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RESEARCH PUBLICATION

Neighbourhood Satisfaction Among Municipal Tenants in the Helsinki Metropolitan Area

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Abstract
This article analyses municipal tenants' neighbourhood satisfaction (NS) in the Helsinki metropolitan area. If social mixing has managed to equalise differences related to the residential environment across different social groups, perceived neighbourhood conditions among tenure groups should be similar. We know, however, that even in a Nordic capital with a conscious and long-term effort at small-scale mixing, social housing is not geographically spread out evenly and that clustering of social tenants occurs. We also know that objective resources among social tenants are lower than in other tenures, contributing to subjective wellbeing, of which NS is a component. We examine the Helsinki metropolitan area's objective and subjective neighbourhood conditions using a large residential survey and national register data. Our results show that neighbourhood amenities and locational characteristics do not differ across tenure groups in the Helsinki metropolitan area – however, tenants in municipal social housing report lower NS than other tenure groups. Social mixing appears to promote spatial justice at the neighbourhood level better than it has managed to equalise differences in subjective experiences across tenure groups. This study contributes to understanding NS as a component of subjective wellbeing. It also highlights the unequal distribution of social housing in the Helsinki metropolitan area, which we see as a risk for accelerating segregation across tenure groups. Differences in perceived satisfaction with neighbourhood across tenure groups may reflect differences in micro-scale environments, suggesting a need for policies improving spatial justice at a sub-neighbourhood or residential level.

Keywords
neighbourhood satisfaction, tenure, segregation, social housing, Helsinki metropolitan area

Introduction
Neighbourhood satisfaction can be described as the 'degree of fit' between an individual's neighbourhood aspirations and actual residential circumstances (see, e.g., Campbell et al., 1976; Galster, 1987; Galster & Hesser, 1981). Neighbourhood satisfaction has been seen as a key determinant in moving decisions, particularly in urban settings (Diaz-Serrano & Stoyanova, 2010; Speare, 1974), although 'housing stress' can result from both internal changes in e.g. household composition through the life course, as well as external factors. Here, we focus on external factors. 'Sorting', particularly of the better-off from areas of lower socioeconomic status, can result in a concentration of deprivation and 'cycles of

decay' (Skifter Andersen, 2003). Segregation policies can affect these movement patterns in several ways: for example, through area-based initiatives aimed at upgrading the living environment in deprived areas at risk of out-movement off the well-off, or by levelling socioeconomic differences in neighbourhoods through social mixing, as has been the case in Helsinki since the 1970s.

Nevertheless, socioeconomic differences in the capital region have grown steadily since the 1990s, with the outbound movement, 'sorting' of the middle class, being a key driver (Vilkama, 2011). Rental-dominated neighbourhoods in Finland are objectively and subjectively disadvantaged (Kemppainen & Saarsalmi, 2015). As neighbourhood satisfaction (hereafter NS) plays a decisive role in segregation patterns, and the movement patterns driving segregation are linked with the socioeconomic status of movers (Hedman et al., 2011), we feel more focus should be directed to the perceptions of different tenure groups of their local neighbourhood conditions.

Assuming that anti-segregation policies have managed to equalise neighbourhood conditions through social mixing and area-based initiatives, differences among the objective conditions of neighbourhoods should be similar among tenure groups. However, social housing is not evenly distributed geographically in the Helsinki metropolitan area due to various barriers to social mixing. Another question is how the subjective perception of individuals of their neighbourhoods varies between tenure groups, as perceptions can be driven by various background factors contributing to NS and wider wellbeing. Hence, neighbourhood conditions may be similar, but perceptions of neighbourhoods may still vary.

We hypothesise that social tenants have lower NS than other tenure groups due to clustering to less desirable areas and a lower general level of objective and subjective resources. Our interest relates to whether the neighbourhood matters for NS among social tenants and whether variation can be explained by micro-level factors relating to the respondent's background or housing. We study the following research questions with the help of a large residential survey: (1) Does NS of municipal tenants differ from other tenures in the Helsinki metropolitan area? Further, we ask whether (2) controlling for background, housing, and neighbourhood characteristics helps to explain possible differences. Finally, we ask whether (3) alternative outcomes (quality of life and neighbourhood safety) show similar patterns to NS outcomes according to tenure status.

The article proceeds as follows: first, we position our main outcome, neighbourhood satisfaction, within a wider wellbeing framework. Through descriptive statistics, we explore links between neighbourhood characteristics and tenure and then look more closely at the distribution of social housing and NS across neighbourhoods in the Helsinki metropolitan area. In addition, we use regression analysis to understand the relationship between tenure status and NS using a large residential survey and controlling for possible confounding and mediating individual, residential, and neighbourhood-level factors. Finally, we discuss the societal implications of our findings. We argue how segregation of subjective conditions, previously uncovered in Finnish segregation literature, is linked to objectively measured segregation and how social housing is connected to both forms of segregation despite a long tradition of social mixing in the capital area.

Neighbourhood Satisfaction in a Wellbeing Framework

The Finnish sociologist Erik Allardt (1930–2022) described wellbeing as a sum of subjective and objective indicators. The components of wellbeing, according to Allardt (1973), can be divided into 'having' (material and personal needs) indicators, 'loving' (social needs)

indicators, as well as 'being' (needs for personal growth) indicators (see Table 1). Allardt saw that his categorisation has many similarities with Maslow's (1943) hierarchy of needs: 'having' corresponds to Maslow's physical and safety needs levels, 'loving' to love and esteem needs, and 'being' to the need for self-realisation. Allardt goes further, however, to divide his 'having, loving, being' components into objective and subjective indicators, feeling the latter had largely been neglected in Nordic welfare studies (Allardt, 1993, p. 91).

Table 1. Erik Allardt: Dimensions of Wellbeing (1993).

Dimension	Objective	Subjective
'Having' (material and impersonal needs)	1. Level of living and environmental conditions	2. Satisfaction with living conditions
'Loving' (social needs)	3. Social relations	4. Perception of social relations
'Being' (needs for personal growth)	5. Societal and nature relationship	6. Perception of belonging and growth

The first component, 'having', could be measured by objective measures of the level of living and environmental indicators and subjective indicators measuring perceived satisfaction with living conditions (Allardt, 1993, p. 94). While we concentrate on the 'having' component in this article and, in particular, differences in satisfaction with living conditions, we also recognise that the 'having' component relates to the other components of wellbeing, 'loving' (social needs) and 'being' (needs for personal growth). In this article, we use Allardt's wellbeing framework to illustrate the relationship between subjective and objective wellbeing and position NS within a larger wellbeing framework.

Nested within subjective wellbeing research, NS research looks at the role of neighbourhood characteristics in perceived satisfaction. In this sense, it has many commonalities with neighbourhood effects research (see, e.g. Galster, 2012), which focuses on the effect of neighbourhood characteristics on individual outcomes, such as employment or income. The underlying assumption behind both is similar: local environments may influence individuals. Neighbourhood effects (NE) literature has focused mainly on objective individual outcomes (e.g. socioeconomic status) and NS literature on subjective outcomes (e.g. perceptions of safety, NS).

Like Allardt, B. A. Lee et al. (1994) and Amérigo and Aragonés (1997) recognise the objective and subjective dimensions of NS, but add physical and social dimensions to neighbourhood characteristics. Physical factors have been identified as contributing to NS: these include objectively measured factors such as density (Baldassare, 1982; Bramley et al., 2009; B. A. Lee & Guest, 1983; McCulloch, 2012). Density is in turn connected to objective physical neighbourhood characteristics such as walkability (Dyck et al., 2011; Grasser et al., 2016), building height (Bramley et al., 2009), services or traffic (Hur & Morrow-Jones, 2008), or green space (Björk et al., 2008; de Jong et al., 2012; Lovejoy et al., 2010; Parkes et al., 2002). Likewise, subjective physical factors argued to have a role in NS include perceptions of neighbourhood maintenance (Dyck et al., 2011; Galster & Hesser, 1981; Howley et al., 2009; Parkes et al., 2002).

Neighbourhood-level social factors are similarly relevant to NS: for example, agreement on the impact of neighbourhood socioeconomic status as an objectively measured determinant of NS is widespread, either directly or mediating the effect of other factors (Lu, 1999; McCulloch, 2012; Mohan & Twigg, 2007; Sampson, 1991; Stipak & Hensler, 1983). Similarly,

NE literature has suggested that socioeconomic composition impacts individual outcomes (Bambra et al., 2010; Chetty et al., 2016; Kauppinen, 2007 for Finland). Lee (2014) found that tenure is connected to moving patterns: neighbourhoods consisting predominantly of rentals can expect higher turnover and instability. Neighbourhood-level socioeconomic status has been further linked to subjective factors such as perceived safety (Parkes et al., 2002; Sharpe et al., 2022), and perceived safety again is a central factor in NS (Basolo & Strong, 2002; Bruin & Cook, 1997; Dyck et al., 2011; Hipp, 2009; Howley et al., 2009; Hur & Morrow-Jones, 2008; Leslie et al., 2010; Lovejoy et al., 2010). Kemppainen et al. (2021) found that in Helsinki, social housing quantity correlated positively with residents' perceived unsafety, social disorder, or housing satisfaction. Perceived safety, in turn, has been linked to families' moving preferences (Kortteinen et al., 2005) and housing satisfaction (Pekkonen & Haverinen-Shaughnessy, 2015). Other subjective social factors linked with NS include perceived safety, perceptions of relationships and place attachment (Amérigo & Aragonés, 1990; Sharpe et al., 2022).

In addition to neighbourhood-level factors, various personal characteristics have been linked to NS, such as education level (Lu, 1999), income (McCulloch, 2012; Parkes et al., 2002; Permentier et al., 2011), age (Lu, 1999; Parkes et al., 2002; Permentier et al., 2011) and household composition (McCulloch, 2012). Many of these characteristics have also been linked with residential mobility. Those who report dissatisfaction with their housing situation are more prone to move than their satisfied counterparts (Diaz-Serrano & Stoyanova, 2010). According to the stress-threshold model (see e.g. Wolpert, 1965), households react to housing stress by adjusting housing consumption, i.e. moving to more suitable housing. Some groups have more opportunities to fulfil their residential needs. On the other hand, adaptation to imposed conditions has been reported (Amérigo & Aragonés, 1990). Different socioeconomic groups may also be more capable of taking advantage of available opportunities: Amartya Sen (1993) argued that the existence of resources did not guarantee they were useable if individuals did not have the capabilities to take advantage of them. In the case of neighbourhoods, help might be needed for individuals to take advantage of opportunities. For example, a good public transportation network would not satisfy the need for mobility: the system needs to be accessible physically, economically, and psychologically, requiring additional input to secure equal usability. Public amenities such as green areas may be accessible but still contain various barriers hindering their use, possibly affecting neighbourhood perceptions.

Tenure status is relevant to NS, as homeowners are likely to have a more extensive selection of options in the housing market and thus be more successful in obtaining an environment leading to higher NS (Bramley et al., 2009; Hipp, 2009; McCulloch, 2012; Parkes et al., 2002). This is particularly true in 'homeowner societies' such as Finland (Ruonavaara, 1993), where, despite a growing share of tenants in larger cities, owner-occupants still make up 45% of residents in the Helsinki metropolitan area (Statistics Finland, 2022). Homeowners' satisfaction is more affected by neighbourhood characteristics (Boschman, 2018). This seems logical, as homeowners have a larger investment in housing. Studies show homeowners' preferences to live among each other (Parkes et al., 2002). Housing satisfaction is linked with NS (Parkes et al., 2002). Tenure status is linked especially strongly with *housing* satisfaction: Acolin (2022) found that homeowners have higher odds of being satisfied with their residence in Europe. In another European study, Diaz-Serrano (2009) found that transferring from tenant to homeowner increased housing satisfaction. Similarly, housing satisfaction has been linked to homeownership and single-family housing in Finland (Pekkonen & Haverinen-Shaughnessy, 2015).

Angel and Gregory (2023) argue that tenure also directly affects wider subjective wellbeing: life satisfaction in respondents in the UK and Austria was significantly higher, controlling for other factors. Acolin (2022) also argues that in Europe, owners show better life satisfaction. It has been argued that, in part, the benefits of homeownership on individual outcomes may operate through the stability and security of homeownership. This brings us back to the wider framework of wellbeing in which NS is nested.

While much focus in NS literature has been given to the effects of physical and social characteristics of neighbourhoods on individual perceptions, less research has focused on the mechanisms behind residents' subjective experiences of their living environment. Nevertheless, the role of personality traits on NS has been recognised from the earliest studies on NS. For example, Marans and Rodgers (1975) recognise that satisfaction with neighbourhood circumstances depends on the respondent's values, attitudes, and expectations. More recently, Neal (2020) found in a meta-analysis that while neighbourhood characteristics do have a role in determining satisfaction, their direct effect is weak: objective neighbourhood features determine only a fraction of variation in NS, suggesting that policies affecting the physical or social local environment would have little impact on perceptions of the area. Personal and psychological factors, on the other hand, had a much more direct impact on NS. In a further study, Neal and Brutzman (2023) found that personality traits were associated with NS, much as they were associated with subjective wellbeing more generally, although underlying mechanisms behind these factors are still unknown.

Context: Social Housing and Diverging Wellbeing in the Helsinki Metropolitan Area

Allardt argued for a minimum welfare provision, a 'floor level' below which neighbourhoods could not fall. He also argued that 'the average may, comparatively speaking, be impressively high, but if a large percentage of the population remains below the floor, then the national level of human welfare can hardly be described as satisfactory' (Allardt, 1993, p. 90). Allardt's view followed a Rawlsian critique of utilitarianism (Rawls, 1971): different individuals in different locations required different amounts of primary goods to satisfy similar needs. Therefore, social policy should aim not to maximise welfare, but to distribute it evenly according to needs.

The Nordic welfare model has, since the 1960s, counteracted social inequality on a structural level in Finland. However, relative poverty and income inequalities have grown since the recession of the early 1990s. Segregation levels in Finland are not high in a European context (e.g. Tammaru et al., 2021), and there has been little concern over segregation until recent decades. A central pillar in segregation management has been the provision of social housing, which is used to provide affordable housing and equalise socioeconomic differences (see e.g. Amcoff, 2021; Galster, 2007). In Finland, segregation researchers have criticised social mixing for its inability to address structural drivers of inequality (Hyötyläinen, 2019; Vaattovaara et al., 2018).

Finland represents a 'dualistic' housing regime, with partial restrictions on social housing (Arbaci, 2007, p. 416). Social housing is built with state financial support for interest rates, supplementary loans, or loan guarantees managed by ARA (Housing Finance and Development Centre of Finland). Social housing can be restricted to specific vulnerable residential groups such as students, disabled, and homeless residents, or be 'normal', i.e., unrestricted, generally provided and allocated by municipalities based on the applicants' housing needs and financial situation. For example, Helsinki assigned housing to only 14% of applicants in 2020, most classified as 'extremely urgent' cases. The rent levels in social

housing are cost-based, which has often meant significantly lower rents than in free-market rentals, but has also left social rental levels prone to fluctuation: for example, the current rise in maintenance costs has resulted in a sharp increase in rents of housing owned by the City of Helsinki during 2023. ARA also subsidises a third (although marginal) form of social housing: right-of-occupancy housing,[1] which allows residents without the financial funds to secure full homeownership to buy a small share of the dwelling and pay a right-of-occupancy fee (rent) in addition to maintenance fees.

Social housing has experienced a period of retrenchment in Finland in recent decades (Ruonavaara, 2017). Marketisation (Hyötyläinen & Haila, 2018), coupled with deregulation, has resulted in a decline in the share of unrestricted social housing open to all groups. This decline has happened simultaneously with a sharp increase in free-market rental housing (Figure 1). Due to the recent retrenchment in social housing in Finland, low-income residents have shifted towards using housing benefits available regardless of tenure. A shift towards using housing benefits has also been seen as an opportunity to level segregation: Saarimaa and Eerola argue that private tenants live in areas of higher socioeconomic status (Eerola & Saarimaa, 2018). On the other hand, as social mixing has been a traditional tool in tackling segregation through e.g. residential selection, a dwindling pool of social housing provides local governments with control over market-led development.

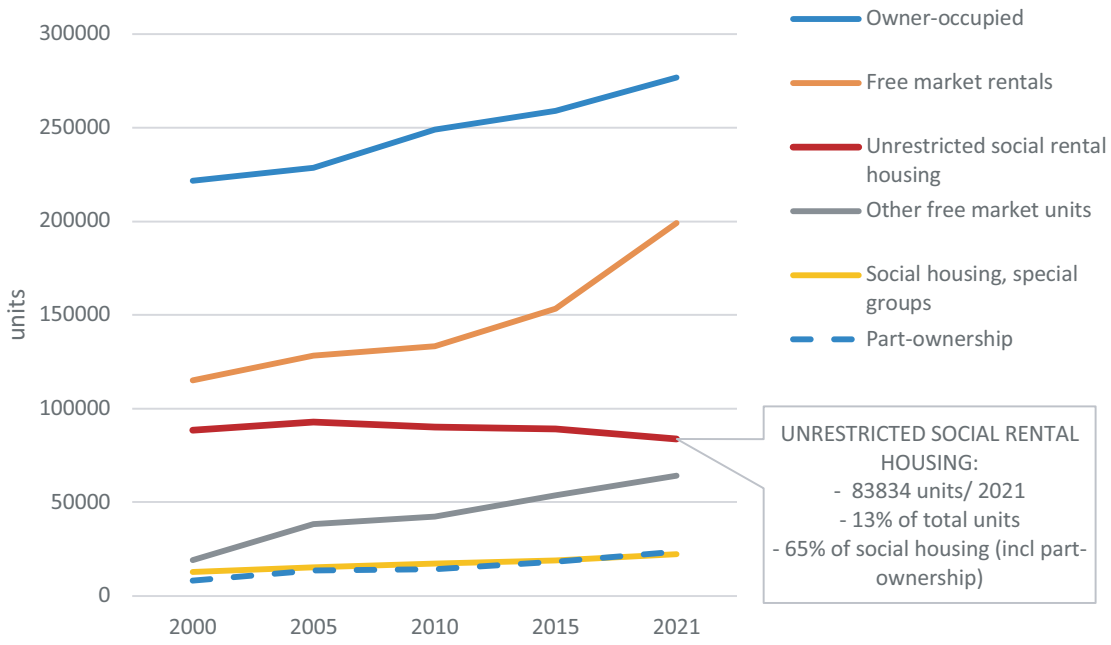

Figure 1. Housing Development in the Helsinki Metropolitan Area by Tenure 2000–2021

Due to a housing shortage in the Helsinki metropolitan area restricting economic growth (see e.g. Finnish Government, 2019), social housing targets have been adjusted lately through regional agreements (see e.g. Finnish Ministry of the Environment, 2020b). However, these goals have not been realised fully. Possible reasons could include a general overheating of the property market, increases in production costs, and planning requirements (HSY, 2021). Existing social housing is additionally unequally distributed across neighbourhoods despite spatially balanced development being a new but prominent goal in across state

1 With a few exceptions, right-of-occupancy dwellings are financed with state support in the form of housing loans or interest subsidy loans: https://ym.fi/en/right-of-occupancy-housing

housing policy (Finnish Ministry of the Environment, 2020a), regional MAL agreements (Finnish Ministry of the Environment, 2020b) and local housing programmes (see e.g. Helsingin kaupunki, 2020). In the four core municipalities of the Helsinki metropolitan area, the proportion of social housing per neighbourhood averaged 18% in 2015, but varies significantly across neighbourhoods (Figure 3). Reasons include spatial variation in municipal land ownership, ARA-imposed price restrictions on plots ruling out prime locations, and differences among municipalities in land-use policies favouring social housing.

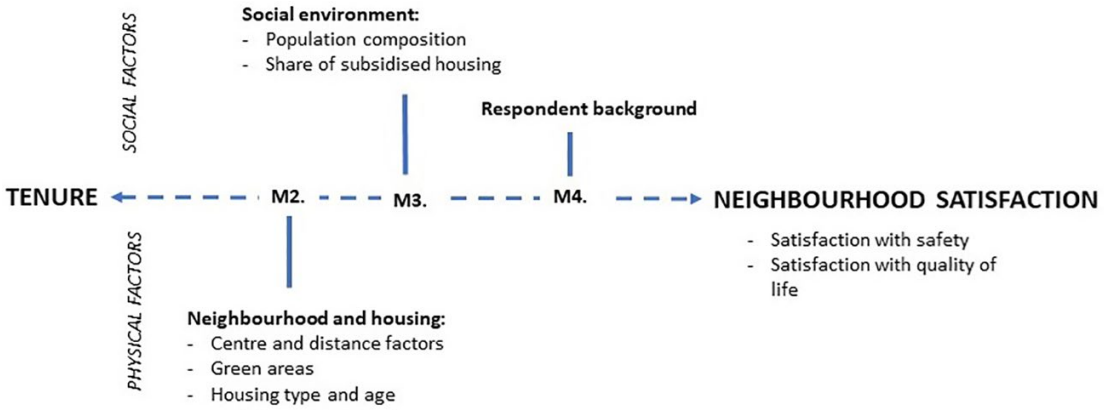

Figure 2. Analysis Framework and Variable Groups

While segregation levels are still low on a European scale, segregation in the Helsinki area is steadily rising and is visible in services such as primary education and housing (Bernelius & Vilkama, 2019; Vilkama, 2011). It can be said that Allardt's objective living standards (Table 1) have diverged spatially in the region. It is debatable whether a 'floor level' can still be guaranteed: residential differentiation is seen as structural and 'beyond the scope of the preventive policies pursued' (Vaattovaara et al., 2018). Social mixing is increasingly used as a reactive – as opposed to preventive – policy. The active use of area-based initiatives, such as the Suburban Regeneration Programme in Helsinki and the similarly named programme in the Helsinki region, which target deprived areas, indicates the apparent (unacceptable) neighbourhood differences.

We argue that the diminished social housing pool has affected municipalities' possibilities to counteract segregation development preventively using social mixing. While social housing is named as a pillar in national housing policy (see, e.g., Finnish Ministry of the Environment, 2020a), it is clear that residents with acute accommodation needs cannot secure municipal housing due to long queues and have been for forced to join a growing group of free-market tenants. From a social mixing point of view, public influence over social structure is increasingly difficult, as the free market does not enforce residential selection to guarantee small-scale social mixing. Therefore the clustering of residential groups is now more possible than previously due to the growing free-market rental sector. With a high demand but tight supply of social housing in growth centres such as Helsinki, there is a danger that the socioeconomic structure of social tenants will skew towards the most vulnerable and become marginalised. For example, Hyötyläinen (2020) argues that Finnish social housing has been increasingly seen as a social service for those not able to obtain housing from the free market.

Possible recent marginalisation of social housing together with the 'old' problem of clustered of social housing could imply that recent segregation trends would deepen in the

future. As objective conditions diverge, experiences of living conditions will likely diverge as well. While Piirainen (1993) saw only minor signs of concentrating social problems within social housing in 1993, a decade later Kortteinen et al. (2006) saw signs of a significant proportion (20–25%) of municipal social tenants in Helsinki perceiving their living environment as restless or untidy, risking an exodus of better-off social tenants and aggravating internal segregation of social housing. Even more concerningly, in a recent national study of housing estates, Kemppainen et al. (2020) found that those with limited options to move make up a third of Finnish housing estate residents and that involuntary staying was linked to financial and health concerns. These findings illustrate the connections between the different aspects of wellbeing as theorised by Allardt, where subjective experiences go hand-in-hand with objective resources and where subjective and objective levels of living link to individual wellbeing more widely.

Research Framework

In this article we study the following research questions: (1) Does municipal tenant NS differ from other tenures? Further, we ask whether (2) controlling for background, housing, and neighbourhood characteristics helps to explain possible differences. Finally, we ask whether (3) alternative outcomes (quality of life and neighbourhood safety) are similar to NS.

We use survey data from the Regional Health and Wellbeing study (2012–2015) collected by the Finnish Institute for Health and Welfare through a national postal and web-based questionnaire. In the Helsinki metropolitan area (the four municipalities of Helsinki, Espoo, Vantaa and Kauniainen), some 21,900 valid responses were collected in 2012–2015. The data collection was based on stratified random sampling, and survey weights accounting for the stratified design and non-response were included in the data. For this analysis, post-stratification weights were created from the original weights to account for the multi-year data collection and restriction of the dataset to the Helsinki metropolitan area, and the municipality, district, year, and age group defined the strata. These weights were used in all analyses.

The research setup is illustrated in Figure 2: the main variables are tenure status and perceived NS. NS is measured in the study by a global question: *'How satisfied are you with the conditions of your neighbourhood?'*. In addition, we used two other outcomes as a sensitivity check: perceived quality of life, *'How satisfied are you with the quality of your life?'*, and perceived neighbourhood safety, *'How satisfied are you with the safety of your neighbourhood?'*. The survey and combined population register data provided background information on the respondents, for which we used gender, age, employment status, and household size, as well as register-based data on the respondents' buildings, such as housing type and building age.

We divide respondents into six tenure groups. In addition to owners, private tenants, and the residual 'other/unknown' category, there are three categories of social tenants: municipal tenants, students in student housing, and other subsidised tenants. Our focus group, municipal tenants, are 'normal' social tenants, where municipalities allocate housing according to means-testing and social mixing principles. Students belong to 'special groups' in ARA terms, where mixing and means-testing are looser. Municipal housing is separated from other social housing because it is most stringently means-tested: we hypothesise that income restrictions may be linked to NS. In addition, there are less opportunities for neighbourhood selection in municipal housing due to the large numbers of applicants. Further, municipal tenants are less likely to have resources to compensate for detrimental conditions

(e.g., travel or adapt their housing conditions) and also less able to move to other housing or neighbourhoods when experiencing 'housing stress.' In addition, municipalities are the key actors in social mixing and we are interested in whether this social mixing strategy has managed to equalise differences in perceived satisfaction among municipal tenants and other tenure forms.

Tenure status was defined by first locating all respondents living in social rental housing (ARAKIRE register, excludes right-of-occupancy housing) and then separating those living in primarily municipal-owned buildings into the 'municipal tenants' group. The remaining social rental housing was divided into two groups due to the large number of students: 'students' and 'other state-subsidised'.[2] The respondents not living in social rental housing were divided into 'owner' (including right-of-occupancy housing), 'private tenant' or 'other/unknown' depending on the respondent's assessment in the survey.

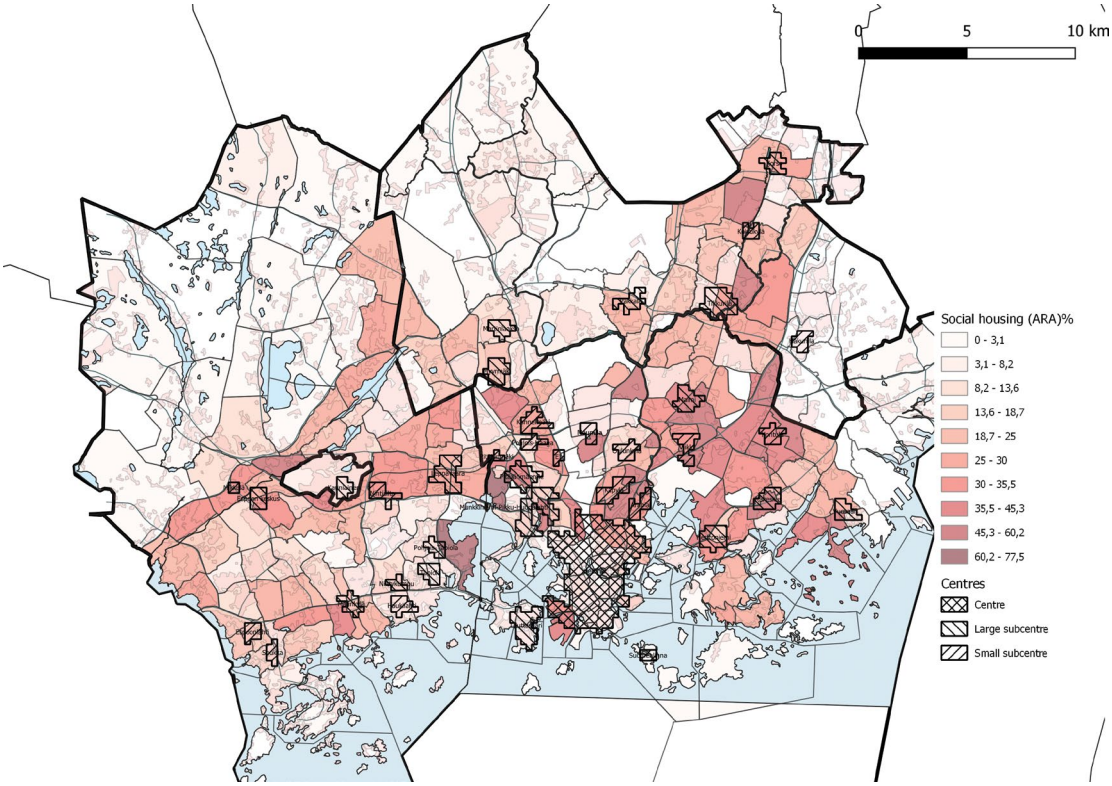

Figure 3. Social Housing Shares by Neighbourhood 2015

Survey responses were combined with Finnish Population Register Data (VTJ), the National Housing Register (RHR) and ARA housing register (ARAKIRE). Because responses were geocoded, we could allocate responses into various spatial units from open-data web services of the Finnish Environment Institute (SYKE), Statistics Finland and HSY Regional Information, the most important being the neighbourhood classification ('pienalueet') of Statistics Finland. In terms of scale, this was the smallest available neighbourhood-scale unit, which provided enough respondents per neighbourhood.

2 Students are separated by ownership from other special groups due to their large number, age bracket, clustering around educational institutions and a possible preference for more urban settings.

In 2015, these 255 neighbourhoods had an average of 4200 residents. The number of respondents by neighbourhood ranges from 3 to 394, with 82 respondents on average. Data on the housing and population composition of the neighbourhoods were created with data from Statistics Finland.[3]

The modelling of NS was done by conducting linear regression analyses (in Stata 17), with standard errors clustered at the neighbourhood level. A series of models were estimated (see Figure 2). After first including only the housing tenure as an explanatory variable, in Model 2, variables measuring physical and locational characteristics of the residential environment were controlled to see how much the difference between the tenures was related to these factors. In Model 3, social characteristics (including the housing tenure composition) were added for a similar reason. In Model 4, the personal characteristics of the respondent were controlled for. The main reason was to control for potential response tendencies that could reflect these characteristics instead of neighbourhood characteristics. A further fifth model controlled for neighbourhood fixed effects, i.e. the neighbourhood identifiers instead of neighbourhood-level explanatory variables, to see the effect of controlling for the neighbourhood's total effects on NS.

Results

Tenure and Neighbourhood Characteristics

In general, there are no marked differences in the locations of tenure groups relative to amenities: students and private tenants live somewhat closer to the centre than other groups, and owners live slightly farther from subcentres (Table 2). Students and private tenants live closest to the sea, which may reflect their more central locations and the centre of Helsinki's location on a peninsula. Distances to amenities such as primary schools, stores and green areas are similar among all tenure groups, pointing to general spatial equality. Despite green areas being close to all groups, owners (and 'other subsidised tenants') enjoy approximately double the amount of green space (m^2) in their neighbourhoods than municipal tenants and students do. This is partly explained by density: owners live in less dense areas (65% of units in flats) than tenants.

Differences emerge when looking at the social composition of neighbourhoods among respondents' tenures: the neighbourhood's median income among owners is higher than in other groups, and the share of residents in the lowest income quintile is lower among owners. On the contrary, municipal tenant respondents live in neighbourhoods with a lower median income and a higher percentage of residents in the lowest income quintile. Municipal tenants' neighbourhoods are similar in shares of children and the elderly as owners' neighbourhoods, but have a larger share of non-Western immigrants, as do other tenants' neighbourhoods compared to owners' neighbourhoods. Municipal tenants live in slightly more transient neighbourhoods than owners, with the largest share of out-movers in other tenant groups. This may reflect the difficulty of obtaining a municipal flat, as queues are long and only a small share of applicants receive offers. However, private tenants' and students' neighbourhoods are more transient than homeowners' or municipal tenants' neighbourhoods.

3 License TK/2958/07.03.00/2021

Table 2. Neighbourhood Characteristics of Respondents by Tenure

	Owners		Municipal tenants		Student housing (subsidised)		Other state-subsidised tenants		Private tenants		Unknown	
	N = 13070		N = 1865		N = 518		N = 630		N = 4936		N = 880	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
LOCATIONAL FACTORS												
Green area/ resident (m^2)	**378**	1955	**174**	350	**140**	127	**416**	3982	**171**	1190	**370**	1624
Distance to green areas (km)	**0.4**	0.4	**0.3**	0.3	**0.3**	0.2	**0.3**	0.3	**0.4**	0.4	**0.3**	0.3
Distance to centre (km)	**10.2**	5.3	**10.0**	4.4	**7.6**	3.9	**10.4**	4.6	**7.6**	5.3	**10.2**	5.1
Distance to sea (km)	**3.8**	3.7	**3.3**	3.0	**2.3**	2.5	**3.8**	3.6	**2.6**	3.2	**3.5**	3.5
Distance to store (km)	**0.5**	0.4	**0.4**	0.3	**0.4**	0.2	**0.4**	0.5	**0.3**	0.3	**0.4**	0.4
Distance to school (km)	**0.5**	0.4	**0.4**	0.2	**0.6**	0.6	**0.5**	0.3	**0.4**	0.3	**0.5**	0.3
Distance to subcentre (km)	**1.0**	1.3	**0.8**	1.0	**0.7**	0.5	**0.7**	1.2	**0.6**	0.9	**0.9**	1.1
DEMOGRAPHIC FACTORS												
Under-18-yr.-old residents (%)	**19.6**	5.9	**19.8**	4.8	**15.4**	6.9	**20.5**	4.8	**16.2**	5.8	**20.4**	5.9
Over-65-yr.-old residents (%)	**16.0**	4.6	**15.5**	5.0	**10.9**	5.6	**14.2**	5.1	**16.1**	4.5	**14.7**	5.1
Non-western immigrants (%)	**13.2**	8.1	**18.2**	8.5	**21.6**	12.1	**18.0**	8.2	**14.1**	8.2	**15.1**	8.5
SOCIOECONOMIC FACTORS												
Median income/25–59-yr.-olds	**35755**	6466	**31285**	4615	**27917**	7603	**32158**	4712	**33524**	5170	**34226**	5960
Lowest income quintile residents (all ages)	**14.9**	6.9	**20.0**	6.5	**28.3**	14.9	**18.7**	6.4	**17.8**	6.0	**16.6**	7.0
HOUSING FACTORS												
Flats of total housing (%)	**65.0**	34.5	**78.7**	24.4	**87.2**	13.7	**78.9**	25.1	**85.1**	21.9	**71.4**	31.7
Subsidised housing (%)	**16.6**	13.6	**32.3**	13.6	**40.1**	16.4	**29.5**	14.1	**17.0**	14.8	**22.2**	16.0
Out-movers within 1 yr. (%)	**12.7**	3.8	**13.1**	2.9	**19.1**	6.8	**13.9**	3.3	**15.2**	4.0	**13.3**	3.5

Variation in Neighbourhood Satisfaction

Respondents are generally satisfied with their neighbourhood conditions, confirming the results of earlier studies (e.g. Strandell, 2017). When looking at the variation of NS spatially (Figure 4), we see variation from approximately 3.5 to 4.7 on a scale of 1 (very dissatisfied) and 5 (very satisfied). Mean NS is positively correlated with neighbourhood median income and negatively correlated with the share of (ARA-subsidised) SH in the neighbourhood

(r = .38), a possible indication of the self-selection of those with better resources to areas corresponding to their needs (see e.g., Parkes et al., 2002; Sharpe et al., 2022), also visible in Finland (Kemppainen & Tuominen, 2015). Additionally, the share of (ARA-subsidised) SH and the share of residents in the lowest income quintile are positively correlated (r = .66), hinting at clustering of objectively measured socioeconomic deprivation and social housing. Despite the equal distribution of key amenities and locational factors among respondent groups (Table 2), it may be that respondents with higher socioeconomic status have a better *capability* to use available amenities, resulting in higher NS (see, e.g. Sen's capability theory, 1993).

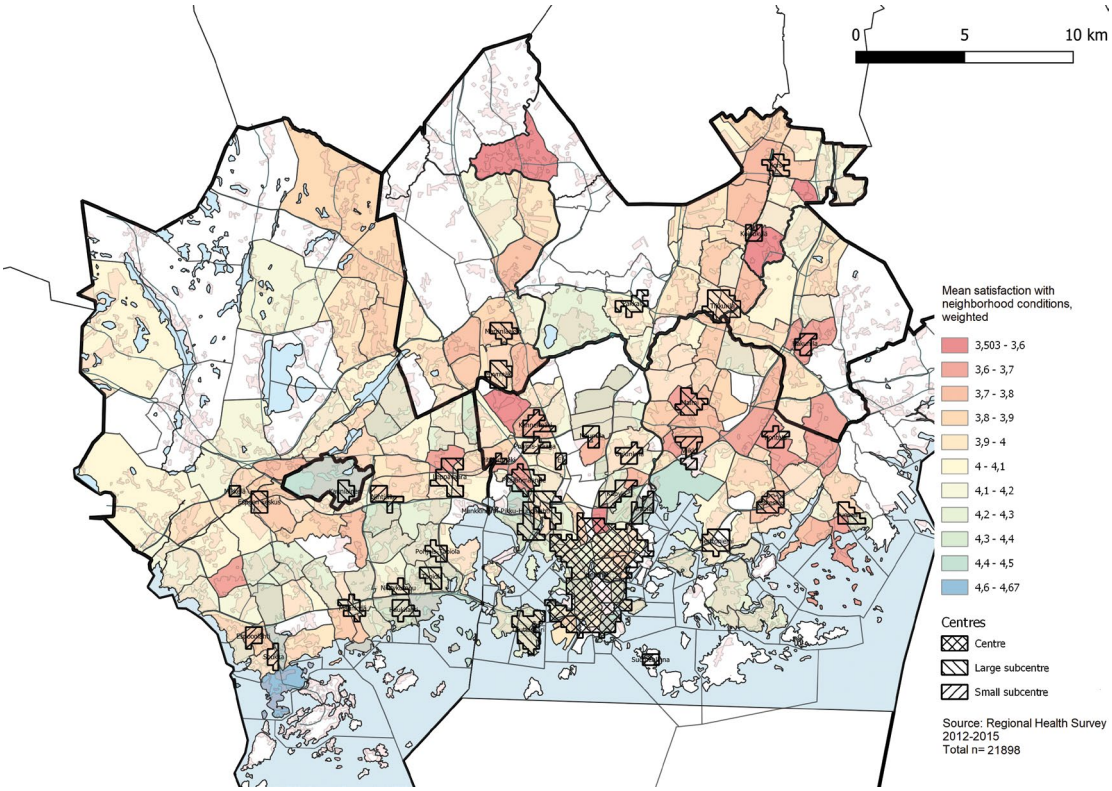

Figure 4. Satisfaction with Neighbourhood Conditions (Mean)

Differences between Tenures in Neighbourhood Satisfaction

The predicted level of NS is 0.46 points higher among homeowners than among municipal tenants on a scale of 1 to 5 (Table 3, Model 1). This difference corresponds to slightly over half of the standard deviation of NS (0.82), making the difference noticeable. NS is also higher for all the other tenures than municipal tenants, although the difference from other state-subsidised housing (excluding student housing) is small and barely statistically significant.

How are the Differences between Tenures Related to the Physical and Locational Characteristics of the Living Environment? The differences are attenuated to some extent when the other housing characteristics and aspects of the physical environment (centre type, distance to the city centre and the sea, green areas, and the housing type and age in the neighbourhood) are controlled (Table 3, Model 2). However, most of the unadjusted differences remain, so the differences between the tenures cannot be explained much by these characteristics of the environment. Inspection of models adding only some of these control

Table 3. Predicted Difference to Municipal Tenants' NS in Linear Regression Models with Different Control Variables

	Model 1: Only housing tenure		**Model 2: Also physical environment**		**Model 3: Also social environment**		**Model 4: Also respondent's background**		**Model 5: Neighbourhood fixed effects**	
Housing tenure	b	95% C.I.	b	95% C.I.	b	95% C.I.	b	95% C.I.	b	95% C.I.
Owner	0,46	(0,39–0,52)	0,38	(0,32–0,44)	0,35	(0,29–0,41)	0,33	(0,27–0,38)	0,32	(0,26–0,38)
Private rental	0,29	(0,21–0,37)	0,21	(0,15–0,28)	0,19	(0,12–0,25)	0,18	(0,11–0,24)	0,17	(0,11–0,24)
Student housing	0,30	(0,15–0,45)	0,25	(0,11–0,39)	0,34	(0,19–0,50)	0,30	(0,14–0,45)	0,20	(0,05–0,35)
Other state-subsidised	0,11	(0,01–0,20)	0,10	(0,01–0,19)	0,09	(0,00–0,18)	0,09	(0,00–0,17)	0,08	(–0.01–0,17)
Other/unknown	0,32	(0,22–0,41)	0,26	(0,16–0,35)	0,24	(0,15–0,33)	0,23	(0,14–0,32)	0,23	(0,14–0,32)
Control variables (X = included):										
Other housing characteristics	–		X		X		X		X	
Centre and distance factors	–		X		X		X		X	
Green areas in the neighbourhood	–		X		X		X		–	
Housing type and age in the neighbourhood	–		X		X		X		–	
Share of state–subsidised rental housing	–		–		X		X		–	
Population composition summary variable	–		–		X		X		–	
Respondent's background characteristics	–		–		–		X		X	
Neighbourhood fixed effects	–		–		–		–		X	
N	20803		20742		20742		20738		20746	
R squared, %	2,9		7,2		7,9		8,8		11,0	

variables at a time reveals that it is particularly the centre type/distance indicator (and the associated age of the housing stock) that helps to explain tenure differences, especially the difference between municipal and private rental dwellings. The latter are more concentrated in the city centre where NS is the highest.

How are the Remaining Differences Related to the Social Environment and the Respondents' Backgrounds? When the share of social rental housing and the population composition of the neighbourhood are additionally controlled for, a very small further attenuation is observed (Model 3). The difference between municipal and student housing tenants increases somewhat because the shares of social rental housing, low-income households and non-Western immigrants are the highest among the respondents living

in student housing, and they still have higher NS. These characteristics may partly refer to other students, however.

The results are otherwise similar when either only the share of social rental housing or only the population composition is controlled for, but the increase in the difference to student housing relates particularly to the population composition. In Model 3, the rather weak negative association between the share of social rental housing and NS vanishes, so the significance of this housing stock characteristic is closely associated with the population composition (their correlation is .68). However, the negative association between the population composition and NS stays almost unchanged when the share of social rental housing is controlled for.[4] Therefore, the population composition has some relevance for NS even after controlling housing stock characteristics that influence this composition, although taking it into account does not explain the association between housing tenure and NS.

Adding the respondent's background variables in Model 4 reduces the differences between the tenures very little. Most of the unadjusted differences remain. We were only able to explain a fraction (2% in the case of student housing, 21%–37% in the case of the other tenures) of the lower NS among the municipal tenants by their backgrounds, the housing type and age, or by the measured characteristics of the neighbourhoods and the residential locations.

Do the Neighbourhood-Level Variables Cover the Relevant Neighbourhood-Level Factors Adequately? Replacing the neighbourhood-level explanatory variables in the model with the neighbourhood fixed effects (Model 5) does not help to explain the differences between the tenures almost at all, except for student housing (which might be related to larger concentrations of student housing). This suggests that we have not missed such relevant neighbourhood-level factors that would explain the differences between the tenures but are uncorrelated with our measured neighbourhood-level variables. Explanations for the remaining differences seem to be related to within-neighbourhood variation.

As there are no municipal tenants among the respondents in 92 neighbourhoods, we checked whether the result of the fixed-effects model changes when only data for the neighbourhoods with municipal tenants are used. The results are similar: the difference between municipal tenants and homeowners is 0.32 also in this case, and the difference to the private rental dwellings is 0.16.

Comparison to Other Related Outcomes: Perceived Safety and Quality of Life

How do the Results Differ with Neighbourhood Safety or Quality of Life as the Outcome? To check how unique the NS findings are compared to similar findings with other satisfaction measures, we conducted similar analyses with either satisfaction with neighbourhood safety or perceived quality of life (QOL) as the outcome. Differences in QOL could be expected to be better explained by individual-level predictors than differences in neighbourhood-related outcomes if the latter outcomes truly measure neighbourhood-related factors.

Table 4 shows the results for similar models as in Table 3 for neighbourhood safety (same 1–5 scale as in NS). Satisfaction with neighbourhood safety is the lowest among municipal

4 When only the share of state-subsidised rental housing is added to Model 2, a one-percentage-point higher share predicts –0.004 points lower NS (95% confidence interval: –0.006, –0.002). When only the population composition variable is added, a one standard deviation higher value predicts a 0.12 points lower NS (95% C.I.: –0.16, –0.08). These change to 0.0004 (95% C.I.: –0.002, 0.002) and –0.13 (95 % C.I.: –0.17, –0.08) in Model 3, correspondingly.

tenants, with smaller differences between the homeowners and free-market tenants than in the case of NS. Similar to the NS analysis, a minority (max. 30%) of the differences between municipal tenants and those in other tenures were explained by all the explanatory variables (Model 4). The addition of the respondent's background characteristics affects the differences between tenures very little and has only a very small impact on the explained share of variance in the outcome (R squared). On the other hand, the fixed-effects model (Model 5) explains more than Model 4, suggesting that some unmeasured neighbourhood-level factors affect tenure differences in satisfaction with neighbourhood safety.

Table 4. Predicted Differences between Other Tenure Types and Municipal Tenants' Satisfaction with Neighbourhood Safety in Linear Regression Models with Different Control Variables

	Model 1: Only housing tenure		**Model 2: Also physical environment**		**Model 3: Also social environment**		**Model 4: Also respondent's background**		**Model 5: Neighbourhood fixed effects**	
Housing tenure	b	95% C.I.	b	95% C.I.	b	95% C.I.	b	95% C.I.	b	95% C.I.
Owner	0,37	(0,30–0,44)	0,28	(0,22–0,34)	0,25	(0,19–0,31)	0,26	(0,20–0,32)	0,24	(0,18–0,30)
Private rental	0,25	(0,16–0,33)	0,20	(0,14–0,26)	0,18	(0,12–0,24)	0,17	(0,12–0,23)	0,16	(0,10–0,22)
Student housing	0,29	(0,10–0,47)	0,24	(0,12–0,36)	0,35	(0,16–0,54)	0,32	(0,13–0,51)	0,13	(0,01–0,26)
Other state-subsidised	0,16	(0,05–0,26)	0,15	(0,06–0,24)	0,14	(0,06–0,23)	0,14	(0,05–0,22)	0,10	(0,01–0,20)
Other/ unknown	0,34	(0,25–0,43)	0,27	(0,19–0,35)	0,26	(0,18–0,34)	0,26	(0,18–0,34)	0,24	(0,16–0,33)
N	20577		20518		20518		20514		20522	
R squared, %	2,1		8,7		9,8		10,1		14,0	

In the case of QOL, the differences between the tenures are similar but smaller than in NS, except for student housing (Table 5). Altogether, the explanatory variables in Model 4 explain the difference between municipal and free-market tenants much more (by 59%) than the difference between municipal tenants and homeowners (by 24%). This is due to the addition of the individual-level predictors in Model 4, which also explains a large share of the difference between municipal tenants and those in student housing. Also, R squared jumps in this model from 6% to 13%, suggesting strong overall importance of individual-level factors in explaining QOL. The neighbourhood fixed effects do not explain more of the differences between the tenures, except for student housing (although R squares increase a little), so there do not seem to be unmeasured neighbourhood-level factors affecting the QOL differences.

A further check was to estimate multilevel linear regression models for all three outcomes with the individuals and the neighbourhoods as the levels and no explanatory variables, i.e. 'empty' models. This showed that 5.8% of the variance of NS is at the neighbourhood level, 9.4% of the variance of neighbourhood safety, and 2.9% of the variance of QOL. Therefore, NS is between the other two outcomes regarding the share of its variation being between neighbourhoods instead of between individuals.

In summary, the results for the two neighbourhood-related outcomes are similar, as expected, due to their supposed measurement of neighbourhood-level factors, but

Table 5. Predicted Differences between Other Tenure Types and Municipal Tenants' Perceived Quality of Life in Linear Regression Models with Different Control Variables

	Model 1: Only housing tenure		**Model 2: Also physical environment**		**Model 3: Also social environment**		**Model 4: Also respondent's background**		**Model 5: Neighbourhood fixed effects**	
Housing tenure	b	95% C.I.	b	95% C.I.	b	95% C.I.	b	95% C.I.	b	95% C.I.
Owner	0,43	(0,38–0,48)	0,36	(0,31–0,42)	0,34	(0,29–0,40)	0,33	(0,28–0,38)	0,33	(0,28–0,38)
Private rental	0,23	(0,16–0,30)	0,18	(0,12–0,24)	0,16	(0,10–0,23)	0,09	(0,04–0,15)	0,10	(0,03–0,16)
Student housing	0,40	(0,30–0,51)	0,38	(0,28–0,48)	0,43	(0,33–0,54)	0,23	(0,12–0,33)	0,19	(0,08–0,31)
Other state-subsidised	0,09	(0,00–0,19)	0,06	(-0.04–0,16)	0,06	(–0.04–0,16)	0,05	(–0.04–0,14)	0,05	(–0.04–0,14)
Other/ unknown	0,26	(0,17–0,35)	0,19	(0,10–0,28)	0,18	(0,09–0,27)	0,17	(0,09–0,25)	0,17	(0,09–0,26)
N	20624		20563		20563		20559		20567	
R squared, %	3,2		5,4		5,7		13,3		14,5	

neighbourhood safety still seems more strongly related to neighbourhood-level factors. Our expectation that in the case of QOL, a larger share of variance and the differences between the tenures would be explained by individual-level predictors was mostly confirmed. Therefore, the results suggest that the NS question measures neighbourhood-level factors to a larger extent than the QOL question. The remaining difference between municipal tenants and homeowners in QOL could mean that the similarity in NS partly reflects a more general association between homeownership and various wellbeing measures. It might be, for example, that being able to enter and remain in homeownership in the Helsinki metropolitan area generally signifies a long-standing, sufficiently stable, and secure life situation that leads to higher perceived quality of life and eases the fulfilment of neighbourhood preferences. Ultimately, this could be a question of economic resources. The difference in NS between homeowners and municipal tenants may still reflect actual differences in the neighbourhood contexts. However, the explanation for this difference may be in the increased freedom of choice brought by higher economic resources among homeowners.[5]

Discussion

Allardt's theory of objective and subjective wellbeing factors (Table 1) formed a framework for this study. According to this theory, objective and subjective factors are interlinked and should be seen together to understand the full context of subjective wellbeing. In this study, we focus on the first component of wellbeing, 'having'. On the objective side, this means the level of living and environmental conditions. On the subjective side, this means satisfaction with the former. Within the subjective side of 'having' (NS), we look more closely at the role of tenure. As tenure is inherently connected to objective resources such as income, particularly in homeowner societies such as Finland, it is essential to look first at whether homeowners and tenants live in objectively different environments, which could

5 Addition of the perceived sufficiency of income would help to explain the remaining differences between the tenures, but we did not include this explanatory variable in the models, as controlling it could be over-controlling, if the various subjective aspects of well-being are seen as interrelated parts of general perceived well-being and therefore endogenous.

cause corresponding differences in perceptions of the living environment. Our descriptives show that neighbourhood amenities and locational characteristics do not differ markedly by tenure in the Helsinki metropolitan area. Distances to amenities such as primary schools, stores, and green areas are similar among all tenure groups, pointing to general spatial equality. Another question is whether all social groups can equally take advantage of locational benefits (see, e.g. Sen's capability theory, 1993).

Differences emerge when looking at the social structure: the median neighbourhood income among owners, for example, is higher than among other groups. Previous studies show that neighbourhood SES is linked with NS (Lu, 1999; McCulloch, 2012; Mohan & Twigg, 2007; Sampson, 1991; Stipak & Hensler, 1983). The question here is to which extent this is applicable to welfare states with internationally small income differences. We hypothesised that municipal tenants would have a lower level of NS than homeowners, as we know from previous Finnish studies that objective resources (e.g., income, health) among social tenants are lower than in other tenures and that these individual-level resources contribute to subjective wellbeing. Further, social housing in the region is clustered, limiting the neighbourhood experiences of municipal tenants to certain areas, reflected in their social composition. The results of this study confirm our hypothesis: the predicted level of NS is lower among municipal tenants than homeowners. NS among municipal tenants is also lower than among other tenants. It is particularly the centre type/distance indicator that helps explain some of the tenure differences, especially between municipal and private rental dwellings. The latter are more concentrated in the city centre where both NS and rents are the highest. Notably, respondents are generally satisfied with their neighbourhood conditions, confirming the results of earlier studies (see e.g. Strandell, 2017).

Surprisingly, most differences in NS between the tenures cannot be explained by locational, physical, or social characteristics of the environment or respondents' backgrounds. Four potential explanations can be presented for the remaining differences. Firstly, NS may be evaluated at a smaller scale than the neighbourhood units used in this analysis. For example, neighbourhood disturbances might be most tangible to residents on a building or block scale. Additionally, characteristics of the dwellings, i.e. housing standards in the municipal rental sector, may influence reported NS. A second potential explanation is that different aspects of the neighbourhood are relevant for the municipal tenants compared to residents in the other tenures. We could not test this as there were not enough more detailed questions about the neighbourhood in the survey. A third possible reason is that some relevant individual-level factors affecting tenure and NS were omitted, although we did control for several central factors. A last explanation could be that responses to the NS question reflect something beyond actual neighbourhood conditions. Of these explanations, we could test the last one to some extent and found indications that these responses may partly reflect general subjective wellbeing.

These questions open space for further study on the scale at which NS is evaluated and on possible tenure-related differences in environmental attributes contributing to NS. For example, examining neighbourhood conditions on a block scale may reveal objective factors influencing NS, which are not visible on a neighbourhood scale. In this respect, a more detailed analysis of block-scale factors would be a topic of further research. The focus of this study was on the neighbourhood scale. Methodologically, it could be better to ask more concrete questions about the perception of the respondent's neighbourhood, as NS is not as strongly linked to the neighbourhood as perceived safety. Using a large national wellbeing survey to measure neighbourhood characteristics and satisfaction has disadvantages: a national survey cannot capture all questions specific to local neighbourhoods, and there is

limited space in the survey for questions related to such a specific topic. On the other hand, the survey had a sample size large enough to study variation between and within neighbourhoods, and due to a large number of questions, it allowed the NS question to be studied in a wider frame of wellbeing.

Conclusions

Even in a Nordic capital that has made a conscious and long-term effort at small-scale mixing, social housing is not evenly, geographically spread out – quite the opposite. Therefore, clustering of social tenants occurs, possibly in less desirable environments. The goal of social mixing relies on diluting the spatial concentration of deprivation to counteract segregation and neighbourhood effects: living among neighbours of higher socioeconomic status could positively affect the outcomes of residents with a lower socioeconomic status. These positive outcomes could be the objective outcomes commonly studied in NE literature, such as income or education. Following Allardt's theory of wellbeing, changes in objectively measured wellbeing would also be reflected in subjective wellbeing: e.g. neighbourhood satisfaction, QOL or perceived safety studied here. We found, however, that while different tenure groups live in similar urban conditions in the Helsinki metropolitan area, they do not live in similar socioeconomic conditions, nor do they enjoy the same levels of NS, QOL or perceived safety. Among the variables studied, neighbourhood income, particularly the share of residents in the lowest income quintile, goes hand-in-hand with the share of social rental housing. Therefore, the findings of this study conclude that tenure mixing has not eradicated differences in subjective experiences, as it has furthered spatial justice.

In order to fully equalise differences across tenure groups, municipal tenants would need to live in areas 'better' than their present neighbourhoods to attain the same level of satisfaction as other groups. Our results showed that municipal tenants lived in equal spatial conditions but more disadvantaged socioeconomic conditions than other groups, the latter reflected in differences in subjective wellbeing. Gaps in subjective wellbeing among tenure groups risk fuelling growing socioeconomic segregation among neighbourhoods because tenures cluster geographically. Certain groups (e.g. families with children) may be more sensitive to the social disturbances that are more common in municipal housing (see, e.g. Kemppainen, 2017), or they may be more sensitive to neighbourhood reputation or critical amenities such as school quality, inducing out-movement patterns of the well-off. This may lead those with fewer resources to stay involuntarily (Kemppainen et al., 2020) and/or promote out-movement patterns of those with better resources to private tenancy, further fuelling municipal tenants' 'falling in place'. When this marginalising group of municipal tenants is spatially clustered, it creates a risk for further segregation rather than a basis for fighting segregation, as currently promoted by municipal, regional, and state-level programmes.

Because the tool behind social mixing policies in Finland traditionally provides social housing (Rasinkangas et al., 2023), existing barriers to social housing should be analysed first. Barriers include land ownership: municipalities with higher land ownership, such as Helsinki, can adopt more active land-use policies. Further, building through densification or on brownfield sites is expensive, and state-imposed cost limits may rule out social housing in these locations, directing construction to less desirable locations. Finally, social housing may be opposed (or not even proposed) in higher-income areas.

As tenure mixing has proven difficult due to the many unresolved barriers described, the role of area-based initiatives becomes more important. Area-based initiatives are a reactive equalising tool for neighbourhood differences, targeting the built environment and

often services such as schools. Currently, Helsinki runs its own Suburban Regeneration Programme, and a similarly named programme includes a wider basket of neighbourhoods in the Helsinki region, usually dating from the 1960s to the 1990s, in need of housing and infrastructure updates. From a NS viewpoint, the positive discrimination of areas with high shares of municipal tenants to provide better neighbourhood conditions is justified to equalise differences in subjective wellbeing among tenure groups and de-escalate out-movement patterns of the well-off. Another potential application of these programmes would be targeting areas with high shares of tenants in general, including new private rental housing clusters posing a risk for segregation due to, e.g. the clustering of small units and immigrants. Currently, the local government lacks tools to socially diversify these areas as it cannot determine the share of private rental housing in its social mixing policy. This study does not fully capture the sharp rise in small apartments in private rental housing, which has occurred in recent decades in the Helsinki metropolitan area. The pressure on the quality and safety of the immediate surroundings becomes magnified when units are small. Areas with private rentals built during the 2010s boom are predominantly new neighbourhoods. However, careful surveillance of their neighbourhood conditions and possible immediate reactive measures would reduce the risk of these areas slipping into decline, necessitating reactive area-based initiatives on a larger scale in the future.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix Table 1. Complete results of the linear regression model M4 ("Also respondent's background) in the analysis of neighbourhood satisfaction

	b	s.e.	t	p	95% C.I.
Housing tenure (ref. = State–subsidised rental)					
Owner	0.33	0.03	11.13	<.001	(0.27 – 0.38)
Private rental	0.18	0.03	5.49	<.001	(0.11 – 0.24)
Student housing	0.30	0.08	3.83	<.001	(0.14 – 0.45)
Other state–subsidised	0.09	0.04	1.99	.048	(0.00 – 0.17)
Other/unknown	0.23	0.05	5.00	<.001	(0.14 – 0.32)
Construction year of the house (ref. = 1960–1979)					
–1940	0.10	0.04	2.54	.012	(0.02 – 0.18)
1940–1959	0.05	0.02	2.13	.034	(0.00 – 0.10)
1980–1999	0.04	0.02	1.85	.066	(0.00 – 0.08)
–2000	0.11	0.02	4.94	<.001	(0.07 – 0.16)
Housing type (ref. = Single–family / duplex / terraced)					
Multi–storey	–0.11	0.02	–4.81	<.001	(–0.15 – –0.06)
Centre type / distance to centre (ref. = within 5 km of the Helsinki city centre)					
Not centre, distance to Helsinki city centre 5–10 km	0.05	0.05	0.98	.328	(–0.05 – 0.15)
Not centre, distance to Helsinki city centre 10–15 km	–0.08	0.05	–1.75	.082	(–0.17 – 0.01)
Not centre, distance to Helsinki city centre 15–20 km	–0.15	0.05	–2.96	.003	(–0.25 – –0.05)
Not centre, distance to Helsinki city centre >20 km	–0.13	0.06	–2.36	.019	(–0.25 – –0.02)
Sub–centre, distance to Helsinki city centre 5–10 km	–0.06	0.04	–1.61	.109	(–0.13 – 0.01)
Sub–centre, distance to Helsinki city centre 10–15 km	–0.05	0.04	–1.14	.254	(–0.14 – 0.04)
Sub–centre, distance to Helsinki city centre 15–20 km	–0.06	0.05	–1.21	.227	(–0.15 – 0.03)
Sub–centre, distance to Helsinki city centre >20 km	–0.19	0.06	–3.46	.001	(–0.30 – –0.08)
Distance to a grocery store (ref. = <200 m)					
200–499 m	0.05	0.02	2.63	.009	(0.01 – 0.09)
500 m –	0.05	0.02	2.19	.029	(0.01 – 0.10)
Distance to the sea (ref. = <500 m)					
500 m–5 km	–0.09	0.02	–4.41	<.001	(–0.14 – –0.05)
5 km –	–0.17	0.03	–6.36	<.001	(–0.22 – –0.12)
Green areas per resident[1] (unit = 100 m^2)	–0.0019	0.0006	–3.32	.001	–(0.0030 – –0.0008)
Squared term	3.39E–06	1.47E–06	2.31	.022	4.96E–07 – 6.29E–06
Share of dwellings in multi–storey apartment buildings, %[1]	–0.0002	0.0008	–0.29	.772	–(0.0017 – 0.0013)
Squared term	–2.4E–05	1.3E–05	–1.89	.059	(–4.9E–05 – 9.7E–05)
The most common construction period in the housing stock (mode) (ref. = before the 1950s)					
1950s	0.02	0.04	0.37	.713	(–0.07 – 0.10)
1960s	–0.04	0.05	–0.81	.417	(–0.13 – 0.06)
1970s	–0.11	0.05	–2.30	.022	(–0.20 – –0.02)
1980s	–0.13	0.05	–2.54	.012	(–0.24 – –0.03)
1990s	–0.10	0.05	–1.88	.061	(–0.21 – 0.00)
2000s	–0.06	0.05	–1.07	.287	(–0.16 – 0.05)
2010s	–0.15	0.07	–2.19	.030	(–0.29 – –0.02)
Share of state–subsidised rental dwellings, %	0.0002	0.0010	0.18	.859	(–0.0018 – 0.0022)
Population composition summary variable (standardised)[2]	–0.11	0.02	–5.02	<.001	(–0.16 – –0.07)

	b	s.e.	t	p	95% C.I.
Gender (ref. = Female)					
Male	–0.05	0.01	–3.54	<.001	(–0.08 – –0.02)
Age, years (ref. = <35)					
35–54	–0.08	0.02	–4.33	<.001	(–0.12 – –0.04)
55–74	0.00	0.02	–0.21	.835	(–0.05 – 0.04)
75 –	0.06	0.04	1.53	.126	(–0.02 – 0.13)
Country of birth (ref. = Finland)					
Foreign	–0.23	0.03	–7.07	<.001	(–0.29 – –0.16)
Household size (ref. = Single person)					
Two persons	0.06	0.02	3.57	<.001	(0.03 – 0.09)
Three persons or more	0.05	0.02	2.28	.023	(0.01 – 0.09)
Main type of activity (ref. = Employed)					
Pensioner	–0.03	0.02	–1.45	.149	(–0.07 – 0.01)
Unemployed	–0.05	0.04	–1.35	.177	(–0.13 – 0.02)
Unknown	–0.05	0.03	–1.70	.091	(–0.11 – 0.01)
Constant	4.05	0.07	60.64	<.001	(3.92 – 4.18)

[1]Centred, measures difference to the mean value among respondents living outside the city centre.

[2]The mean of standardised values of the shares of low–income residents and non–Western immigrants.