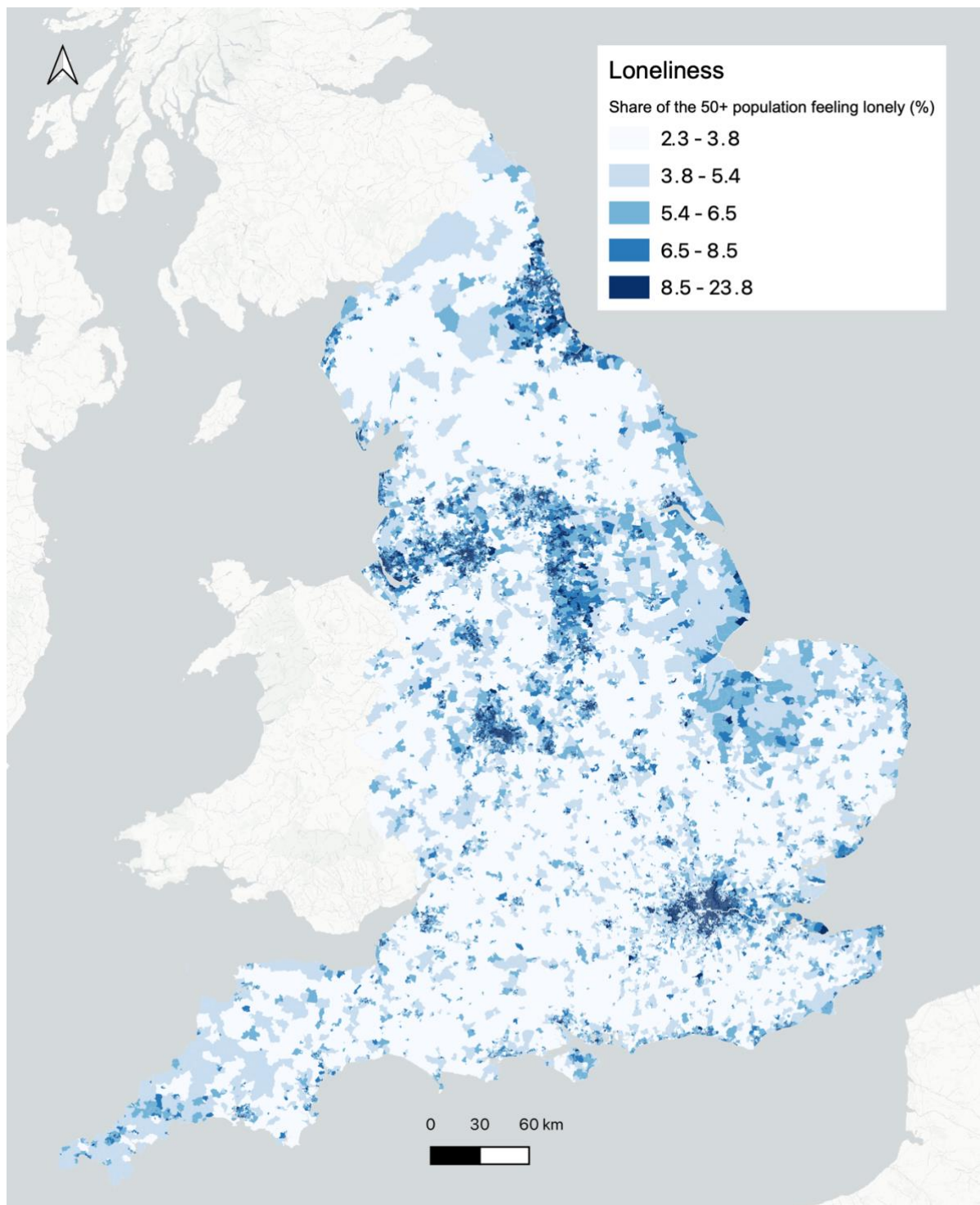


Figure 2 Share of the estimated 50+ population feeling lonely at LSOA level in England

4. Discussions and conclusions

Accommodation dissatisfaction amongst the elderly tends to be concentrated in urban areas with central areas in large urban centres (especially London) as concerning epicentres. On the contrary, rural, and urban-fringe areas display the highest housing satisfaction. However, this pattern is not binary. Multiple rural areas especially in the East of England, North West and South East England show higher than average share of people that are not satisfied with their accommodation. Our findings suggest that promoting home ownership and addressing the needs of older people with long-term illnesses or disabilities may be important in improving housing satisfaction. With nearly half of the 65+ population expected to have a disability in the next 20 years (ONS, 2018), access to suitable housing for this population is crucial for fair conditions among senior citizens. Additionally, addressing area level factors could also improve the level of accommodation satisfaction. Indeed, using the two IMD score domains as predictors, we also found that higher crime rate is associated with lower satisfaction, while general barriers to housing does not show neither a negative nor positive impact. However, if we further analyse the latter, housing affordability appears to be strongly associated with higher level of satisfaction.

In terms of loneliness, our estimates show how loneliness is more prevalent in urban areas rather than rural areas while this is not homogenous. On average rural areas show consistent lower share of people feeling lonely while suburban and rural-fringe areas near cities such as London, Birmingham and Liverpool have 50% higher than national average level of loneliness. Interestingly, some major urban centres such as Manchester, Leeds and London show a ‘donut-shaped’ pattern with low level of loneliness in more central areas surrounded by a dramatic increase in the surrounding areas.

Our analysis unveils a high-level spatial inequality in terms of the proportion of older people feeling lonely. These finding might suggest how loneliness levels can be associated with certain socio-economic inequalities as the positive correlation between higher level of deprivation (IMD score) and loneliness shows.

Methodologically, we demonstrate that using a geodemographic classification improves the performance of the spatial microsimulation both for housing satisfaction as well as loneliness. The AiPC can also suggest patterns between our estimates and ageing population profiles thus avoiding dangerous homogenization in the policies aiming to help the growing ageing population.

Our research shows how large urban centers present challenging scenarios for an ageing population that aim to age in place both for housing and mental health. Policymakers could tackle both issues by looking at a series of factors identified in our SAE models. For example, non-white ageing urban population and households living long-term illness or disabilities should be monitored with extra care given the high risk of both loneliness and low level of accommodation needs met.

5. Acknowledgements

The research is funded by the Nuffield Foundation ref: WEL/44091

The ELSA (The English Longitudinal Study of Ageing) and EHS (English Housing Survey) data has been provided by the UKDS (UK Data Service), under project ID 213933.

We would also like to thank Fran Darlington–Pollock, Yuanxuan Yang, Alex Lord and Paul Williamson who have contributed significantly to this project.

References

- ONS (2017) Model-Based Estimates of households in poverty for Middle Layer Super Output Areas, 2013/14 Technical Report.
- ONS (2018a) Health state life expectancies, UK: 2015 to 2017. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/bulletins/healthstatelifeexpectanciesuk/2015to2017#:~:text=In%20the%20UK%20in%202015,months%20over%20the%20same%20period.> (Accessed: 20/01/23).
- ONS (2018b) *Overview of the UK Population: November 2018*. Office for National Statistics, Available at:

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/articles/overviewoftheukpopulation/november2018>

- World Health, O. 2007. Global age-friendly cities: a guide. Geneva: World Health Organization.
- Yang, Y., Dolega, L. & Darlington-Pollock, F. Ageing in Place Classification: Creating a geodemographic classification for the ageing population in England. *Appl. Spatial Analysis* (2022). <https://doi.org/10.1007/s12061-022-09490-y>

Biographies

Andrea Nasuto is a PhD candidate and research associate at the Geographic Data Science Lab, University of Liverpool. His research interests include tracking online social media public sentiment, elderly population, machine learning and social network analysis.

Les Dolega is a Lecturer in Human Geography and Geographic Information Science at the University of Liverpool. His research interests and expertise are in economic and retail geography and spatial analysis, in particular performance of retail centres, consumer behaviour and ageing population. He has lead a number of projects related to classification of elderly population and retail geography including 'e-Resilience', delineation of spatial extent of retail centres, their catchments and a typology of consumption spaces.

Richard Dunning is Senior Lecturer in Housing and Planning. Dr Dunning works at the interface of housing delivery and planning. Drawing from behavioural economics, his research focuses on explaining human decision making in the built environment. Richard's research frequently considers: calculations of housing need; the relationship between public outcomes and land value capture; and cycling infrastructures.