National Social Housing Survey 2021

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About

The 2021 National Social Housing Survey was conducted during the COVID-19 pandemic providing a unique insight into the benefits of social housing during this time. In 2021, satisfaction was high among social housing tenants (almost 3 in 4 tenants were satisfied), but there were differences between housing programs and states and territories, with most of the variation in satisfaction due to the structural condition of dwellings. Nearly all tenants reported feeling more settled and being able to manage their rent better as benefits of living in social housing.

Cat. no: HOU 332

Findings from this report:

- <u>73% of tenants were satisfied with the overall services provided by their social housing organisation in 2021</u>

- <u>Three quarters of tenants were satisfied with emergency maintenance services</u>

- <u>80% of tenants who had to work/study from home or home school children during COVID-19 said their home met their needs</u>

- <u>Satisfaction was closely related to the condition of tenants homes: as structural problems increased, satisfaction fell</u>

State and territory summary data

The data visualisation displays a summary of key national as well as state and territory data from the National Social Housing Survey. Data presented are available in the individual sections of this report and in the data download section.

Australian Government
Australian Institute of Health and Welfare

National Social Housing Survey in Australia

| Australia | NSW | Vic | Qld | WA | SA | Tas | ACT | NT |

The NSHS reports tenants' perspectives on social housing to provide a more person-centred approach to the Australian social housing experience. The findings on the lived experiences of social housing tenants assist with understanding of tenants' needs, and if housing policy objectives are being fulfilled.
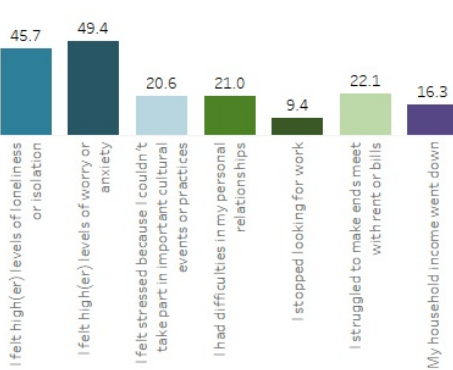
Were tenants satisfied?

Around 72.9% of tenants in Australia were satisfied with the overall services provided by their social housing organisation in 2021.

Bar chart: All 72.9, PH 72, CH 76.4, SOMIH 64.5

COVID-19 impacts

In addition to asking tenants about their overall satisfaction and whether their home met their needs during the COVID-19 pandemic, tenants were asked about problems they experienced because of COVID-19. 49.4 % reported high(er) levels of worry or anxiety because of COVID-19.
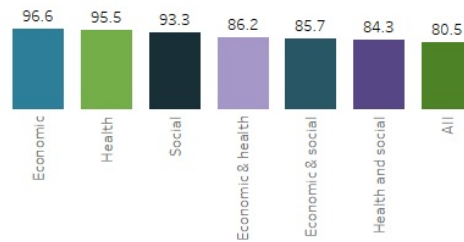
Bar chart:
- I felt high(er) levels of loneliness or isolation: 45.7
- I felt high(er) levels of worry or anxiety: 49.4
- I felt stressed because I couldn't take part in important cultural events or practices: 20.6
- I had difficulties in my personal relationships: 21.0
- I stopped looking for work: 9.4
- I struggled to make ends meet with rent or bills: 22.1
- My household income went down: 16.3

Quick facts – Australia

In 2021:
- 72.9% of tenants were satisfied with the overall services provided by their social housing organisation
- 95.2% of tenants reported *feeling more settled* as one of the main benefits to living in social housing.
- Of the tenants who had to spend more time at home due to the COVID-19 pandemic, 89.5% felt their needs were met by their housing situation.
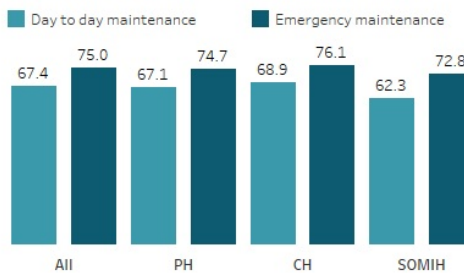
What benefits were reported?

In 2021, around 80.5% of tenants reported benefits across all life domains—economic, social and health. Almost all tenants reported gaining at least one broad benefit from living in social housing—be it economic (96.6%), health (95.5%) or social (93.3%).

Bar chart:
- Economic: 96.6
- Health: 95.5
- Social: 93.3
- Economic & health: 86.2
- Economic & social: 85.7
- Health and social: 84.3
- All: 80.5

Were tenants satisfied with maintenance services?

Of those surveyed, 67.4% of tenants were satisfied with day-to-day maintenance, whilst 75.0% of tenants were satisfied with emergency maintenance services.

Legend: Day to day maintenance / Emergency maintenance

Bar chart:
- All: Day to day 67.4, Emergency 75.0
- PH: Day to day 67.1, Emergency 74.7
- CH: Day to day 68.9, Emergency 76.1
- SOMIH: Day to day 62.3, Emergency 72.8

Note: # indicates jurisdiction finding is statistically different, at the 95% confidence level, from the finding for the rest of Australia.
Source: National Social Housing Survey
**Published:** 20 October 2022

Introduction

On this page:

What is social housing?

Social housing is low cost or subsidised rental housing provided to eligible Australians by government or non-government (including not-for-profit) organisations. In recent times, social housing has increasingly been provided to those in 'greatest need' relative to others on the waiting list, for example, those experiencing homelessness, family or domestic violence, or those with disability or special needs. For more information see the Entries, exits and transfers and Supply of social housing in Housing assistance in Australia.

In 2020–21, there were almost 790,000 people living in over 440,000 social housing dwellings across Australia. The 3 main Australian social housing programs relevant to the National Social Housing Survey are public housing, state owned and managed Indigenous housing (SOMIH) and community housing (Figure Intro.1). For more information on demographics of people in social housing, see the Occupants and Households sections of Housing assistance in Australia.

Figure Intro.1: Australians living in the 3 main social housing programs, 2020-21

This bar chart shows that in 2020–21, public housing had around 554,700 occupants, followed by community housing with around 185,800 and SOMIH with 49,500.
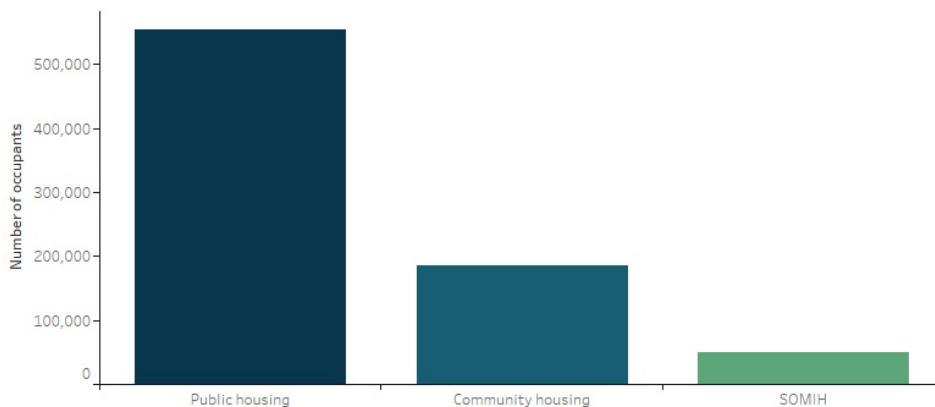
Source: AIHW National Housing Assistance Data Repository.

The impact of housing on health and wellbeing

Housing is more than simply shelter. Housing can shape the health and wellbeing of Australians. Where people live and the condition of their housing can have far-reaching impacts on their health, as well as the quality of life enjoyed—or endured (Fujiwara 2013; Marmot et al, 2012).

Housing conditions relate to the physical characteristics and quality of the dwelling, such as its structure, facilities and amenities. Housing conditions influence various aspects of health, including mental and physical health, and respiratory and cardiovascular disease risk. For example, living in a cold, mouldy and damp home can increase the risk of respiratory diseases (Wimalasena et al. 2021). Living in persistently inadequate housing is associated with worsening mental health (Pevalin et al. 2017; Singh et al. 2019).

Housing location relates to the environmental characteristics affecting the lifestyle and experiences afforded to tenants, such as their access to transport, shops and friends and family. As such, it can affect people's wellbeing and lives. For example, housing location can affect who they can socialise with, where they can work, what schools they can attend and which services they can reasonably access (Ong et al. 2022; Paddison et al. 2012; Phibbs and Thompson 2011).

In this way, housing can have a dramatic bearing on people's health and wellbeing through such domains as education, earnings, social/community engagement, exposure to disease, healthcare access and of course, life itself (Clapham et al. 2017).

For more information on housing and wellbeing indicators, such as affordability, see Australia's welfare indicators.

About the National Social Housing Survey (NSHS) 2021

The NSHS is the largest social housing study conducted in Australia and complements other data on social housing in Australia, that is, administrative data collected by social housing providers and reported in Housing assistance in Australia.

The primary objective of the NSHS is to gain insights into the lived experiences of social housing tenants and their satisfaction with housing service providers, amenities, and maintenance services, as well as tenants' perceived benefits of living in social housing. NSHS offers tenants' perspectives on social housing to allow for a more person-centred approach to the Australian social housing experience. The findings on the lived experiences of social housing tenants assist in understanding tenant needs and whether housing policy objectives are being fulfilled.

Social housing households from all states and territories were sampled in the NSHS. Information on the housing programs covered in each jurisdiction is outlined in Table Intro.1.

Table Intro.1: Coverage and scope of social housing programs, states and territories, NSHS 2021

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
State/territory has PH	Y	Y	Y	Y	Y	Y	Y	Y
PH in-scope for 2021 NSHS	Y	Y	Y	Y	Y	Y	Y	Y
State/territory has SOMIH	Y	N	Y	N	Y	Y	N	Y
SOMIH in-scope for 2021 NSHS	Y	. .	Y	. .	Y	Y	. .	N
State/territory has CH	Y	Y	Y	Y	Y	Y	Y	Y
CH in-scope for 2021 NSHS	Y	Y	Y	Y	Y	Y	Y	N

Y - yes

N - no

. . - not applicable

The 2021 NSHS is the most recent in a series of surveys of social housing tenants. The previous NSHS was undertaken in 2018 and while the NSHS is ordinarily undertaken every 2 years, the 2020 survey was delayed due to COVID-19. The survey was administered between April and September 2021.

The impact of COVID-19 affected several aspects of the NSHS survey including:

- survey delivery mode (less face-to-face interviews were able to be carried out)
- Indigenous Community Housing tenants were not surveyed. In 2018, Indigenous Community Housing tenants in Queensland were surveyed for the first time.
- delayed postage (impacted timeliness and survey follow up).

Lonergan Research administered and conducted the survey on behalf of the AIHW. Social housing tenants were randomly selected based on the demographic characteristics of each program by state. Participating tenants completed the survey form either on paper, online, face-to-face or over the telephone. Detailed information on the impact of COVID-19 and other information on the survey implementation are detailed in the methodological report.

Additional questions were incorporated regarding COVID-19 and its impact on social housing. More detail is provided in the COVID-19 section of this report.

Information on the number of survey responses received for each social housing program is outlined in the box below, with more information in the supplementary tables.

> **2021 NSHS Sample Information**
>
> A total of 8,976 NSHS questionnaires were completed in 2021:
>
> - 8,443 via mail-out or online
>   - 4,556 by public housing tenants
>   - 837 by SOMIH tenants
>   - 3,050 by community housing tenants
> - 533 were face-to-face interviews with SOMIH tenants (NSW).

Understanding tenant satisfaction statistics

The key findings from the 2021 NSHS are presented in this report. The descriptive statistics presented are proportions (per cent) obtained by applying weights to the NSHS sample responses. That is, not every social housing household was surveyed so statistical methods (weighting) was used to ensure that estimates better represent all tenants in social housing, rather than just those who were surveyed.

Results of logistic regression analyses are also presented to provide an insight into the factors most closely associated with tenant satisfaction. Regression analysis is a statistical technique used to explore the relationships between factors (or variables) and an outcome.

In some instances, where appropriate, the results from 2014, 2016, and 2018 are used for comparisons. More detailed data are available in the supplementary data tables. More information on the NSHS statistical methodology (such as sampling and weighting), is provided in the technical notes.

Are observed differences statistically significant and what does that mean in this report?

Tests of statistical significance compare observed data to a hypothesised data model, gauging the compatibility between what has been observed and the hypothesis. Under the hypothesis, the chance of obtaining data as or more incompatible as the observed data are calculated. If this probability is below a given threshold, the result is declared to be statistically significant. Statistical significance does not imply a difference is big, meaningful, or important. Here, the term 'significantly' refers to statistically significant results which are explicitly described or highlighted as such throughout this report.

Significance is affected by the number of people sampled. When there is a large enough number of people in a sample, even very small differences can be statistically significant, whereas large changes can be missed when a small number of people are sampled.

Readers are encouraged to consult the confidence interval data tables when interpreting differences in estimates between populations or over time. A confidence interval is statistical term describing a range (interval) of values that covers the true population value with a known confidence. The confidence level used in this report is 95%.

References

Clapham D, Foye C and Christian J (2017) 'The concept of subjective well-being in housing research', *Housing, Theory and Society, 35*(3):261-280.

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Were tenants satisfied with social housing services?

On this page:

'My housing organisation responds promptly to requests and really encourages us to build a sense of community. They are very supportive of our needs as individuals and a community.'

'They are very responsive and I can contact them directly. They are thorough and prompt and generous with what they do to help us.'

'We have more stability, harmony and gratitude thanks to living in affordable housing.'

– Community housing tenants

'Public housing was the best thing that happened for me, it has given me a home. For many years I lived on the streets and now I have my own home and am very happy here. Thank you so much.'

'Overall the service which has been given has been excellent in terms of punctuality, quality and the caring towards the elderly.'

– Public housing tenants

'As soon as I contact them, it's easy for me talk to someone and it's quick service for what I need and easy help for me, thank you so much for helping me always.'

'I was looked after extremely well by office staff through the situation leading me to go into social housing. The house was very clean and in great condition.'

– SOMIH tenants

Tenant satisfaction with overall services provided by their housing organisation refers to whether tenants are generally happy with the services they received. It is a reflection of whether providers are delivering high quality social housing services while also capturing tenants' perspective on aspects of social housing.

This section presents estimates of the proportion of social housing households who were satisfied with the overall services provided by their housing organisation. The estimates were calculated by applying weights to the NSHS sample responses. For more information on the NSHS methodology, see the technical notes.

NSHS question about overall satisfaction with housing services

Information about social housing tenants' satisfaction was obtained from responses to the question:

'In the last 12 months, how satisfied were you with the **overall services** provided by your housing organisation?'

Respondents selected from the following:

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied
- Not applicable.

Satisfied refers to 'satisfied' or 'very satisfied' responses.

The term **satisfaction rate** refers to the proportion (%) of social housing tenants who were satisfied with the overall services provided by their housing organisation.

Satisfaction varied between states and territories

'Our accommodation manager is excellent. She responds very quickly to queries and issues and is happy to spend time with residents to ensure that everyone is happy with the result.'

'Because we are living in social housing we are treated like second class citizens and talked down to.'

'They are always open to discuss issues/concerns with me and follow up with courtesy phone calls or alternatives, such as to arrange a home visit.'

Almost three-quarters (73%) of tenants were satisfied with the overall services provided by their social housing organisation in 2021. The satisfaction rate varied by state and territory, with satisfaction highest among tenants in Queensland. Across all social housing programs (Figure Satisfaction.1, Table S1.1):

- Queensland had the highest satisfaction rate at 83%, followed by Western Australia (80%), Northern Territory (79%), South Australia (79%) and Tasmania (76%).
- New South Wales and Victoria both had a satisfaction rate of 68% and the Australian Capital Territory had the lowest overall satisfaction rate at 64%.

Figure Satisfaction.1: Tenant satisfaction (%), by housing program, states and territories, 2014 to 2021

This interactive bar chart shows the tenant satisfaction rate has been variable within each of the housing programs in each state and territory from 2014 to 2021.
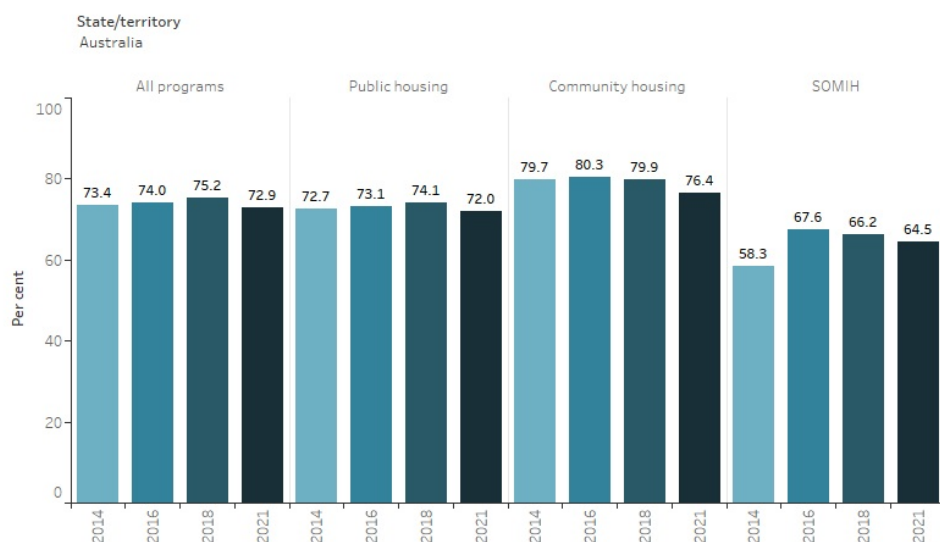
Note: # Indicates jurisdiction finding is statistically significantly different, at the 95% confidence level, from the finding for the rest of Australia.

Source: National Social Housing Survey 2021. Supplementary Table S1.1.

Satisfaction varied between programs

'The staff are very friendly and helpful all the time with anything. They are very committed to help residents keep a roof over their heads and support with any individual's life issues.'

'Department of Housing staff do not completely listen to tenant maintenance concerns. I personally feel that most staff that I have been in contact with do not care about the tenants. Their attitude towards tenants is we are poor, uneducated, sit at the lower rung of society and are a burden to Australia.'

'The housing service is reliable, punctual and very effective. The day to day service is always managed by professional staff and communication and interaction between the staff and myself are always cordial with mutual respect and tactful diplomacy making it a delight to interact with them.'

Nationally, tenants in community housing had a higher satisfaction rate (76%) than public housing (72%) and SOMIH (65%) in 2021. This pattern was observed in all states and territories except for Queensland, where the satisfaction rate was highest in public housing (83%) (Figure Satisfaction.1,Table S1.1). For the Northern Territory, public housing was the only housing program in scope for the NSHS.

Satisfaction rates with public housing ranged from 63% in the Australian Capital Territory to 83% in Queensland. Satisfaction rates with community housing providers ranged from 72% in Victoria to 84% in Western Australia. For SOMIH, New South Wales had a satisfaction rate of 54% compared with 80% in Queensland (Figure Satisfaction.1,Table S1.1).

It is important to note that the variance among social housing programs is related to other factors. See Which factors were significantly associated with tenant satisfaction? for further details on the underlying factors that explain the variation among social housing programs.

Satisfaction with services has declined over time

The overall satisfaction rate of 73% in 2021 decreased from 75% in 2018. The satisfaction rate decline in 2021 – while modest – contrasts with the trend of generally steady increase or stability since 2014 (Figure Satisfaction.1, Table S1.1).

Queensland had the highest tenant satisfaction rates in the surveys 2014 to 2021. The Australian Capital Territory had the lowest rate in 2021, with the satisfaction rate declining from 73% in 2018 to 64% in 2021, mostly due a lower satisfaction rate among public housing tenants (decreased from 73% to 63%) (Figure Satisfaction.1, Table S1.1).

In 2021, satisfaction rates in the Northern Territory and South Australia were stable (both 79%), while rates in Western Australia increased from 78% to 80%. Satisfaction rates declined in all others states and territories when compared with 2018 (Figure Satisfaction.1, Table S1.1).

'We are dissatisfied because our concerns aren't taken seriously as we would be in private rent. Several of our concerns we have not even heard back from housing and they haven't been addressed yet.'

'I have been extremely dissatisfied. Chronic issues have been reported for years and fall onto deaf ears.'

COVID-19 pandemic impacts on social housing tenants

On this page:

> 'Our housing provider gave us updated info and contact details for issues when COVID-19 impacted access to offices. Phone and emails were replied to reasonably promptly.'

Household needs met during the COVID-19 pandemic

To understand whether social housing met certain specific needs during the COVID-19 pandemic, tenants were asked about the situations listed in the box below.

Additional question about needs during COVID-19

Information about COVID-related situational needs met by tenants' homes were obtained from responses to the following question:

'Thinking about your experience during the COVID-19 pandemic, did your home meet your needs in the following situations':

- had to **work or study** from home, or **home-school** children
- had to **accommodate extra family members** in your home (e.g. because COVID-19 brought them financial or other problems)
- had to **spend a lot more time at home** due to 'lockdown', or other COVID-19 restrictions about leaving the house of having people over

Respondents indicated the needs met by selecting either: this happened and my home met my/our needs, this happened and my home did not meet my/our needs, this did not happen to me/us.

Not all types of COVID-related needs were equally met. Among households living in public and community housing, around 60% of tenants who had to accommodate extra family members considered this need was met by their home, compared with around 80% who had to work or study from home, or home-school children and 90% who had to spend a lot more time at home. Needs met among SOMIH tenants showed a similar pattern, however, the proportion who considered their needs met was generally higher across the various measures.

> 'Before the pandemic if we told housing something needed to be fixed, it would be fixed in 2–4 days, now it takes 2 or 3 months.'
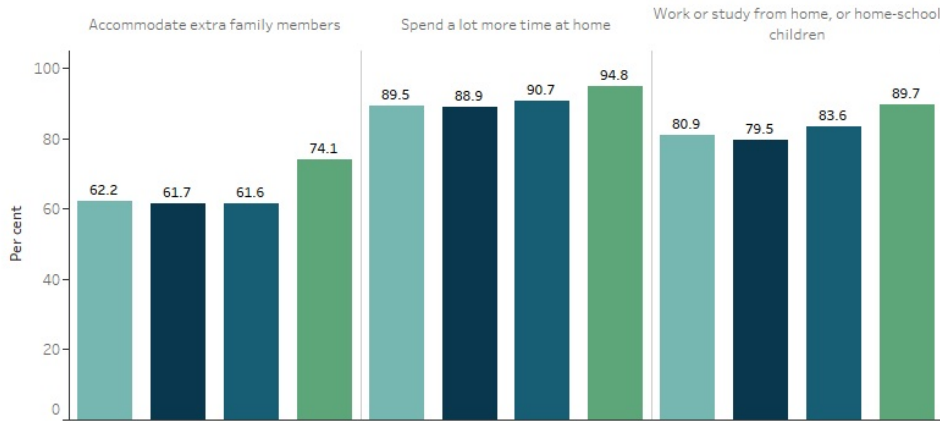>
> 'COVID-19 stopped a lot of regular services we have in the complex.'

Figure COVID.1: Housing met additional needs (%) during COVID–19, by social housing program, states and territories, 2021

This interactive bar chart shows whether social housing met additional tenant needs due to the COVID-19 pandemic for each of the housing programs in each state and territory.

Notes
1. # Indicates jurisdiction finding is statistically significantly different, at the 95% confidence level, from the finding for the rest of Australia.
2. * Estimate has a relative standard error of 25% to 50% and should be used with caution.

Source: National Social Housing Survey 2021. Supplementary Table S6.4.

'I am dissatisfied that during the COVID-19 pandemic, the cost of rent actually went up.'

'My house was too small, not sufficient space for us all to be home for so long.'

Impacts of COVID-19 on tenant experiences

In addition to asking tenants about their overall satisfaction and whether their home met their needs during the COVID-19 pandemic, tenants were asked about problems they experienced because of COVID-19.

NSHS question about experiences during COVID-19

Because of COVID-19, have you experienced any of the following:

- My household income went down
- I struggled to make ends meet with rent or bills
- I stopped looking for work
- I felt high(er) levels of worry or anxiety
- I felt high(er) levels of loneliness or isolation
- I had difficulty in my personal relationships
- Other problem.

Tenants reported a range of negative impacts to their lives because of the COVID-19 pandemic. In 2021 (Figure COVID.2, Table S6.5):

- around 1 in 2 (49%) tenants felt higher levels of worry or anxiety
- almost 1 in 2 (46%) tenants felt higher levels of loneliness or isolation
- over 1 in 5 (22%) tenants struggled to make ends meet with rent or bills.
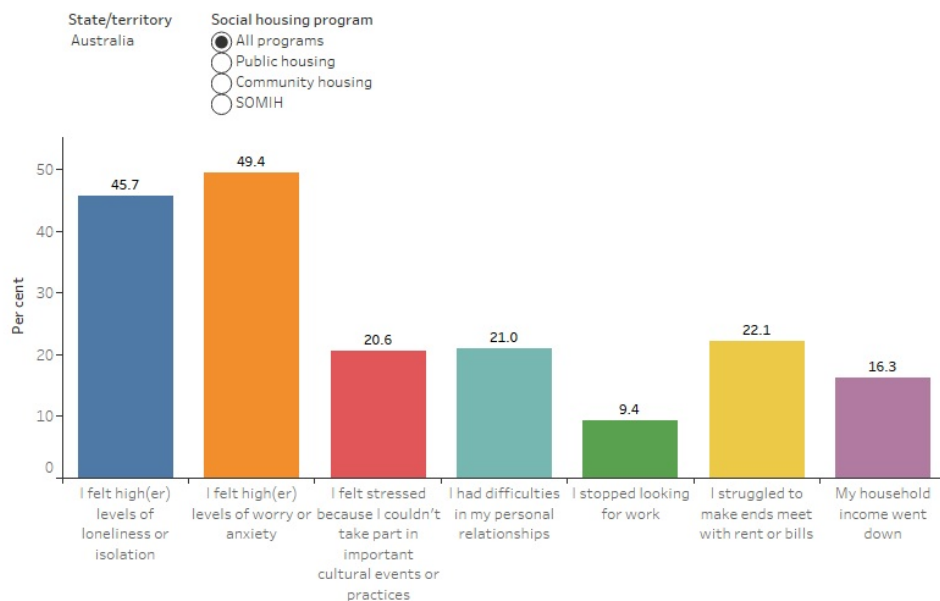
A significantly higher proportion of tenants in Victoria experienced negative impacts than tenants elsewhere in Australia (Figure COVID.2, Table S6.5). In contrast, there was a significantly lower proportion of tenants in the Northern Territory and Queensland reporting negative impacts resulting from COVID-19. However, this may be expected given the survey was conducted during a time when Victoria was experiencing more COVID-19 related restrictions compared with other parts of the country (Baker et al. 2020; Amerio et al 2020; Schwartz 2009).

'Not being able to ensure my health and fitness needs were met caused my mental state to deteriorate.'

'Stressed because of having to spend a lot of time at home and maintenance issues not addressed.'

Figure COVID.2: Impacts of COVID-19 on social housing households (%), by experience and social housing program, 2021

This interactive bar chart shows the proportion of tenants impacted by COVID-19 pandemic driven experiences, for each of the housing programs in each state and territory.

State/territory
Australia

Social housing program
⦿ All programs
◯ Public housing
◯ Community housing
◯ SOMIH

Notes
1. # Indicates jurisdiction finding is statistically significantly different, at the 95% confidence level, from the finding for the rest of Australia.
2. * Estimate has a relative standard error of 25% to 50% and should be used with caution.

Source: National Social Housing Survey 2021. Supplementary Table S6.5.

Satisfaction with additional services during the COVID-19 pandemic

To understand social housing tenants' satisfaction with the housing organisation during COVID-19, respondents were asked additional questions about specific services as listed in the box below.

Additional question about satisfaction during COVID-19

Information about social housing tenants' satisfaction was obtained from responses to the question:

"Thinking about services that your housing organisation provided during COVID-19, how satisfied were you with:

- Delivery of **usual services** during COVID-19 (e.g. maintenance, lease renewal, rent review)
- COVID-19 **health information or advice** provided by your housing organisation
- COVID-19 related financial assistance provided by your housing organisation (e.g. rental relief or emergency payment)"

Respondents indicated their satisfaction by selecting either:

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied
- Not applicable.

Satisfied refers to 'satisfied' or ' very satisfied' responses. The term **satisfaction rate** is used in this chapter to refer to the proportion (%) of social housing tenants who were satisfied with the overall services provided by their housing organisation.

In 2021, 75% (almost 3 in 4 tenants) of social housing tenants in Australia were satisfied with the usual services provided by their housing organisation during the COVID-19 pandemic (Table S6.1). However, satisfaction rates were lower for COVID-19 health information (70%) and COVID-19 related financial assistance (59%) provided by housing organisations.

Tenants in Queensland were significantly more satisfied with the delivery of usual services (83%) and health information (79%) provided by their housing organisation than tenants in the rest of Australia. Likewise, social housing tenants in Queensland (66%), as well as Western Australia (70%) were both significantly more satisfied with COVID-19 related financial assistance than tenants in the rest of Australia.

Broadly, these results are consistent with the overall results. These results may also reflect impacts of the COVID-19 health policies, such as, the impact of public health restrictions (lockdowns) on tenants and providers.

'During COVID-19 I have been kept well informed with up to date information as it came to hand.'

'They rang me to advise me that they had incorrectly charged me rent during COVID lockdowns and refunded me what they owed me.'

References

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What were the key factors in tenant satisfaction?

On this page:

- Understanding regression and differences in tenant satisfaction
- Which factors were significantly associated with tenant satisfaction?
- Which housing conditions affect tenant satisfaction?
- Which household characteristics affect tenant satisfaction?
- Which social housing factors affect tenant satisfaction?
- References

In 2021, three-quarters of social housing tenants (73%) were satisfied with the overall services provided by their housing organisation (see Figure Satisfaction.1, Table S1.1). However, the underlying reasons why tenants were satisfied – or dissatisfied – are relative to their lived experience of social housing (Pawson and Sosenko 2011). The pathways from living in social housing to being satisfied with living in social housing are as diverse as individual experiences of social housing (Garnham et al. 2021).

To better understand the Australian social housing experience, a range of aspects of the social housing experience were examined. The goal of the following analyses was to identify which factors were related to tenant satisfaction, both within and between social housing programs.

Understanding regression and differences in tenant satisfaction

Regression analysis is a statistical technique used to understand relationships among multiple variables. It examines the strength of the relationship between the specified factors and an outcome (such as tenant satisfaction), while holding other factors equal. Here, a logistic regression analysis was used to determine the relationships between multiple 'factors' (such as tenant age, location, or condition of the dwelling) and tenant satisfaction.

The regression model included key geographic, sociodemographic and housing-related factors. Although other factors (such as tenants' housing expectations) likely contribute to tenant satisfaction, only the directly measurable aspects of social housing were included as factors to maintain direct relevance to social housing performance.

Identifying key factors in tenant satisfaction using logistic regression analysis

Logistic regression analysis is a way to examine relationships between multiple factors (for example, social housing program, location and condition) with an outcome (such as tenant satisfaction). This statistical technique shows which individual factors are significantly associated with tenant satisfaction, after accounting for other factors included in the model (see, for example, Sperandei 2014); or in other words, when all else is equal between tenants. Using NSHS data, a regression model for tenant satisfaction (illustrated below) was developed to include housing-related, geographic and sociodemographic factors.
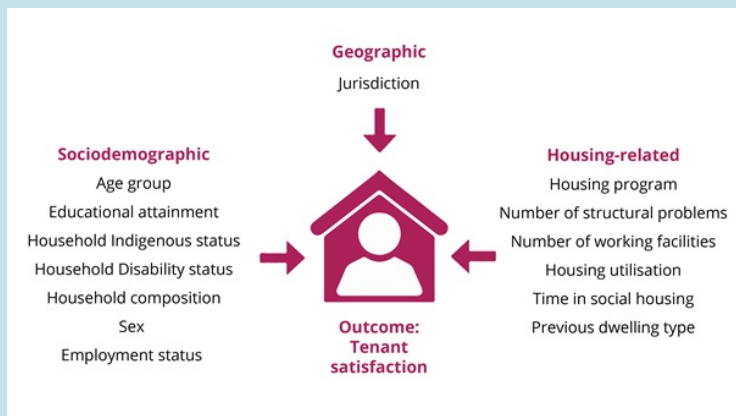
The regression model is used to explore how likely it is that a tenant with a particular set of characteristics would be satisfied with their housing services. The value of the technique is that it allows comparisons of the '**predicted probabilities**' for 2 tenant groups that differ by a single characteristic, when all else is equal (or held constant). If the model identifies a statistically significant difference, this suggests there could be a relationship between the factor in question and tenant satisfaction – a relationship that holds after accounting for all factors included in the model.

To create a point of reference, a **base case** is assigned for each variable in the model so that the direction and size of a factor's relationship with satisfaction can be seen. See Table C1 for the categories and base cases for all factors in the model. The **reference group** is a hypothetical group of tenants with all the base case characteristics combined. This provides a point of reference only and does not affect the findings. All estimates (such as predicted probabilities) presented in this report are in reference to the base case. See the technical notes for a detailed description of the base case.

The base cases for each variable were chosen because they provide a useful point of reference. For example, they were the bottom or top of a variable range (for example, age group); they represented the most common group (for example, public housing); or they appear to have higher satisfaction levels (for example, Queensland).

This report presents the predicted probability of satisfaction for tenants in the reference group and shows how predicted satisfaction changes for tenants who differ on just one characteristic. For example, in the section on dwelling condition, the likelihood of being satisfied for tenants with structural problems is compared with those with no structural problems (the base case), while accounting for other factors. Predicted probabilities are presented as percentages but differ from the descriptive proportions included elsewhere in this report.

The technical notes present detailed information about the regression method and results.

Tips on interpreting regression results

Statistically significant results are when differences in results between groups or associations between a factor and result met a required statistical benchmark of confidence. Throughout this report, the term 'significantly' refers to statistically significant. More information on understanding significance is outlined in the introduction.

Which factors were significantly associated with tenant satisfaction?

There are a range of factors that were significantly associated with tenant satisfaction for all social housing tenants and among tenants of the three social housing programs surveyed in 2021 (Figure Factors.1, Table R.2). Some factors were not statistically for significant for social housing tenants collectively but were statistically significant for tenants within specific social housing programs.

Figure Factors.1. Summary of factors associated with tenant satisfaction, by social housing program, 2021

This interactive table shows which factors were significantly associated with tenant satisfaction for each of the housing programs.

Domain	Factor	Highly significant	Significant	Not significant
Tenant characteristics	Age group		•	
	Disability household status		•	
	Employment status			•
	Indigenous household status			•
	Living situation			•
	Previous dwelling type			•
	Sex			•
	Time in social housing	•		
Social housing characteristics	Housing program			•
	State/territory	•		
Housing conditions	Housing utilisation			•
	Number of structural problems	•		
	Number of working facilities		•	

Note: Highly significant is when the p-value is < 0.001, 'Significant' is when the p-value is < 0.05, and 'Not significant' is when the p-value is >= 0.05.

Source: National Social Housing Survey 2021. Supplementary Table R.2.

Only those results for factors that were significant among all social housing tenants are presented in this section. Also, only when a factor was found to be significant among all social housing tenants, are the results for tenants within each of the specific programs presented. The results for the non-significant factors and those unique to specific programs can be found in the supplementary tables.

Which housing conditions affect tenant satisfaction?

Housing conditions relate to the physical characteristics and quality of the dwelling, such as its structure, facilities and amenities. Whether a home is structurally sound and has access to working facilities is a key aspect of any housing experience, as it has the potential to influence multiple aspects of health and wellbeing, such as respiratory health and mental health (Baker et al. 2016; Clapham et al. 2017; Fujiwara 2013).

Likewise, whether a home is appropriate for a person's household size is another key aspect of the housing experience, as it can also influence multiple aspects of tenants' wellbeing, such as their sense of space and privacy (Dockery et al. 2022).

Structural problems affect tenant satisfaction
NSHS question about structural problems

NSHS respondents were asked if their home had any of the following problems:

- Major electrical problems
- Major plumbing problems
- Major cracks in walls/floors
- Walls/windows not square (out of alignment)
- Wood rot/termite damage
- Sinking/moving foundations
- Sagging floors

- Major roof problems
- Rising damp
- Other structural problems

'The ceiling in the bathroom has been leaking for a long time, repair people keep saying there is no money to fix it properly.'

'Extremely worn floorboards with protruding nails in main living area, front door not sealed at bottom allowing cold air to blow in, large wall splits in outside walls, paint peeling in bathroom and mould issues throughout the home.'

Structural problems were a highly significant factor in tenant satisfaction. The more structural problems a tenant had with their social housing dwelling, the less likely the tenant will be satisfied (Figure Factors.2, Table R.2). Within each housing program, tenants living in a dwelling with one or more structural problems were less likely to be satisfied than those without, when all other factors were considered equal.

Figure Factors.2 Predicted probability (%) of being satisfied with the overall service provided by their housing organisation, by the number of structural problems and social housing program, 2021

This interactive bar chart shows the tenant satisfaction (predicted probability) decreased with increasing number of structural problems. This trend was consistent across housing programs and states and territories.
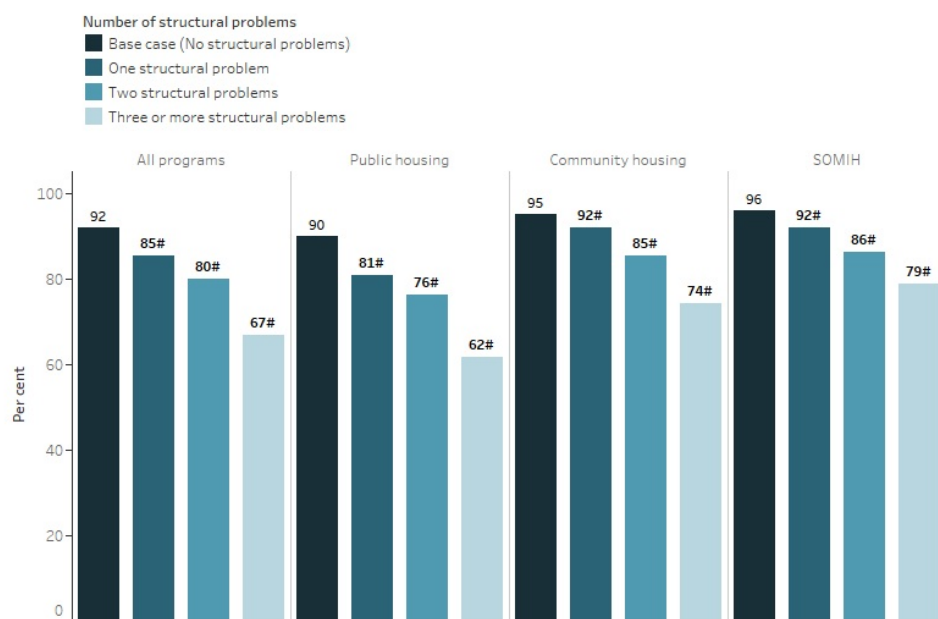
Note: # indicates characteristic is statistically significantly different at the 95% confidence level from the base case - *No structural problems*.

Source: National Social Housing Survey 2021. Supplementary Tables R.1 and R.3.

'Ongoing issue with excess moisture in the roof and running down interior walls.'

'The bathroom floor (vinyl flooring) is now bubbly and springy from being damp, the floor surface is not level. This is a health and safety hazard and could cause me to trip, slip and fall.'

Access to working facilities affects tenant satisfaction

Access to working facilities – such as cooking facilities, a refrigerator, bath or shower, toilet, a washing machine, kitchen sink and laundry tub – is a key aspect of housing condition that may affect tenant satisfaction. Tenants were asked whether they had access to 7 different working facilities in their social housing dwelling. Note that the following findings do not differentiate between facilities that are the ownership or responsibility of the housing provider or tenant.

Tenants with access to all 7 working facilities were more likely to be satisfied than those without (Figure Factors.3, Table R.3). When all else was considered equal, tenants with access to 6 or less working facilities were significantly less likely to be satisfied than tenants that had access to all 7 facilities. This was true in all models tested. Despite the significant difference, the predicted probability for tenants with access to 6 or fewer facilities was 3–4 percentage points lower than the base case.

Refer to the introduction for more information on interpreting statistically significant results.

'Why was a community housing building allowed to be built without integral air conditioning in this hot climate?'

Figure Factors.3: Predicted probability (%) of being satisfied with the overall service provided by an organisation, by the number of working facilities and social housing program, 2021

This interactive bar chart shows that tenant satisfaction (predicted probability) was significantly lower when there were less than seven working facilities. This trend was consistent across housing programs.
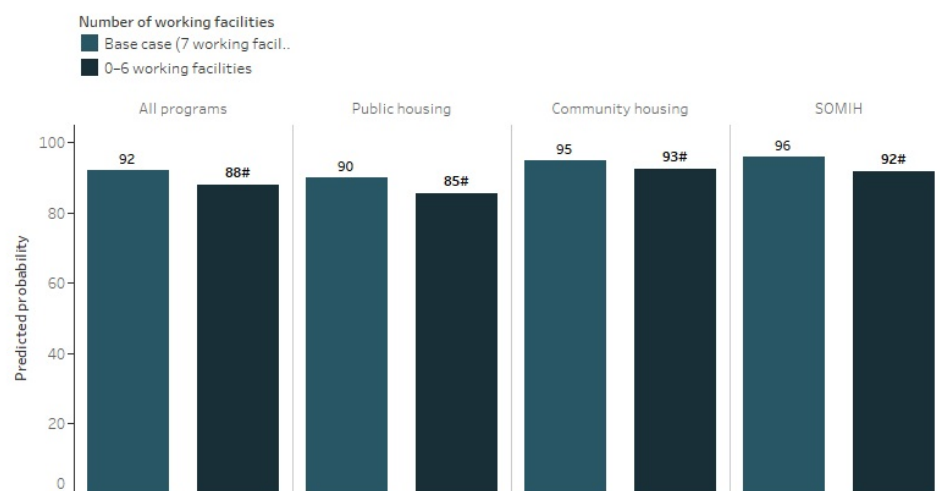
Note: # indicates characteristic is statistically significantly different at the 95% confidence level from the base case - *7 working facilities*.

Source: National Social Housing Survey 2021. Supplementary Table R.3.

> 'Regarding the shared laundry room, we have two washing machines and two dryers. One of each have been broken for over 4 months which is ridiculous to share a single washing machine and dryer between over ten apartments.'

Which household characteristics affect tenant satisfaction?

Households seeking social housing often have members with special needs. Some households may have one or more members with multiple special needs.

Living with disability in the household affects tenant satisfaction

Tenants in households with a person with disability were less likely to be satisfied than tenants in other households, when all else was equal (Table R.2). However, among each of the specific programs significant differences were only evident for tenants in public housing and SOMIH (Table R.3).

Age affects tenant satisfaction

Age was significantly associated with the likelihood of tenant satisfaction (Table R.2). Compared to tenants aged 0–34, tenants aged 45–54 and, especially, those aged 65 or over were significantly more likely to be satisfied, when all else was equal. However, there was not statistically significant difference between tenants aged 0–34 and those aged 35–44 or 55–64.

Age affects tenant satisfaction differently among some of the social housing programs, however, the models indicate very high satisfaction for each age group (ranging from 90% to 95%), when all else is considered.

Tenancy length affects tenant satisfaction

Tenancy length was significantly associated with tenant satisfaction (Table R.2). With all else being equal, tenants who had lived in social housing for over 16 years or for 6–10 years were less likely to be satisfied than tenants who had lived in social housing for 0–5 years. However, tenants who had lived in social housing for 11–15 years were not significantly different from those who lived in social housing for 0–5 years.

Which social housing factors affect tenant satisfaction?

State location affects tenant satisfaction, but housing program does not

Housing program was not significantly associated with tenant satisfaction (Table R.2). With all else being equal, tenant satisfaction between public housing and community housing or public housing and SOMIH tenants were not significantly associated. This indicates that the higher satisfaction rates apparent in community housing tenants may mostly be explained by factors, such as the absence of structural problems (Figure Factors.2, Table R.3), rather than the specific housing program.

In contrast, the state or territory a tenant lived in was associated with how likely they were to be satisfied. State or territory was significantly associated with tenant satisfaction among social housing tenants, as well as among comparable tenants within public housing and SOMIH. With all else being equal, social housing tenants in Queensland were significantly more likely to be satisfied than those in New South Wales, Victoria and the Australian Capital Territory.

When tenants were compared only with others within their program, the pattern was similar among public housing tenants and SOMIH tenants.

See Technical notes for detailed information on these results. Other findings from the regression analysis relate to priority populations. These are described in the following section.

'Community housing and its staff are very understanding and always treat you with respect in all areas, they deserve recognition.'

'The team leader was very professional, took notice of both my wife and my selves' disabilities and made sure our problems were solved.'

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Were tenants satisfied with maintenance services?

On this page:

- Social housing tenants were more satisfied with emergency maintenance services
- Public housing: satisfaction with maintenance has decreased
- SOMIH: satisfaction with maintenance was variable
- Community housing: decreased satisfaction with maintenance services
- Tenants living in homes with structural problems

Receiving quality maintenance services in a timely matter is of great importance to social housing tenants. Tenants were surveyed on their satisfaction with both day to day and emergency maintenance services. Note: There is variability in the scope of what is included in maitenance services between and within housing programs.

NSHS questions about tenants' satisfaction with maintenance services

Information about social housing tenants' satisfaction with the maintenance services provided by their housing organisation was obtained from responses to the following questions.

In the last 12 months, how satisfied were you with:

- the **day to day maintenance services** provided by your housing organisation?

- the **emergency maintenance services** provided by your housing organisation?

Survey respondents selected either Very satisfied, Satisfied, Neither satisfied nor dissatisfied, Dissatisfied, Very dissatisfied, or Not applicable.

Satisfied refers to satisfied or very satisfied.

The term **Satisfaction rate** refers to the proportion of social housing tenants who were satisfied with maintenance services (emergency or day to day services, as described).

Social housing tenants were more satisfied with emergency maintenance services

'The emergency maintenance (such as a blocked toilet) is fixed no worries but anything else that falls into general maintenance never gets done.'

'Some maintenance has still not yet been completed 12 months since being raised. The quality of some maintenance work performed is not of high quality.'

Across all programs, a larger proportion of social housing tenants were satisfied with the emergency maintenance services (75%) provided by their housing organisation than with day to day maintenance services (67%) (Figure Maintenance.1, Table S5.1).

Among public housing tenants, satisfaction rates with day to day maintenance services and emergency maintenance services remained relatively unchanged from 2014 to 2021 (Figure Maintenance.1, Table S5.1). Satisfaction among community housing tenants for both day to day and emergency maintenance services decreased between 2014 to 2021.

In 2014, the satisfaction rate of SOMIH tenants' with both day to day and emergency maintenance services was much lower than the other housing programs, but satisfaction has steadily increased over time, with satisfaction with emergency maintenance services increasing from 64% in 2014 to 73% in 2021 and from 48% to 62% for day to day maintenance.

'Satisfied with emergency maintenance, the system works well, i.e. reference number, number of days. Dissatisfied with long term maintenance issues. No clear process. You put in an order and it is never followed up. No communication.'

Public housing tenant

Figure Maintenance.1: Satisfaction with maintenance services (%), by social housing program and maintenance service type, 2014 to 2021

This interactive bar chart shows the tenant satisfaction with day-to-day maintenance services was lower than satisfaction with emergency maintenance services. This trend was consistent across housing programs, years, and states and territories.
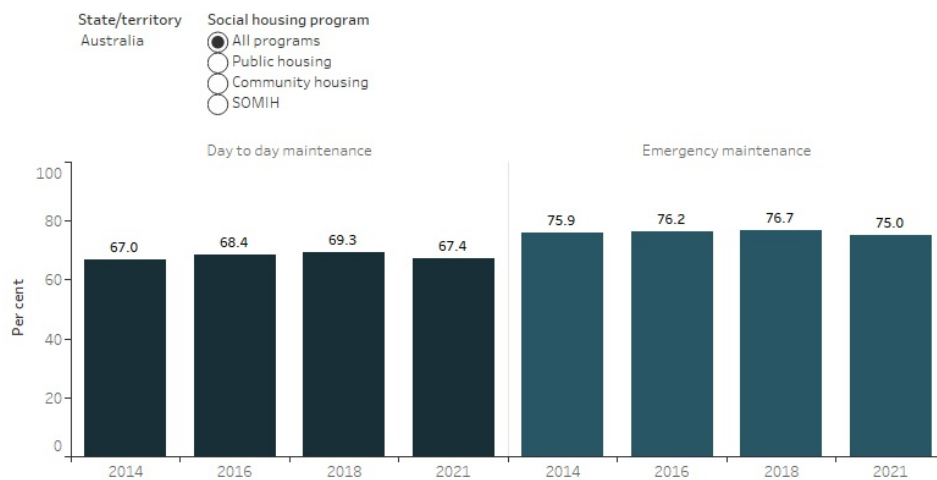
Note: # Indicates jurisdiction finding is statistically significantly different, at the 95% confidence level, from the finding for the rest of Australia.

Source: National Social Housing Survey 2021. Supplementary Table S5.1.

Public housing: satisfaction with maintenance has decreased

'Not happy about having to make 15 phone calls before problems are fixed. In the last 12 months this has happened more than once.'

Public housing tenants' satisfaction with maintenance services varied between states and territories in 2021 (Figure Maintenance.1, Table S5.1):

- Queensland and the Northern Territory had the highest satisfaction rate with day to day maintenance services (79%) and the Australian Capital Territory had the lowest (48%).
- Satisfaction rates with day to day maintenance services decreased compared with 2018 among tenants in both Victoria (69% in 2018 to 61% in 2021) and the Australian Capital Territory (62% and 48% respectively).
- Queensland had the highest rate of satisfaction with emergency maintenance services (87%) and the Australian Capital Territory had the lowest (63%).
- Compared with 2014, both the Northern Territory and Western Australia had notable increases in satisfaction with both day to day maintenance services and with emergency maintenance services.

SOMIH: satisfaction with maintenance was variable

'Repair contractors are timely but work is always rushed and often does not completely fix an issue. This means the housing organisation has to be contacted more than once. I have been in this situation several times.'

'Whenever we've called in regards to maintenance, housing always acts quickly to remedy any problems we have had.'

In 2021, Queensland was the only state or territory with satisfaction rates above 75% for both day to day maintenance services (76%) and emergency maintenance services (83%) among SOMIH tenants (Figure Maintenance.1, Table S5.1). Satisfaction rates for both day to day and emergency maintenance services were higher in 2021 compared with 2014 for all states/territories (Figure Maintenance.1, Table S5.1).

Community housing: decreased satisfaction with maintenance services

'I'm dissatisfied as maintenance is not carried out right nor is it done in a satisfactory time frame. If things were fixed the right way the first time, there wouldn't be a need to keep coming back.'

'It seems that this housing service doesn't even have a database that tracks maintenance reports or requests and outcomes of these reports or requests. That is a measure of the true disinterest that the tenant managers have in dealing with issues.'

'My housing service organisation has always responded promptly to maintenance requests. They have followed up with me to make sure the work has been completed and also that that I am happy with the repair. They are easy to communicate with and friendly.'

Tenants in community housing in Western Australia (79%) had the highest satisfaction rate with day to day maintenance services in 2021. Victorian community housing tenants (62%) had the lowest satisfaction rate. New South Wales (66%) and Victoria (62%) had lower satisfaction rates compared with 2018, contributing to a reduced national rate (69% in 2021 compared with 72% in 2018). All other states and territories had stable or increased satisfaction rates compared with 2018 (Figure Maintenance.1, Table S5.1).

Western Australian community housing tenants had the highest satisfaction with emergency maintenance services in 2021 (85%), followed by South Australia (82%). The Australian Capital Territory (70%) was the lowest of all the states and territories (Figure Maintenance.1, Table S5.1).

Tenants living in homes with structural problems

Satisfaction with maintenance services decreased with an increasing number of structural problems. For more robust analysis on the importance of structural problems on overall satisfaction, see the regression analysis.

Rates of satisfaction with maintenance services were particularly low among those living in dwellings with multiple structural problems (Figure Maintenance.2, Table S5.4). While the proportions varied between the different social housing programs, the pattern was consistent. Satisfaction rates were highest for tenants living in dwellings with no structural problems and progressively decreased with 1, 2 and 3 or more structural problems. The pattern was more marked with day to day maintenance, with tenants in all housing programs having satisfaction rates below 50% when their dwelling had 3 or more structural problems.

> 'Doors falling off due to termite damage, semi exposed wiring because of termite damage. Nearly all the skirting boards are eaten out. Hasn't been fixed even though they have been informed about it multiple times over the last few years.'
>
> 'They haven't fixed anything in the house-cracks in the walls, cracks in the floors, roof leaks, taps don't work in the kitchen. Rang about this months ago.'

Figure Maintenance.2: Satisfaction with maintenance services (%), by social housing program and number of structural problems in the dwelling, 2021

This interactive bar chart shows the tenant satisfaction with maintenance services was lower when there were more structural problems with the residence. This trend was consistent for both day-to-day maintenance and emergency maintenance and within each housing program.
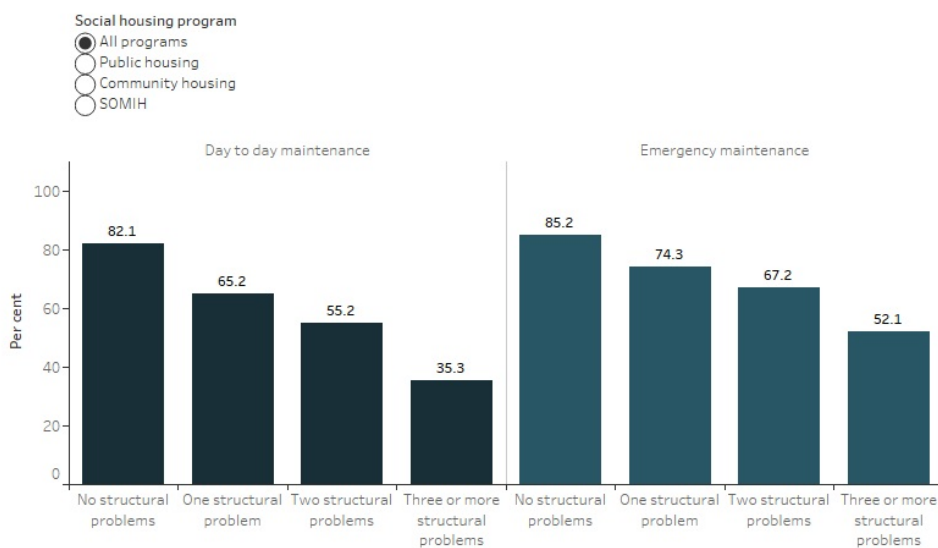
Source: National Social Housing Survey 2021. Supplementary Table S5.4.

What are the benefits of living in social housing?

On this page:

- Tenants gained economic, health and social benefits
- Tenants in outer regional and remote areas felt various psychosocial benefits
- Tenants reported other benefits
- References

Broadly, a goal of social housing is to support the health and wellbeing of tenants (DSS 2020). Social housing often affords tenants with greater security of tenure than private rental housing. Tenure security can provide tenants with certain social, economic and health benefits (such as improved community participation, employment opportunities and mental health), and offers protection from entering homelessness (Groenhart 2014; Prentice and Scutella 2019; Fitzpatrick and Stephens 2007).

Although tenants typically gain multiple benefits from living in social housing, benefits are not guaranteed; and can even be rare to come by for some tenants (Cheshire et al. 2014; Muir et al. 2020; Ong et al. 2022; Pawson et al. 2020). To explore whether the social housing provided to tenants improved their health and wellbeing, tenants were asked about some of the benefits they perceived to gain from living in social housing.

NSHS question about benefits of social housing

Information about the benefits of living in social housing was obtained from responses to the following question:

For you, what are the benefits of living in social housing?

Survey respondents were asked to select 'Yes, it is a benefit', 'No, it is not a benefit' or 'Not applicable' from a list of nominated benefits. The estimates presented in this chapter are the proportion of tenants who agree the nominated item is a benefit of living in social housing (after excluding those who answered 'Not applicable').

This section categorises the specific benefits surveyed into the following three broad life domains: economic, health and social (Figure Benefits.1), and reports some of the results relating to the specific benefits nominated in the questionnaire.

Figure Benefits.1: Life domains included in the National Social Housing Survey
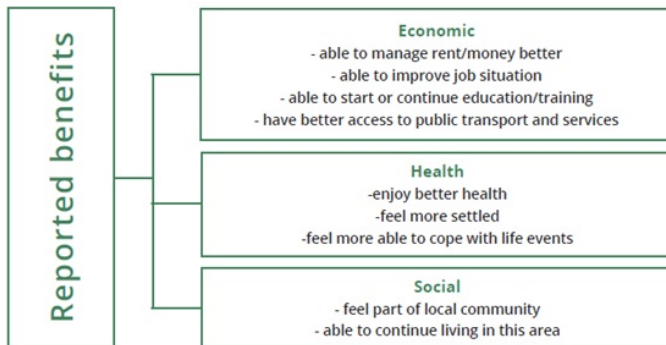
Tenants gained economic, health and social benefits

In 2021, around 81% of tenants reported benefits across all life domains – economic, social and health. However, tenants reported benefits across 2 domains more often than 3 (Figure Benefits.2, Table S2.1). Nonetheless, almost all tenants reported gaining at least one broad benefit from living in social housing – be it economic (97%), health (96%) or social (93%).

> 'A safe environment for my children and myself to plan our future and move forward.'
>
> 'Public housing provides a security that I will have a home for as long as I need one.'
>
> 'Not worrying all the time about having stable affordable accommodation, massive load off my mind.'

Figure Benefits.2: Benefits of living in social housing by broad category, 2021

This interactive bar chart shows the proportion of tenants experiencing benefits from living in each of the social housing programs. Over 90 per cent of tenants reported either economic or health or social benefit. Proportions for more than one benefit type were lower.
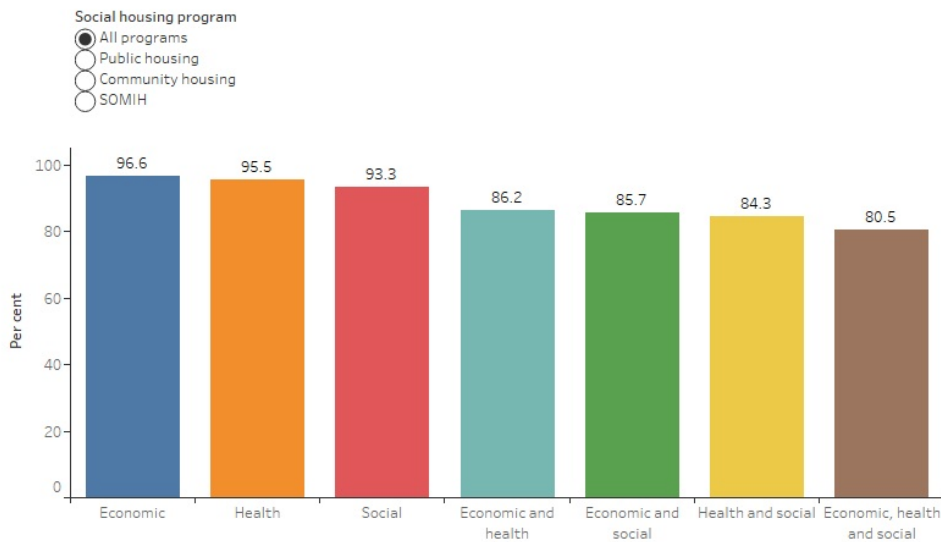
Source: National Social Housing Survey 2021. Supplementary Table S2.1.

Although the reported benefits of living in social housing were relatively similar across all 3 programs, SOMIH tenants generally reported benefits across all domains and combination of domains at a higher proportion than the other housing programs (Figure Benefits 3.1, Table S2.1).

Across all the housing programs, the most common benefits for tenants were feeling more settled (95–96%) and being able to manage rent/money better (93–94%), while being able to continue living in the area (91–93%) was next most common for public housing and community housing tenants (Figure Benefits.2, Table S2.1); feeling more able to cope with life events was the next most common benefit reported by SOMIH tenants. The least common benefit tenants reported was feeling more able to improve their job situation (66%–79%).

'Have the opportunity to support my children with their future/higher education in a home they can live without the stress of financial issues, or location, or space available in the house.'

'I am no longer living in survival mode, and I feel safe.'

'Long term security, knowing I will always have this roof over my head gives me continued peace of mind.'

'Stability and being able to pay cheaper rent, and have money left to eat.'

'The relief of having somewhere safe, clean and permanent to live and the gratitude I feel for that.'

Figure Benefits.3: Benefits by housing program, states and territories, 2021

This interactive bar chart shows specific benefits experience by tenants within each of the social housing programs over time within in each state and territory.
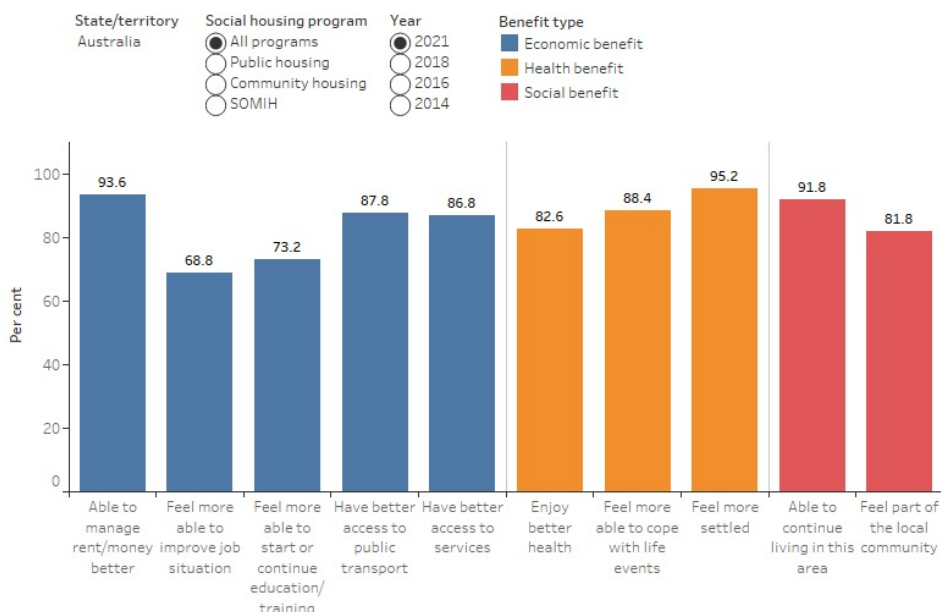
Note: # Indicates jurisdiction finding is statistically significantly different, at the 95% confidence level, from the finding for the rest of Australia.

Source: National Social Housing Survey 2021. Supplementary Table S2.2.

Tenants in outer regional and remote areas felt various psychosocial benefits

'I feel like I have a stable home, I can afford to live in, my children have a home and feel safe, it makes life easier to cope with.'

'In general, the public housing available to seniors is purpose built and provides sufficient security and safety to allow one to remain in the area where one has spent most of younger years.'

Tenants living in *outer regional* and *remote and very remote* areas felt more able to cope with life events (94% and 93% respectively), part of the local community (88% and 87%) and enjoyed better health (87% and 88%) at significantly higher proportions than those living in other areas; better access to public transport (81% and 73%) was reported by these tenants at a significantly lower proportion compared with tenants in other areas (Figure Benefits.4, Table S2.4).

Figure Benefits.4: Benefits by social housing program and remoteness area, 2021

This interactive bar chart shows specific benefits experience by tenants within each of the social housing programs by remoteness area.
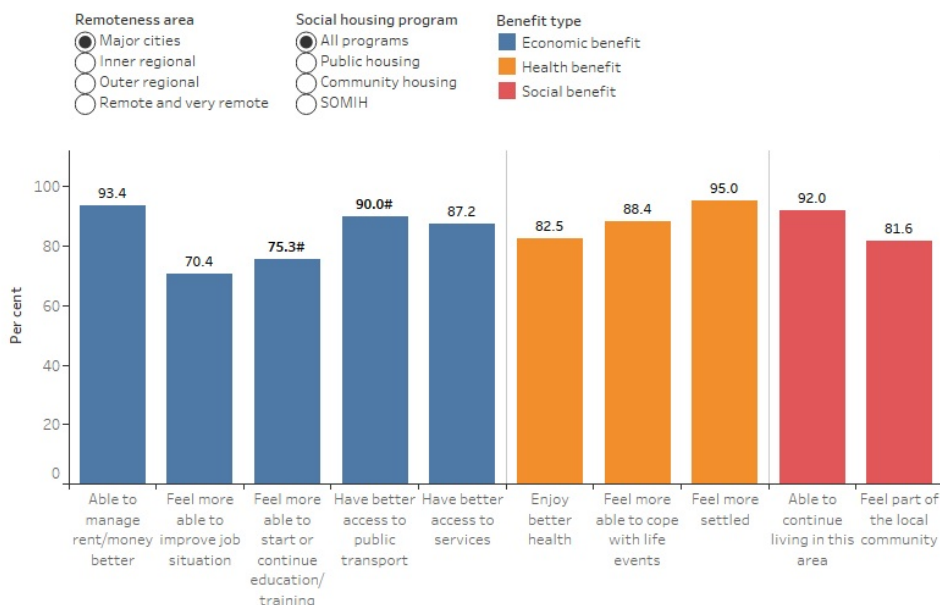
Note: # Indicates jurisdiction finding is statistically significantly different, at the 95% confidence level, from the finding for the rest of Australia.

Source: National Social Housing Survey 2021. Supplementary Table S2.4.

Tenants reported other benefits

Tenants were provided an option to report any additional benefits they felt as a result of being in social housing. Many of the comments re-iterated benefits of the domains, with tenants commenting about the positive impact housing stability had on their overall wellbeing. This included being able to avoid homelessness, improved mental health and improved family relationships.

'Not being at immediate threat of homelessness immensely helps my mental health.'

'Feeling of security and a place for family to visit and stay connected.'

'Having a secure place to live has been hugely beneficial to my life. I have experienced couch surfing and unsafe living environments when I was younger which created a lot of fear, anxiety and instability. I feel a sense of safety and peace knowing I have a safe place to live.'

'Security as I am in a domestic violence situation and housing and maintenance have made my home more secure than I could have done by myself.'

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Did amenities meet the needs of tenants?

Housing amenities are vitally important to improving social housing tenants' standard of living. Many amenities such as thermal comfort, security, and modifications and fixtures for tenants with special needs as well as the overall quality of the property have been demonstrated to contribute to tenants' health and wellbeing (Rolfe et al. 2020).
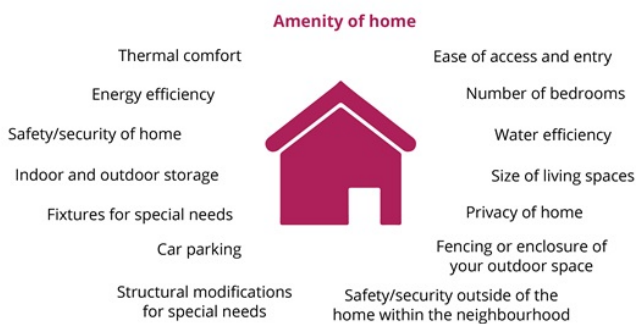
Measuring the extent to which tenants had their need for amenities met provides an insight into which amenities tenants had the greatest need for and which amenities tenants were most satisfied with.

NSHS question about whether amenities meet tenants' needs

Information about whether features of a tenant's home meet their needs was obtained from responses to the following question:

Please indicate if these features currently meet the needs of your household or not.

Respondents were asked to respond for a list of amenities (see illustration).

Amenity of home

Thermal comfort

Energy efficiency

Safety/security of home

Indoor and outdoor storage

Fixtures for special needs

Car parking

Structural modifications for special needs

Ease of access and entry

Number of bedrooms

Water efficiency

Size of living spaces

Privacy of home

Fencing or enclosure of your outdoor space

Safety/security outside of the home within the neighbourhood

The majority of tenants reported that most of the features (that is, amenities) in their homes met the needs of their household (Figure Amenities.1, Table S3.1).

Although the rate of amenity needs met was high overall in 2021, there was variation between jurisdictions, between the housing programs and over time (Figure Amenities.1, Table S3.1). Nationally in 2021:

- the most commonly met amenity needs of **public housing** tenants were ease of access and entry (94%), access to outdoor space (92%) and water efficiency (90%); the least commonly met amenity needs were outdoor storage (63%), indoor storage (72%) and thermal comfort (73%).

- among **community housing** tenants, the most commonly met amenity need were ease of access and entry (95%), access to an outdoor space (93%) and number of bedrooms (91%); outdoor storage (63%), indoor storage (75%) and thermal comfort (77%) were the least met needs.

- the most commonly met amenity needs of **SOMIH** tenants were ease of access and entry and access to an outdoor space (both 93%) and car parking (90%) and water efficiency (89%); outdoor storage (56%), indoor storage (68%) and thermal comfort (69%) were the least met needs.

> 'My house was fitted with solar panels, our summer bill was 35%-45% lower than previous bills. This improved my standard of living.'
>
> 'I have a safe place to live, I have a roof over my head and a yard I can grow vegies in, I have a permanent address which makes it easier to study get metal, physical health care. I have a unit which is home, I look after it like it's mine, rent is very reasonable.'
>
> 'This place has no storage space so everything is in boxes still.'

Figure Amenities.1: Social housing tenants—needs met for an amenity (%), by social housing program, states and territories, 2021

This interactive horizontal bar graph shows the proportion of tenants whose needs were met by listed amenities, within each of the social housing programs over time. For Australia, 'Ease of access and entry' most commonly met tenant needs in all social housing programs in all years.

State/territory
Australia

Social housing program
○ All programs
○ Public housing
○ Community housing
○ SOMIH

Year
● 2021
○ 2018
○ 2016
○ 2014

Amenity	Per cent
Ease of access and entry	94.0
Access to an outdoor space[4]	92.4
Water efficiency	90.4
Number of bedrooms	89.3
Size of dwelling/living spaces	86.7
Privacy of home	86.1
Car parking	84.7
Fixtures for special needs[3]	82.2
Safety/security of home	80.9
Fencing or enclosure of your outdoor space[4]	80.7
Structural modifications for special needs[3]	79.4
Energy efficiency	77.7
Safety/security within neighbourhood	76.1
Thermal comfort	73.9
Storage – indoor[5]	72.4
Storage – outdoor[5]	62.7
Yard space and fencing[4]	
Modifications for special needs[3]	

Notes:
1. # Indicates jurisdiction finding is statistically significantly different, at the 95% confidence level, from the finding for the rest of Australia.
2. Item 'Size of dwelling' on the 2014 to 2018 surveys replaced with 'Size of living spaces' on the 2021 survey.
3. The item 'Modifications for special needs' from the 2014 to 2018 surveys was separated into 'Fixtures for special needs' and 'Structural modifications for special needs' for the 2021 survey.
4. The item 'Yard space and fencing' from the 2014 to 2018 surveys was separated into 'Access to an outdoor space' and 'Fencing or enclosure of your outdoor space' for the 2021 survey.
5. 'Storage–outdoor' and 'Storage–indoor' were new items added to the 2021 survey.
6. In 2014 to 2018, responses regarding needs being met were only included if the respondent had rated the service or facility as 'important'. The question regarding the importance of the service or facility was omitted in the 2021 survey.

Source: National Social Housing Survey 2021. Supplementary Table S3.1.

Are housing amenities meeting the needs of priority groups?

Some tenants have specific needs. The following sections provide results for selected priority populations compared with households who were not in that priority group.

'They haven't done any of the things that were asked of them including request letters from my doctor asking for appropriate disability modifications.'

– Public housing tenant with a disability

'Still waiting for my roof which is leaking. When it rains water gets inside. And when it rains electricity goes out in half of the house.'

– SOMIH tenant

'It's very hard to get things done, doesn't seem to be enough staff to deal with everyone's needs. You need spend a lot of your time hunting simple things and chasing answers. Also don't like the way they don't provide solutions, just reasons why they can't help. For example, there is no parking but they have no interest in finding or providing a reasonable solution.'

In 2021 (Figure Amenities 2, Table S3.7) among tenants of all social housing programs:

- **Indigenous households'** needs were met less often than non-Indigenous households for most amenities, in particular, outdoor storage (53% compared with 63% respectively), fixtures for special needs (73% compared with 84%) and number of bedrooms (82% compared with 91%) (Table S3.2).
- Tenant needs were met among households with a **person with disability** for all surveyed amenities compared with households without a person with a disability, in particular, energy efficiency (69% compared with 81% respectively), structural modifications for special needs (72% compared with 83%), thermal comfort (66% compared with 77%) and fixtures for special needs (75% compared with 85%) (Table S3.3).
- Among tenants who had **experienced homelessness** in the last 5 years, a lower proportion reported that their needs were met across most amenities compared with other tenant groups, in particular, safety and security of the home or within the neighbourhood, privacy of the home and size of living spaces (Table S3.4).
- Tenants living in households with children less commonly reported their needs were met across most of the amenities compared with those living in households without children, in particular, indoor storage (55% compared with 76% respectively), thermal comfort (59% compared with 77%) and size of living space (73% compared with 90%) (Table S3.5).

'Kids have their own rooms, own space. Closer to schools. Better for everyone's mental health. There are a lot of benefits. Big back yard.'

Figure Amenities.2: Social housing tenants—needs met for an amenity (%), by priority group cohort, 2021

This interactive horizontal bar graph shows the proportion of tenants whose needs were met by listed amenities, for the priority population groups. Outdoor storage least commonly met the needs of all priority groups.

Priority population group
15–24 Years

Amenity	Per cent
Access to an outdoor space	88.2
Car parking	79.5
Ease of access and entry	92.5
Energy efficiency	85.2
Fencing or enclosure of your outdoor space	75.7
Fixtures for special needs	68.5
Number of bedrooms	79
Privacy of home	77.5
Safety/security of home	73.7
Safety/security within neighbourhood	68.7
Size of living spaces	69.9
Storage – indoor	62.3
Storage – outdoor	42.7
Structural modifications for special needs	77.5
Thermal comfort	59.7
Water efficiency	87.9

Source: National Social Housing Survey 2021. Supplementary Table S3.7.

References

Rolfe S, Garnham L, Godwin J, Anderson I, Seaman P and Donaldson C (2020), Housing as a social determinant of health and wellbeing: developing an empirically-informed realist theoretical framework, *BMC Public Health*, 20(1):1-19

Did the location of a tenant's home meet their needs?

Where people live can have far-reaching implications to their health, and the quality of life they may enjoy (Paddison 2012). It can affect whom they can socialise with, where they can work, what schools they can attend, and which services they can reasonably access (Ong et al. 2022; Paddison 2012; Phibbs and Thompson 2011). As such, it is often a critical factor in people's housing choice, as the impacts to health and wellbeing can be substantial.

The limited number of available dwellings in specific locations and social housing allocation policies can limit social housing location choice when housing is offered to tenants on the waiting list (Flanagan et al. 2020). Because of this, it is critical to explore whether tenants' homes meet their location related needs, such as access to education and training facilities, employment and friends and family.

NSHS question about whether location of home meets tenants' needs

Information about whether the location of a tenant's home meets their needs was obtained from responses to the following question:

For each of the following access to services, are your needs met in your current home (including the needs of those who live with you)?

Respondents were asked to respond for a list of facilities and services.

> 'We are very happy to live where we are, as we can walk to all the shops, post office, café.'
>
> 'Close to friends, community support, job, church, services for my children.'
>
> 'I'm only 10 minutes from the hospital, city centre, library, parks, and shops, public transport is fantastic, and there are a great selection of venues I can go to with family and friends.'

In 2021, nearly all public and community housing tenants reported at least one of their location-related needs were met. Of the needs surveyed, access to:

- schools (96%)
- public transport (95%)
- parks and recreational facilities or sporting facilities (95%)

were the most commonly reported location needs met among public housing tenants (Figure Location.1, Table S4.1). Among community housing tenants, access to:

- hospitals (94%)
- schools (94%)
- public transport (94%)
- parks and recreational facilities or sporting facilities (94%)
- medical services (94%)

were the most common location-related needs met.

Satisfaction with access to:

- hospitals (95%)
- shops and banking (95%)
- schools (95%)
- medical services (95%)

was also high among SOMIH tenants nationally, however, there was some variation between state and territory results.

Figure Location.1: Satisfaction (%) with location (proximity to facilities and services), by social housing program, states and territories, 2014 to 2021

This interactive horizontal bar graph shows the satisfaction of tenants with their access to facilities and services, within each of the social housing programs over time.

State/territory
Australia

Social housing program
- ● All programs
- ○ Public housing
- ○ Community housing
- ○ SOMIH

Year
- ● 2021
- ○ 2018
- ○ 2016
- ○ 2014

Proximity to

	Per cent
Schools	95.7
Public transport	94.7
Parks and recreational facilities or sporting facilities	94.6
Hospitals	94.3
Medical services	93.6
Child care facilities	93.4
Shops and banking	92.6
Community and support services	92.3
Employment/place of work	90.3
TAFE, university or other training	89.7
Family and friends	88.1
Emergency services, medical services and hospitals	
Education/training facilities	

Notes:
1. # Indicates jurisdiction finding is statistically significantly different, at the 95% confidence level, from the finding for the rest of Australia.
2. The item 'Emergency services, medical services and hospitals' from the 2014 to 2018 surveys was separated into 'Medical services' and 'Hospitals' for the 2021 survey.
3. The item 'Education/training facilities' on the 2014 to 2018 surveys was separated into 'Schools' and 'TAFE, university or other training' for the 2021 survey.
4. The item 'Parks and recreational facilities or sporting facilities' had the 'or sporting facilities' phrase added in the 2021 survey.
5. In 2014 to 2018, responses regarding needs being met were only included if the respondent had rated the service or facility as 'important'. The question regarding the importance of the service or facility was omitted in the 2021 survey.

Source: National Social Housing Survey 2021. Supplementary Table S4.1.

The location-related needs of priority populations can differ compared with other households. For example, access to health services may be important for tenants with specific disability needs.
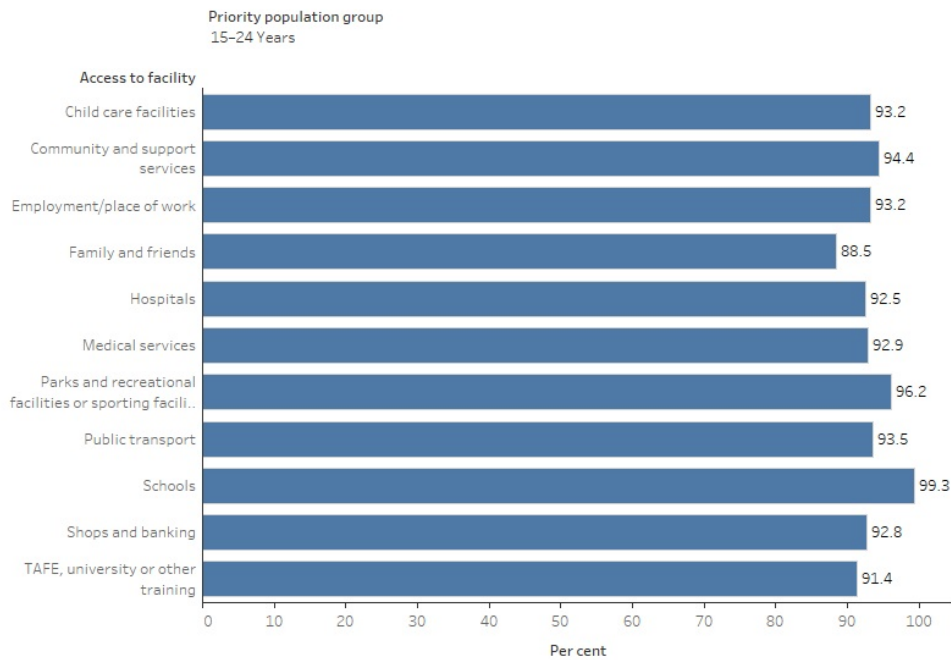
In 2021 (Figure Location.2, Table S4.7) among tenants of all social housing programs:

- **Households with a person living with disability** were less likely to report that the location of their dwelling met their needs than others. For example, a lower proportion of tenants in households with a person living with disability reported that their dwelling met their needs for access to:
  - community and support services (86% compared with 95% for other households)
  - and medical services (89% compared with 95%).
- Except for public transport, tenants that **recently experienced homelessness** (that is, in the last 5 years) reported less often that their needs were met by the location of their current home than other households; access to family and friends (83%) was the least location-related need met.
- The needs met by the location of the home were mostly similar between **Indigenous households** and non-Indigenous households. However, a lower proportion of Indigenous tenants reported that their homes provided access to:
  - family and friends
  - childcare facilities
  - employment/place of work and TAFE
  - university or other training

  compared with other households.

Figure Location.2: Satisfaction (%) with location (proximity to facilities and services), by priority population groups, 2021

This interactive horizontal bar graph shows the satisfaction of tenants with their access to facilities and services, for the priority population groups.

Priority population group
15–24 Years

Access to facility

Access to facility	Per cent
Child care facilities	93.2
Community and support services	94.4
Employment/place of work	93.2
Family and friends	88.5
Hospitals	92.5
Medical services	92.9
Parks and recreational facilities or sporting facili..	96.2
Public transport	93.5
Schools	99.3
Shops and banking	92.8
TAFE, university or other training	91.4

Per cent

Source: National Social Housing Survey 2021. Supplementary Table S4.7.

References

Flanagan K, Levin I, Tually S, Varadharajan M, Verdouw J, Faulkner D, Meltzer A and Vreugdenhil A (2020) 'Understanding the experience of social housing pathways', *AHURI Final Report No. 231*, Australian Housing and Urban Research Institute (AHURI), Melbourne.

Ong R, Singh R, Baker E, Bentley R and Hewton J (2022) 'Precarious housing and wellbeing: a multidimensional investigation', *AHURI Final Report No. 373*, AHURI, Melbourne.

Paddison R (2012) 'Housing and neighbourhood quality: Urban Regeneration', *International Encyclopedia of Housing and Home:* 288-293.

Phibbs P and Thompson S (2011) 'The health impacts of housing: toward a policy-relevant research agenda', *AHURI Final Report No. 173*, AHURI, Melbourne.

Technical notes

On this page:

- 2021 NSHS data collection and reporting methodology
- Data collection methodology
- Survey and interview response rates
- Weighting
- Sample alignment with administrative data
- Regression analysis – details
- Results

2021 NSHS data collection and reporting methodology

Introduction

This appendix provides an overview of the 2021 National Social Housing Survey (NSHS) data collection and reporting methodology. Further information on the 2021 NSHS methodology, including a copy of the final questionnaire, can be found in the 2021 NSHS methodological report prepared by Lonergan Research, available from the Australian Institute of Health and Welfare website.

Data collection

The data quality statement for the 2021 NSHS is available online. Key information is as follows.

Survey scope

The 2021 NSHS collected information from tenants of 3 social housing programs – public housing (PH), community housing (CH), and state owned and managed Indigenous housing (SOMIH).

Data collection methodology

The COVID-19 pandemic impacted both the timing of (postponed from 2020) and planned method of conducting the 2021 NSHS.

Among PH, CH and SOMIH tenants (the latter Queensland, South Australia and Tasmania only), the 2021 NSHS was conducted via a mail-out paper questionnaire, with an option provided for online completion.

Among SOMIH tenants in New South Wales, and a small number of ACT CH tenants, the 2021 NSHS was conducted via face-to-face interview. Where tenants were not at home, a drop-at-home survey pack was left at the property.

Face-to-face interviews were initially intended to be used to conduct the 2021 NSHS for SOMIH and ICH tenants in Queensland. Due to COVID-19, Queensland SOMIH tenants instead received mail-out questionnaires and the survey was not conducted with ICH tenants.

The 2021 NSHS used the same survey instrument across PH, CH and SOMIH, with the exception of some state specific additions (for ACT PH and SA PH/SOMIH). Before 2010, the survey content differed slightly across programs, reflecting different areas of interest in relation to each program. Since 2012, the adoption of more consistent survey instruments has allowed greater data comparability across social housing programs. See the NSHS 2021 methodological report for more information.

Each jurisdiction provided information for each tenancy and each social housing program to Lonergan Research. To protect tenancy privacy and confidentiality, information was handled in line with relevant legislation. All remoteness areas were included in the sample. For the postal component of the survey, various factors (see Survey and interview response rates) may have affected the number of responses received from tenants in these areas.

Sample design

Consistent with 2018, stratified sampling was undertaken to reduce sampling error and to maximise the chance that jurisdiction/program sample targets were met. Minimum sample quotas were again employed for remoteness-based strata. For New South Wales, additional stratification was undertaken based on Department of Communities and Justice districts. Quotas were set for each jurisdiction/housing strata, as shown in Table A1. The actual responses received are shown in Table A2.

Table A1: Quotas set for 2021 NSHS, by housing program and state/territory

Jurisdiction	PH	SOMIH	CH
NSW	500	500	540
Vic	500	. .	350
Qld	1,000	500	500

WA	500	. .	350
SA	500	300	700
Tas	500	200	350
ACT	500	. .	200
NT	500	n.a.	n.a.

. . Not applicable (state or territory does not have the program)

n.a. Not available (jurisdiction not in scope for the 2021 NSHS in the program

Survey and interview response rates

The response rate for the mail-out/online component of the 2021 NSHS was 26%; for face-to-face interviews, it was 52%. Some non-response bias is expected. The 'Sample alignment with administrative data section' examines key differences between the sample population and the actual population—therefore providing some indication of the potential for non-response bias. Apart from sample weighting (see 'Weighting' following this section), no adjustments have been made for non-response bias.

Changes to the management of tenant privacy for the 2021 NSHS meant that Lonergan Research was unable to be provided with personal information for PH tenants in New South Wales, Victoria and the Northern Territory. Letters were addressed 'to the tenant', which impacted particularly on remote areas that often require personalised mail to be received, resulting in many being returned to sender. Where no personal information was provided, tenants could not be sent digital reminders. Response rates dropped sharply in all three of these jurisdictions.

Lockdowns and mail delays due to COVID-19 also impacted on response rates in 2021. Response rates by housing program and jurisdiction are provided in Table A2.

Table A2: 2021 NSHS coverage and response rates (%), by housing program, by state and territory

Program	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
PH								
Responses (no.)	487	475	949	513	561	517	583	471
Response rate	18.9	21	28.5	31	45.2	31.8	32	20.2
CH								
Responses (no.)	564	314	509	443	677	342	201	n.a.
Response rate	22.6	24.9	26.2	32.3	29.4	28.5	27.2	n.a.
SOMIH								
Responses (no.)	528	. .	522	. .	263	52	. .	n.a.
Response rate	52.2	. .	19.6	. .	20.6	24.4	. .	n.a.

Notes

1. For the mail-out/online component, the response rate was calculated as the number of completed surveys returned as a percentage of the total tenants mailed (excluding any that were returned to sender). For SOMIH face-to-face surveys, the response rate calculated as the number of completed interviews as a percentage of the total number of interviews attempted.
2. SOMIH tenants were surveyed via face-to-face interviews in New South Wales and via mail-out in Queensland, South Australia and Tasmania. Response rates between the 2 methodologies are not directly comparable.

Weighting

Consistent with the 2018 NSHS, a grouped weighting methodology was employed. Population groups were created across 3 variables: housing type, jurisdiction, and remoteness. The weighting was calculated as follows: the number of households in each population group divided by the number of usable survey responses. All population counts were confirmed by the states and territories.

Sampling error

The estimates are subject to sampling error. Relative standard errors (RSEs) are calculated for findings from the 2021 NSHS to help the reader assess the reliability of the estimates. Only estimates with RSEs of less than 25% are considered sufficiently reliable for most purposes. Results subject to RSEs of between 25% and 50% are marked as such and should be considered with caution. Those with RSEs greater than 50% are considered too unreliable and are not published. To help interpret the results further, 95% confidence intervals (the estimate plus or minus 2 standard errors) are available online as supplementary tables to the 2021 NSHS.

Non-sampling error

The estimates are subject to both sampling and non-sampling errors. The survey findings are based on self-reported data. Non-sampling errors can arise from errors in reporting of responses (for example, failure of respondents' memories or incorrect completion of the survey form), or the unwillingness of respondents to reveal their true responses. Further non-sampling errors can arise from coverage, interviewer or processing errors. It is also expected that there is some level of non-response error where there are higher levels of non-response from certain subpopulations.

Comparability with previous NSHSs

Surveys in this series began in 2001. Over time, the survey's methodology and questionnaire design have been modified. The sample design and the questionnaire of the 2021 survey differ in some respects from previous versions of the survey. Full details are available in the NSHS 2021 methodological report.

The revisions of the survey undertaken for the 2021 NSHS were the most substantial since 2012. These revisions included some restructuring of sections, changes to question wording, the addition of COVID-19 related questions and new state specific questions (for SA PH/SOMIH and ACT PH).

The 2021 NSHS sampling and stratification methods were similar to those for the 2018 survey: a sample was randomly selected from each stratum. Some additional location based stratification was undertaken for New South Wales in 2021.

For the 2021 NSHS, caution should be used when comparing trend data or data between states and territories due to differences in response rates and non-sampling errors. Some substantial decreases in response rates for mail-out surveys was observed in 2021.

As in 2016 and 2018, the data collected for SOMIH was sourced using 2 methodologies; via mail-out and via face-to-face interview. Since 2016, the mail-out approach was used for SOMIH tenants in South Australia and Tasmania and the face-to-face approach was used for SOMIH tenants in New South Wales. However, in 2021 the approach in Queensland for these tenants changed from face-to-face (used in 2016 and 2018) to mail-out. Different methodologies not only influence the overall response rate, but also have potential impacts on the completion of each question and how tenants perceived and responded to questions. Trend data from before 2016 (and also in 2016 and 2018 for Queensland) and comparisons between states and territories, should therefore be interpreted with caution.

Refer to data quality statements for the 2014 NSHS, 2016 NSHS, 2018 NSHS and 2021 NSHS and their accompanying technical reports before comparing data across surveys.

Reporting methodology – respondents versus households

Responses to the NSHS can report either:

- information about the social housing tenant completing the survey (the respondent), such as age and gender
- information provided by the respondent:
  - that refers to themselves and other individuals in the social housing household, such as whether there are any adults in the household currently working full time
  - on behalf of all members of their household, such as whether the location of their dwellings meet the needs of the household.

In each instance, this is noted under the relevant chart or table throughout the report.

It is important to distinguish between household-level responses and responses to those questions that specifically target the individual who completed the survey. Responses related to the individual completing the survey may not apply to other members of the household.

It should also be noted that, where survey respondents have provided information on behalf of other household members, they have not been asked if they had consulted members in formulating their responses.

Missing data

Some survey respondents did not answer all questions, either because they were unable or unwilling to provide a response. The survey responses for these people were retained in the sample, and the corresponding values were set to missing. Cleaning rules resulted in the imputation of responses for some missing values. Missing responses were excluded from the numerator and denominator of estimates presented in this report.

Sample alignment with administrative data

As part of the NSHS, tenants who responded to the survey were asked to report the gender and age of all members of their household; they were also asked questions to establish if anyone in the household was Indigenous or had a need for assistance due to disability. Table B1 compares the age and gender distribution of all 2021 NSHS household members with similar information from administrative data collections. The distribution of 2021 NSHS households across selected household-level characteristics is also compared with corresponding information from administrative data collections. For this analysis, the 2021 NSHS data were weighted. Weighting helps account for over- or under-representation of particular groups of tenants in the responding sample, to the extent that these differences reflect differences across jurisdiction by remoteness by housing program categories (these are the groups, or strata, used to determine weights for sample responses).

As Table B1 shows, while there was broad alignment between the 2021 NSHS and administrative data results, there were also some differences, particularly among SOMIH households. This may be partly due to the much smaller size of that program, so that relatively small differences in numbers would lead to greater differences in proportions.

Within PH and CH, older tenants appeared to be over-represented in the NSHS, compared with administrative data, while the profile of NSHS SOMIH tenants was younger than in the administrative data. SOMIH was conducted via face-to-face interviews in New South Wales which contributed more than one-third of the total SOMIH sample. It may be that the different collection methodologies resulted in different response biases.

One characteristic recording a noticeable difference between 2021 NSHS results and the corresponding information drawn from administrative data is household composition. For all programs, the proportion of sole parents with children was markedly higher in the NSHS than in the administrative data collections, and the proportion of group or mixed composition households was lower in the NSHS.

While most of the NSHS analysis in this report drew on information about the entire time a tenant had been living in social housing, in Table B1, NSHS information about time in the current home was used, as that information would more closely compare with information about tenure length from administrative data collections. Even so, it appeared that households who had been in social housing for longer were over-represented in the NSHS, particularly among SOMIH tenants.

Finally, there were some discrepancies between the NSHS and administrative data in the proportions of Indigenous households, and households where there was a household member with disability.

Table B1: Distribution of 2021 NSHS households and occupants across selected characteristics, compared with distribution in 2021 administrative collections (%)

	PH NSHS 2021	PH Admin. data	SOMIH NSHS 2021	SOMIH Admin. data	CH NSHS 2021	CH Admin. data
Gender (all occupants)						
Males	42	44	41	45	41	44
Females	53	55	57	55	53	55
Not stated	5	1	2	0	6	1
Age (years) (all occupants)						
Under 5	3	5	7	6	4	5
5 to 17	15	21	32	31	13	19
18 to 24	5	8	10	11	6	9
25 and over	69	67	49	52	69	66
Not stated	7	0	3	0	8	1
Household composition						
Single adult	57	57	24	22	59	62
Couple only	10	7	6	5	10	6
Sole parent with dependent children	17	13	40	25	17	12
Couple with dependent children	6	3	9	8	4	3
Group and mixed composition	4	17	15	40	5	16
Not stated	7	4	6	1	5	3
Tenure length						
2 years or less	15	15	16	17	23	n.a.
Over 2 years–5 years	17	18	17	21	19	n.a.
Over 5 years–10 years	15	19	19	26	24	n.a.
Over 10 years–15 years	13	12	10	12	13	n.a.
Over 15 years–20 years	11	10	11	6	6	n.a.
Over 20 years	25	18	25	9	10	n.a.
Not stated	4	8	2	8	4	
Indigenous household status						

Indigenous household	11	13	96	100	11	11
Not Indigenous household	78	66	2	0	79	85
Not determined	11	21	2	0	10	5
Household disability status						
Person/s in household with disability	28	38	17	19	25	30
No person in household with disability	71	51	83	48	74	64
Not determined	1	10	1	34	1	6

Note: Components within each characteristic may not add to 100% because of rounding.

Sources: AIHW administrative data collections; NSHS 2021

Regression analysis – details

Regression analysis of NSHS data was used to examine the statistical relationships between multiple explanatory factors and tenant satisfaction. This type of statistical technique shows which individual factors are significantly associated with tenant satisfaction, after simultaneously accounting for the confounding effects of the other factors included in the model (see, for example, Sperandei 2014).

In particular, regression analysis was used to help answer the following key questions:

- What are the most important factors associated with tenant satisfaction, after accounting for differences in geography, demographics and housing-related factors?
- Do the factors associated with satisfaction differ depending on the type of housing program?
- How do we account for apparent differences in satisfaction between different populations? What factors best explain the observed differences?

This appendix provides a detailed description of the regression analysis method and results.

Method

Logistic regression was the statistical technique used for this analysis. Logistic regression is an appropriate analytical technique to use when the outcome variable has
2 categories. In the analysis used for this report, the outcome variable had two categories: whether the social housing tenant was **satisfied** (satisfied or very satisfied) or **not satisfied** (neither satisfied nor dissatisfied, dissatisfied or very dissatisfied) with the services provided by their housing organisation.

A regression model was developed that included variables available in the NSHS data set (referred to as factors in this report) that had been identified in previous analyses as being potentially related to tenant satisfaction, along with key geographic and sociodemographic factors (Table C1). This model (Model 1) was used to analyse all social housing tenants in the 3 main programs combined – PH, CH and SOMIH. Similar models were used to analyse tenants within each program – (Models 2-4). The only differences in Models 2-4 compared with Model 1 were:

- Models 2–4 did not include 'housing program' as a variable, as each was single-program only.
- Model 3 (SOMIH) did not include the variable 'Whether Indigenous household' as the SOMIH program is specifically targeted at Indigenous households.

More information about the variables used in the analysis is provided in Table C1. In order to have a point of reference, so that the direction and size of a factor's relationship with satisfaction can be seen, a base case (reference category) is assigned for each variable in the model (for example, for the variable housing program, the base case is PH). The reference group is a hypothetical group of tenants with all the base case characteristics combined.

Base cases for each variable were selected because they provide a useful point of reference—for example, they were the bottom or top of a variable range (for example, age group 0–34, education less than Year 10, employed); they represented the most common group (for example, PH, major cities, females, Non-Indigenous households, households without disability, no structural problem, 7 working facilities, 'adequate' home utilisation, and house as the previous dwelling type); or they represent a benchmark for tenant satisfaction (for example, Queensland, couples without children, and living in social housing for 0-5 years).

The logistic regressions were computed in SAS using PROC SURVEYLOGISTIC, which provides for including a survey weight. The survey weight was included in these analyses to partly account for over- or under-representation (by housing program, state/territory and remoteness and program type) of particular groups of tenants in the responding sample.

Table C1: Variables and categories used in the regression model

Variable/category	Variable construction
Outcome variable:	

Tenant satisfaction	Observations with invalid or missing responses were excluded from the analysis.
Satisfied	Satisfied = Very satisfied or satisfied
Not satisfied	Not satisfied = Neither satisfied nor dissatisfied, Dissatisfied, Very dissatisfied
Explanatory variables (factors)	
State/territory NSW, Vic, Qld (Base case), WA, SA, Tas, ACT, NT	As recorded. No missing or invalid responses.
Remoteness Major cities (base case), Inner regional, Outer regional, and Remote/Very remote	Categories 'Remote' and 'Very remote' were combined. No missing or invalid responses.
Age group (years) 0–34 (base case) 35–44, 45–54, 55–64, 65 and over	Observations with invalid or missing responses were excluded from the analysis. '14 years and under', '15–19 years', '20–24 years' and '25–34 years' were combined, and '65–74' and '75 years or over' were combined.
Sex	Observations with invalid or missing responses were excluded from the analysis.
Female (base case)	
Male, non-binary	
Highest level of education Bachelor degree or above, Certificate, Diploma or Advanced Diploma, Years 11–12, lower than year 10, Year 10 (base case)	Observations with invalid or missing responses were excluded from the analysis. Categories 'Year 11' and 'Year 12' were combined. Categories 'Did not go to school', 'Year 6 or below', 'Year 7', 'Year 8' and 'Year 9' were combined.
Employment status	Observations with invalid or missing responses were excluded from the analysis.
Employed (base case)	
Not employed	
Whether Indigenous household (this factor not in SOMIH model) Indigenous household Household not Indigenous (base case)	Observations with invalid or missing responses for any of the relevant questions were excluded from the analysis. Classified as Indigenous if tenant identified that they or another member of their household were Indigenous. Classified as Non-Indigenous if tenant (a) did not identify any member of their household (including themselves) as Indigenous and (b) identified that they (and any other members of the household) were not Indigenous.
Whether person with disability in household 1 or more persons with disability in household, other households (base case)	Observations with invalid or missing responses for the relevant questions were excluded from the analysis. Classified as at least 1 person with disability in household if tenant identified that they or another member of their household had a need for assistance with self-care, body movement or communication activities due to a long-term health condition or disability. Else classified as no household members with disability.

Living situation Single person living alone (base case) Single parent (Single person with 1 or more children in household) Couple with no children in household Couple with 1 or more children in household Other households	Observations with invalid or missing responses were excluded from the analysis. 'Other households' were also excluded from the analysis; this represented a very small number of observations. Categories 'Extended family with 1 or more children in household', 'Extended family with no children in household' and 'Group of unrelated adults' were combined.
Housing program Public housing (base case), Community housing, State owned and managed Indigenous housing	As recorded.by fieldwork provider No missing or invalid responses.
Number of structural problems 0 (base case), 1, 2, 3+	Observations with invalid or missing responses were excluded from the analysis.
Number of working facilities 0-6 (base case), all 7 nominated	Observations with invalid or missing responses were excluded from the analysis.
Housing utilisation Overcrowded, Adequate (base case), Underutilised	Observations with invalid or missing responses to the relevant questions were excluded from the analysis. Refer to Canadian National Occupancy Standard definition in Glossary.
Time living in social housing (years) 0-5 (base case), 6-10, 11-15, 16+	Observations with invalid or missing responses were excluded from the analysis. Categories 'Less than a year', '1-2 years' and '3-5 years' were combined, categories '16-20' and '21 or more' were combined.
Previous dwelling type House/townhouse/flat (base case) Other than a house/townhouse/flat	Observations with invalid or missing responses were excluded from the analysis. All categories other than 'House/townhouse/flat' were combined into a single category, comprising: caravan/cabin/boat/mobile home, no dwelling/improvised dwelling/motor vehicle/tent, and temporary accommodation/institution/other.

Results

The results from the regression analysis are in the form of predicted probabilities. These are the likelihood, estimated by the models, of a tenant's reporting that they are satisfied given they hold a particular set of characteristics (a category for each of the factors included in the model). This can be compared with the predicted probability for the reference group, who hold all the base case characteristics. A higher probability for a particular category (say, the category CH for the factor housing program), when compared the reference group, indicates that the category of interest (in the example just given, CH) is positively associated with tenant satisfaction in comparison to the base case (for housing program the base case is PH). A negative difference between the category of interest and the reference group indicates a negative association (for example, SOMIH versus the base case of PH).

The predicted probability (expressed as a percentage) was derived from the SAS PROC SURVEYLOGISTIC outputs, which were in the form of odds and odds ratios. This was done as follows (see ABS 2012; Eckel 2008):

Step 1. The predicted probability for the reference group was calculated. The log-odds for the reference group is reported in the SAS output as the model intercept. To convert this to a predicted probability, the log-odds was converted to odds by exponentiating the log-odds. The odds was then converted to a predicted probability using the formula:

$$Predicted\ probability = \frac{odds}{(1+odds)} \times 100$$

Step 2. The odds ratio (reported in the SAS output) for each factor category was applied to the reference group odds (obtained from Step 1) to obtain the odds for that factor (with all other factors having the reference category values). This was then converted to a predicted probability using the formula provided in Step 1.

Step 3. The difference between the predicted probability for the factor category and the reference group was obtained.

Table C2 shows the predicted probability of the reference group for each model, and the number of observations for each.

Table C2: Summary of logistic regression models

	M1 – All tenants	M2 – PH only	M3 – SOMIH	M4 – CH
Predicted probability of reference group (%)	92	90	96	95
Number of observations	5997	2917	1060	2020

Note: See Table C1 for the base case for each variable in the models— these are the characteristics of the reference groups

Factor by factor, the regression results presented in Table R.3 show:

The predicted probability of satisfaction for a tenant with the characteristics of the reference group (the base case categories combined), except in the factor of interest (category as shown).

The p value of model estimates – this indicates the level of confidence we can have in there being a relationship between a factor category and the outcome (satisfaction). The smaller the p value, the greater the confidence of an association between the factor and the outcome. A typical convention is to describe p values of less than 0.05 as being statistically significant (with a 95% level of confidence). However, there may be results that do not meet this standard but are still of importance or interest (perhaps they complement/align with other findings, or the magnitude of the association is large). Conversely, not all differences with a p value < 0.05 are necessarily important or noteworthy, especially if the effect is small.

An example will illustrate how to use the results from Table R.3 by examining the factor structural problems using Model 1 (M1). The preceding table (Table C2) shows the predicted probability of being satisfied for the reference group in M1 is **95%**. The base case for the factor structural problems is **0** structural problems in the home. The results presented in Table R3 for the categories **1** structural problem through to **3** or more structural problems allow us to see the predicted change in satisfaction when comparing tenants with no structural problems to tenants with one or more, while holding all other factors constant. The predicted probability in M1 of being satisfied for tenants living with 3 or more structural problems is 72%. This is substantially lower than the probability of being satisfied for the reference group (95%), with a category of 0 structural problems. Not only is the effect large, it is also statistically significant (p<0.0001).

References

ABS (Australian Bureau of Statistics) 2012. A comparison of volunteering rates from the 2006 Census of Population and Housing and the 2006 General Social Survey, Jun 2012, Appendix D. Canberra: ABS.

Eckel S 2008. Interpreting logistic regression models. Viewed 18 December 2018.

Sperandei S 2014. Understanding logistic regression analysis. *Biochemia Medica 24*(1): 12–18.

Technical notes

base case: a defined value for each variable (factor) included in the regression model, chosen as a point of reference for other values within each factor. For example, in the factor housing program, the base case is PH. See Identifying key factors for more information.

Canadian National Occupancy Standard (CNOS): A measure of the number of bedrooms a household needs to be appropriately accommodated. It is sensitive to both household size (number of people) and household composition (age, gender and couple relationships). The CNOS specifies that:

- no more than 2 people shall share a bedroom
- parents or couples may share a bedroom
- children under 5, either of the same sex or opposite sex, may share a bedroom.
- children under 18 of the same sex may share a bedroom
- a child aged 5–17 should not share a bedroom with a child under 5 of the opposite sex
- single adults 18 and over and any unpaired children require a separate bedroom.

community housing (CH): Housing that offers short-, medium- or long-term tenure for low-income individuals and families, or those with particular needs not well catered for by the private market. CH is generally delivered by not-for-profit organisations and covered in the National Social Housing Survey in all jurisdictions but the Northern Territory. Currently, the CH program operates in all states and territories.

demographic profile: A term used in marketing and research to describe a demographic grouping or segment of the population. This can include age bands, gender, educational attainment and labour force status.

facilities: An amenity or piece of equipment provided in a home for a particular purpose. See Chapter 4 for the list of amenities examined in the 2018 NSHS. See also working facility.

homelessness: describes times when the respondent had to live in emergency accommodation provided by a homelessness agency, or had stayed temporarily with friends or relatives because they had nowhere to live, or had been totally without permanent shelter, or had lived in shelter unlawfully (such as squatting in derelict buildings). (Note: 'Homelessness' can be defined in different ways for different purposes.)

household: Either a group of 2 or more related or unrelated people who usually reside in the same dwelling, and who make common provision for food or other living essentials; or a single person living alone who makes provision for their own food and other essentials.

household composition: The grouping of people living in a dwelling. In general, household composition is based on couple and parent–child relationships. In the NSHS, tenants are asked to select a category that best describes their household, based on whether they are a single person, couple or extended family and whether they are living with 1 or more children; or whether they are a group of unrelated adults; or some other situation.

Indigenous community housing (ICH): Housing owned or managed by an Indigenous community housing organisation. These organisations may either directly manage the dwellings they own or sublease tenancy management services to the relevant state/territory housing authority or another organisation. This housing is made available to households with at least 1 Indigenous tenant. ICH is provided in all states and territories except the Australian Capital Territory.

Indigenous household: A household which contains 1 or more people who identify as being of Aboriginal and/or Torres Strait Islander origin.

overcrowding: A situation in a dwelling when 1 or more additional bedrooms are required to meet the Canadian National Occupancy Standard

predicted probability: for any choice of factor values (base case or otherwise), each regression model developed for the 2021 NSHS estimates the chance that a tenant with the nominated characteristics would be satisfied with services from their housing provider. This chance of satisfaction is called the predicted probability.

public housing (PH): The publicly owned or leased dwellings administered by state and territory governments (also referred to as public rental housing). PH aims to provide appropriate, affordable and accessible housing, mainly for low-income households who have difficulty in obtaining and maintaining housing in the private market.

reference group: a hypothetical group of tenants with all the base case characteristics combined. The group along with its predicted probability of being satisfied is used as a point of reference for regression analysis results. See Identifying key factors for more information.

regression analysis: A statistical technique that identifies significant relationships between variables (characteristics or factors) and an outcome, after simultaneously accounting for the confounding effects of other factors. The regression analysis used in this report identifies relationships between housing, demographic and geographic factors and tenant satisfaction.

remoteness: Remoteness areas divide Australia into broad geographical regions that share common characteristics of remoteness for statistical purposes. There are 5 remoteness classes: *Major cities*, *Inner regional*, *Outer regional*, *Remote* and *Very remote*. Remoteness is based on relative access to services and is measured using the Accessibility and Remoteness Index of Australia (ABS 2018).

satisfaction rate: The percentage of tenants who were satisfied or very satisfied with services provided by their housing organisations, in relation to either overall housing services, day to day maintenance services or emergency maintenance services.

social housing: Rental housing that is funded or partly funded by government, and that is owned or managed by the government or a community organisation and let to eligible people. This housing includes;

- public housing
- state owned and managed Indigenous housing
- community housing
- Indigenous community housing.

state owned and managed Indigenous housing (SOMIH): Housing that is administered by state governments and specifically targeted at households with at least 1 Indigenous member. SOMIH aims to provide appropriate, affordable and financially accessible housing for low- to moderate-income Indigenous households. As at 30 June 2021, SOMIH is provided in New South Wales, Queensland, South Australia, Tasmania and the Northern Territory.

structural problems: In this report, refers to problems in the home reported by respondents to the NSHS: rising damp (moisture absorbed from the ground into walls or floors), major cracks in walls/floors, sinking/moving foundations, sagging floors, walls/windows not square (out of alignment), wood rot/termite damage, major electrical problems, major plumbing problems, major roof defect, and other structural problems.

underutilisation: A situation where a dwelling contains 2 or more bedrooms that are surplus to the needs of the household occupying it, according to the CNOS.

working facility: An amenity or piece of equipment provided in a home for a particular purpose, in correct working order.

Technical notes

Abbreviations

AIHW	Australian Institute of Health and Welfare
CNOS	Canadian National Occupancy Standard
CH	community housing
CI	confidence interval
ICH	Indigenous community housing
NSHS	National Social Housing Survey
PH	public housing
RSE	relative standard error
SOMIH	state owned and managed Indigenous housing

Symbols

. .	not applicable
n.a.	not available
n.p.	not publishable because of small numbers, confidentiality or other concerns about the quality of the data

Technical notes

ABS (Australian Bureau of Statistics) 2012. A comparison of volunteering rates from the 2006 Census of Population and Housing and the 2006 General Social Survey, Jun 2012, Appendix D. Canberra: ABS.

ABS 2018. Australian Statistical Geography Standard (ASGS): volume 5—remoteness structure. Canberra: ABS.

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Fact sheets by state

Notes

Amendment

21 March 2024 – Please note that the values in Table S2.5 for SOMIH have been updated.

Data quality statement

National Social Housing Survey, 2021; Quality Statement

Report editions

This release

National Social Housing Survey 2021 | 20 Oct 2022

Previous releases

- National Social Housing Survey 2018 |
  Publication | 18 Jul 2019
- National Social Housing Survey: detailed results 2016 |
  Publication | 10 Aug 2017
- National Social Housing Survey: detailed results 2014 |
  Publication | 28 Aug 2015
- National Social Housing Survey: detailed results 2012 |
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