



FINAL REPORT NO. 345

# The lived experience of COVID-19: housing and household resilience

Authored by

**Ralph Horne**, RMIT University

**Nicola Willand**, RMIT University

**Louise Dorignon**, RMIT University

**Bhavna Middha**, RMIT University

Publication Date November 2020

DOI 10.18408/ahuri5325601

**Title**

The lived experience of COVID-19: housing and household resilience

**Authors**

Ralph Horne, RMIT University  
Nicola Willand, RMIT University  
Louise Dorignon, RMIT University  
Bhavna Middha, RMIT University

**ISBN**

978-1-922498-11-3

**Key words**

COVID-19, lived experience, resilience, working from home, wellbeing, housing stress, longitudinal, housing policy, urban planning.

**Series**

AHURI Final Report

**Number**

345

**ISSN**

1834-7223

**Publisher**

Australian Housing and Urban Research Institute Limited  
Melbourne, Australia

**DOI**

10.18408/ahuri5325601

**Format**

PDF, online only

**URL**

<https://www.ahuri.edu.au/research/final-reports/345>

**Recommended citation**

Horne, R., Willand, N., Dorignon, L. and Middha, B. (2020)  
*The lived experience of COVID-19: housing and household resilience*, AHURI Final Report No. 345, Australian Housing and Urban Research Institute Limited, Melbourne, <https://www.ahuri.edu.au/research/final-reports/345>, doi: 10.18408/ahuri5325601.

**AHURI**

AHURI is a national independent research network with an expert not-for-profit research management company, AHURI Limited, at its centre.

AHURI's mission is to deliver high quality research that influences policy development and practice change to improve the housing and urban environments of all Australians.

Using high quality, independent evidence and through active, managed engagement, AHURI works to inform the policies and practices of governments and the housing and urban development industries, and stimulate debate in the broader Australian community.

AHURI undertakes evidence-based policy development on a range of priority policy topics that are of interest to our audience groups, including housing and labour markets, urban growth and renewal, planning and infrastructure development, housing supply and affordability, homelessness, economic productivity, and social cohesion and wellbeing.

**Acknowledgements**

This material was produced with funding from the Australian Government and state and territory governments. AHURI Limited gratefully acknowledges the financial and other support it has received from these governments, without which this work would not have been possible.

AHURI Limited also gratefully acknowledges the contributions, both financial and in-kind, of its university research partners who have helped make the completion of this material possible.

**Disclaimer**

The opinions in this report reflect the views of the authors and do not necessarily reflect those of AHURI Limited, its Board, its funding organisations or Inquiry Panel members. No responsibility is accepted by AHURI Limited, its Board or funders for the accuracy or omission of any statement, opinion, advice or information in this publication.

**AHURI journal**

AHURI Final Report journal series is a refereed series presenting the results of original research to a diverse readership of policy-makers, researchers and practitioners.

**Peer review statement**

An objective assessment of reports published in the AHURI journal series by carefully selected experts in the field ensures that material published is of the highest quality. The AHURI journal series employs a double-blind peer review of the full report, where anonymity is strictly observed between authors and referees.

**Copyright**

© Australian Housing and Urban Research Institute Limited 2020

This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License, see <http://creativecommons.org/licenses/by-nc/4.0/>.



## Contents

List of tables	iii	3.4.2 Coping mechanisms	46
List of figures	iii	<b>3.5 Implications for policy</b>	<b>49</b>
Acronyms and abbreviations used in this report	iii	<b>4. Social relationships, intimacy and digital interactions</b>	<b>50</b>
Glossary	iii	<b>4.1 Introduction</b>	<b>51</b>
Executive summary	1	<b>4.2 Social ties, housing and COVID-19</b>	<b>51</b>
Key findings	3	<b>4.3 Changes in social ties: handling physical distance, negotiating closeness</b>	<b>52</b>
Policy development options	6	4.3.1 Self-perception	52
The study	7	4.3.2 Intimate relationships, family and friendships	54
<b>1. Introduction</b>	<b>9</b>	<b>4.4 Maintaining privacy, achieving intimacy</b>	<b>59</b>
<b>1.1 Focus of the research and policy issue</b>	<b>10</b>	4.4.1 Privacy between households: visual and acoustic issues	59
<b>1.2 Project aim and research questions</b>	<b>11</b>	4.4.2 Privacy and intimacy within households: making a room of one's own	59
<b>1.3 Theoretical framework: disaster, resilience, capability</b>	<b>12</b>	4.4.3 Coping strategies: technology, hobbies, praying	61
1.3.1 Terminology	12	<b>4.5 Digital spaces and distant interactions</b>	<b>62</b>
1.3.2 Examining impacts	14	4.5.1 Householders' profiles as digital users	63
<b>1.4 Research methods</b>	<b>14</b>	4.5.2 Establishing boundaries	66
1.4.1 Methodology	14	<b>4.6 Implications for policy</b>	<b>67</b>
1.4.2 Data collection	15	<b>5. Social, physical and mental health</b>	<b>68</b>
1.4.3 Data analysis	17	<b>5.1 Introduction</b>	<b>69</b>
1.4.4 Description of households and participants	20	<b>5.2 Social health: impacts on social support</b>	<b>69</b>
<b>2. Employment, income, housing finances and local services</b>	<b>25</b>	5.2.1 Social integration	69
<b>2.1 Introduction</b>	<b>26</b>	5.2.2 Social acceptance	71
<b>2.2 Housing, employment, local services and COVID-19</b>	<b>26</b>	5.2.3 Social contribution	71
<b>2.3 Employment and income loss</b>	<b>28</b>	5.2.4 Social actualisation	73
2.3.1 Coping with employment and income loss	28	5.2.5 Social coherence	73
2.3.2 Mortgage, rent and other housing finance coping strategies	29	<b>5.3 Physical health: practices of hygiene, physical exercise and impacts on health</b>	<b>75</b>
<b>2.4 Local services and mobilities</b>	<b>30</b>	5.3.1 Infection control and hygiene	75
<b>2.5 Implications for policy</b>	<b>32</b>	5.3.2 Impacts on healthcare	78
<b>3. Working from home, food and energy practices</b>	<b>34</b>	5.3.3 Exercise and impacts on physiological health	78
<b>3.1 Introduction</b>	<b>35</b>	<b>5.4 Mental health: impacts on emotional wellbeing</b>	<b>81</b>
<b>3.2 Working and learning from home</b>	<b>35</b>	5.4.1 Impacts of COVID-19 on emotional wellbeing	81
3.2.1 Working from home	36	5.4.2 Coping with emotional stressors	86
3.2.2 Coping with learning and working from home	38	<b>5.5 Implications for policy</b>	<b>88</b>
<b>3.3 Food provisioning and consumption</b>	<b>39</b>	<b>6. Intersecting issues and policy development options</b>	<b>89</b>
3.3.1 Changes in eating patterns	39	<b>6.1 Intersecting issues</b>	<b>89</b>
3.3.2 Changes in grocery shopping patterns	40	<b>6.2 Policy development options</b>	<b>92</b>
3.3.3 Benefits of COVID-19 financial assistance on diet and food choices	42	6.2.1 Conclusion	94
<b>3.4 Energy practices: managing comfort and energy bills</b>	<b>45</b>	<b>References</b>	<b>95</b>
3.4.1 Impact of COVID-19 lockdown restrictions	45		

## List of tables

Table 1: Profile of participants	22
----------------------------------	----

## List of figures

Figure 1: Research findings	4
Figure 2: Analytical framework	14
Figure 3: Timeline of project and major policy responses in study sites	19
Figure 4: Distribution of participants across age groups	20
Figure 5: Distribution of tenure types	20
Figure 6: Distribution of household compositions	21
Figure 7: Distribution of dwelling structures	21
Figure 8: Working from home: converted spare room (P3)	37
Figure 9: Couple's bedroom with incorporated home office for working from home (P17)	38
Figure 10: Limited space to store extra groceries (P25)	44
Figure 11: Growing food before and during COVID-19 (P18, P22 and P32)	44
Figure 12: Using bubble wrap to stay warm (P8, P22)	47
Figure 13: 'My office' set-up with balcony bed and belongings (P19)	60
Figure 14: Viewing 'outside': apartment dwellers' sunset views from their homes (P5, P10, P19)	62
Figure 15: Shoes stored in the hallway (P17)	77
Figure 16: Distribution of COVID-19-related impacts on emotional wellbeing	82
Figure 17: Research findings	90

## Acronyms and abbreviations used in this report

<b>AHURI</b>	Australian Housing and Urban Research Institute Limited
<b>ARC</b>	Australian Research Council
<b>CALD</b>	Culturally and Linguistically Diverse
<b>CBD</b>	central business district
<b>COVID-19</b>	Coronavirus Disease of 2019
<b>DHHS</b>	Department of Health and Human Services
<b>DIY</b>	do it yourself
<b>DOH</b>	Australian Government Department of Health
<b>HEET</b>	Housing Energy Efficiency Transitions
<b>HOME</b>	Housing Outcomes Metrics and Evaluation
<b>MERS</b>	Middle East Respiratory Syndrome
<b>PV</b>	photovoltaic
<b>SARS-CoV</b>	Severe Acute Respiratory Syndrome
<b>UN</b>	United Nations
<b>VAMPIRE</b>	Vulnerability Assessment for Mortgage, Petrol and Inflation Risks and Expenses
<b>VEU</b>	Victorian Energy Upgrades
<b>WHO</b>	World Health Organization

## Glossary

A list of definitions for terms commonly used by AHURI is available on the AHURI website [www.ahuri.edu.au/research/glossary](http://www.ahuri.edu.au/research/glossary).

# Executive summary

---

## Key points

- Housing has taken on increasing significance with the COVID-19 pandemic. The aim of this project was to evaluate complex interrelated impacts that COVID-19 is having on households with a range of vulnerabilities.
- The literature on disaster response reveals the centrality of vulnerability and resilience in recognising household inequalities, sensitivities and capabilities in coping with COVID-19.
- COVID-19 has exacerbated vulnerabilities such as poor housing quality and location, housing affordability, energy poverty, and a range of social, mental and physical health conditions.
- The physical and social make-up of apartment buildings and neighbourhood encouraged or hindered social integration, and efforts to manage apartment building common spaces seemed to have been differentiated by socio-economic conditions.
- COVID-19 income and housing support measures were critically important in supporting household resilience—but also left gaps in support, with implications for resilient responses.
- For people spending more time at home, including working from home and homeschooling, efforts to adapt were constrained by the ability to make material changes or to afford energy bills.

- **COVID-19 particularly exacerbated social isolation where there were weak pre-existing ties and limited digital capability; involuntary separation from family and reduced or cancelled care-worker visits were particularly challenging.**
- **Digital literacy, inclusion and confidence—together with concerns about online security—reveal uneven capabilities and access to support to achieve social connectedness online.**
- **Resilience to disconnection and distance was exhibited in various coping mechanisms; from creating new bonds locally to developing new technological knowledges or curating at-home spaces for self-development.**

Using longitudinal data points—that is, before and during COVID-19—this summary reports qualitative research on the impacts and responses to the COVID-19 pandemic.

COVID-19 has affected existing inequalities in housing unevenly, and the direct and indirect changes wrought upon some of the more heavily impacted households have been a key focus of COVID-19-related policy intervention. Security of housing is recognised in these policy responses, and much of what constitutes housing policy is based upon the recognition of the links between housing and a wide range of social, health and productivity outcomes, including the effectiveness of the welfare system. Key findings are derived from viewing COVID-19 as a disaster and, accordingly, household responses as expressions of vulnerability and resilience, derived from underlying sensitivities, capabilities and exposure.

## Key findings

COVID-19 has affected households across Australia directly, through disease, and indirectly, through curtailments to employment, loss of income, and restrictions on movement outside the dwelling. (Note: there were no cases of COVID-19 among our participants.) Set against this were a range of policy interventions, ranging from financial payments and guidelines around housing costs relief, to policing of the restrictions on movement and social distancing, to cleaning and sanitising. Nevertheless, these changes brought significant challenges and responses inside homes, in terms of reconfiguring internal spaces for new, more intensive use caused by confinement as described in Chapter 3—such as homeschooling and working from home. These changes also had significant knock-on effects upon relationships (Chapter 4) and upon both mental and physical health and wellbeing (Chapter 5).

The resilient responses of participants occurred against a background of intersecting, pre-existing vulnerabilities. As depicted in Figure 1, these vulnerabilities are described as the result of the intersection between:

- exposure to the impacts of COVID-19
- sensitivities to harm—pre-existing job security or poverty, health and age, household composition and caring responsibilities, social capital and networks
- capabilities to respond—access to support, agency, power and knowledge and the social or digital licence to use it, resources, decent housing and rights to manage housing needs.

Thus, three sequential observations frame resilience in this context:

- Pre-existing vulnerabilities provide an unequal basis for confronting the pandemic.
- The pandemic and socio-economic responses affect these underlying vulnerabilities and therefore act to re-order their intersections and the resilience response.
- The pandemic and socio-economic responses also bring new vulnerabilities that add to the mix of pre-existing vulnerabilities, creating new inequalities in resilience response.

## Research findings

Housing provides a key hub for control measures instituted to control the COVID-19 pandemic. As such, it is assumed that a housing policy would be a key positive factor in mediating the impact of COVID-19 and takes on even greater significance in society as a result.

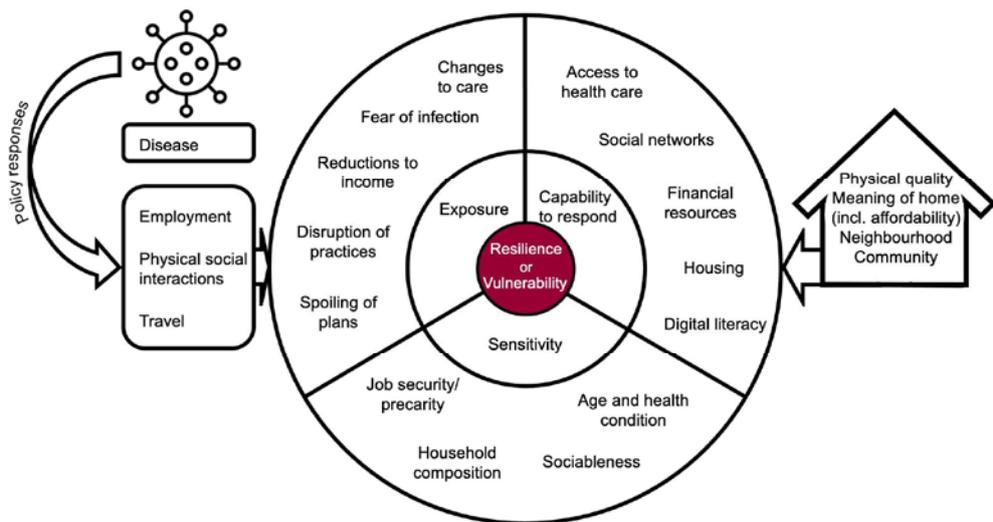
However, housing is not currently organised in a way that provides for universal sanctity, security, health and liveability. Instead, already existing inequalities, together with sensitivities, make for unequal vulnerability:

- **already existing inequalities**—urban form, housing condition, affordability
- **sensitivities**—job precarity, age, health, household composition and social networks.

Moreover, as well as providing sanctuary and security, housing is also a place of violence and fear, where perpetrators carry out crimes behind closed doors. Just as COVID-19 intensifies the home as a site, so it also risks exacerbating injustice.

Thus it follows that services to ensure justice, along with tenure rights, property condition and the rights, responsibilities and resources to improve and maintain decent housing are central in shaping capabilities: economic, social and other resources that enable agency, power and choice.

Figure 1: Research findings



Source: Authors.

Sensitivities are a key consideration in the contact of COVID-19 impacts, because they:

- are not all immediately apparent
- are not arranged as they were prior to the pandemic.

The study found that on top of the changes in practices that were mandated by regulations, such as working from home, many other actions were undertaken voluntarily—for example, shunning public and crowded places.

Moreover, the experiences of the older participants suggested that the disproportionate risk of COVID-19 for the older population group may not be limited to the disease itself. As older participants were discouraged, barred or refrained voluntarily from social activities and physical meetings in and outside their home, these respondents seemed likely to develop feelings of loneliness. This seemed to have been exacerbated by limited digital literacy, and the feeling that contact via social media was not meaningful—as it did not meet the need to belong and be understood. This combination of physical and digital disconnection from community was also experienced by one social renter who lacked digital capacities.

It is in the intersection of multiple exposures, sensitivities and contingent capabilities to respond that the response to the COVID-19 disaster is experienced: either as a life-affirming, solidarity-inducing set of resilient responses; or as multiple, reinforcing vulnerabilities that bring life crashing down into an isolated, marginalised, powerless cul-de-sac of existence.

The potential stressor of sudden income loss or housing precarity seems to have been lessened by the introduction of JobSeeker and JobKeeper income support, along with rent and mortgage moratoriums. Housing affordability was closely linked to job security. The continuation of paid employment, wage and welfare support contributed to ontological security.

Social conversion factors that facilitated functionings were good social networks, such as having adult children or good neighbourhood integration—people who could help with care-giving, shopping and cleaning, allowing participants to achieve sustenance and a valued state of cleanliness. Resilience was enhanced by:

- having access to shops
- having workplaces and services within walking or cycling distance
- having the capacity to drive
- being able to mobilise family networks and supportive social networks.

Having the financial resources, the ability and some freedom to make decisions protected resilience. The freedom to move was also important. Social renters had security of tenure, but little opportunity before the pandemic to choose a home that suited their individual conditions and preferences—thus they were experiencing housing stress beyond concerns about affordability.

Lack of space for storage meant making extra trips outside into potentially contaminated shopping environments. Such shopping trips amounted to a significant new burden upon mental and physical resources when combined with low income, underlying health conditions and anxieties, as well as constraints on mobility.

Combined with isolation—whether self-imposed or not—a potentially catastrophic situation was created where it was increasingly difficult to see meaning in life and in a positive future. The presence of pre-existing housing stressors in housing design and environment rendered tenants and low-income households vulnerable to multiple interacting stressors, including:

- limited access to energy services
- lack of digital literacy
- job precarity.

Thus, housing and its location was found to be a key material mediator of vulnerability and resilience of participants. The important role of housing and urban design in coping with the pandemic suggests that housing policy can play a part in helping people adapt and recover from the COVID-19 pandemic and prepare for possible future emergencies that may confine people to their homes.

These findings were the result of analysis of 40 semi-structured interviews, with participants drawn from across Melbourne CBD, metropolitan Melbourne and regional Victoria. COVID-19 directly affected our participants, as:

- 15 participants reported income lost from impacts on formal employment
- 8 participants lost their jobs
- 1 participant was made to take long-service leave and annual leave
- 1 participant quit their job due to COVID-19 health-related concerns
- 5 participants (or their partner) were obliged to reduce their work hours or pay.

In addition, one participant reported lost income from the decline in the informal economy due to COVID-19, which meant that at least 40 per cent of our participant group were significantly affected by lost income. The remainder of participants were either on fixed incomes (9) or continued working in essential worker roles (2), or began to work from home (4).

The participant group consisted of 28 women and 13 men. One was under 24 years old, with the remainder as follows: 25–44 (18); 45–64 (13); 65–74 (6) and over 75 (3). The majority (31) reported some or multiple housing vulnerabilities in the initial interview (conducted between 2017–19), including:

- poor housing quality
- poor health
- disability
- poor neighbourhood quality or links
- low income.

Upon the follow-up interview, conducted in June–July 2020, only four participants reported no significant vulnerabilities and the remainder reported exacerbated vulnerabilities since the original interview.

## **Policy development options**

While COVID-19 support measures have been generally effective in providing income support for our participant group, wider impacts on security and wellbeing have been unevenly distributed. A key determinant of this uneven distribution is the contingencies of the participants' housing pathways in the period leading up to the pandemic. There are implications for housing and welfare policy in the rapid shift to online and remote relationships and transactions associated with the social distancing measures required to control the pandemic, as well as the role of digital inclusion competencies

Policy development options arising from this research relate to mechanisms to build resilience by addressing sensitivities, exposures and capabilities as they relate to housing at the nexus of employment, health and society.

Given the undoubted success of JobKeeper, JobSeeker and the Coronavirus supplements, these should be maintained for as long as it takes for those affected households to recover and re-enter their paid work. For those without work and on JobSeeker, the enhanced payments should continue in order to provide financial resilience in the face of future disasters.

However, the rent and mortgage support measures have been less successful, and should be reviewed in the light of the 'soft power' relations they revealed, including the householders' reticence and lack of willingness to engage with landlords and banks in what they view as uneven power relations.

Other short-term policy options relate to the cleanliness and policing of COVID-19 distancing requirements on public transport and in common areas around multi-unit dwellings. Increased powers—and exercise of those powers to regulate distancing and cleanliness of surfaces on public transport—would reduce concerns among low-income households and those without a car who were heavily reliant upon public transport. Responsibilities upon body corporate and strata managers to regulate distancing and cleanliness of surfaces in common areas of multi-unit dwellings would address inequalities between households across different developments, and reduce anxieties and possible exposure.

Another set of policy development options relates to urban design, where inequalities in the distribution and quality of urban services such as parks and open space, local shops and other facilities, are exacerbated under COVID-19 movement restrictions. Here, impacts fall disproportionately upon lower socio-economic suburbs that also have poorer services and are less resilient. This points to a need to redouble policy directions to address such inequalities by (re)building accessible 20-minute neighbourhoods with high-quality local urban spaces, services and employment opportunities.

Building design implications of the study point to policy development opportunities in building design and retrofit. While households in smaller apartments demonstrated remarkable ingenuity in reconfiguring and using multifunction spaces for purposes that had never been envisaged at the time of the first interview (pre-COVID-19), it was clear that many of the limits imposed by the design were insurmountable. These included lack of:

- acoustic and visual privacy
- natural light
- circulation space
- floorplate flexibility.

Access to a balcony or garden—either individual or communal—and views of greenery contributed to better mental health, and this is also a matter for building design codes.

In larger, more separate dwellings that could accommodate working from home and opportunities for retreat, the policy challenges revolve around regulations that mandate more energy-efficient homes through:

- improved building code stringency
- mass-upgrades to the energy efficiency of the housing stock across Australia.

Across all homes, policy responses to allow for reconfiguration of dwellings to accommodate working from home and homeschooling are currently limited to a range of tax provisions regarding working from home, and these should be reviewed to allow low-income households equitable access to such upgrades.

Another policy development opportunity relates to how housing can promote community cohesion and social support to build resilience among potentially socially isolated or disconnected households. Digital inclusion and online connections to neighbours were an observed source of resilience. Social and community services, ranging from care-giving to libraries, provide essential sources of connection that were curtailed in numerous cases among our participants—often at the same time that other sources of household resilience were also being undermined. Recognising these as essential services is important in ensuring a base resilience and ongoing provision of these services in the face of future disasters.

Finally, social housing must be re-imagined in terms of its value to the community in the face of COVID-19. It provides much more than shelter and continuity. Social housing tenants benefited from their tenure, although they had little opportunity to choose a home that suited their individual conditions and preferences before the pandemic, and thus were experiencing housing stress other than housing affordability stress. This finding concurs with previous research that has highlighted the often complex needs of social housing tenants, the community context and the limited capabilities to move to other housing (Muir, Powell et al. 2020). A significant expansion of social housing stock would facilitate more choice, as well as give access to housing for a much larger number of households, which we now know are in precarious work conditions where they require secure housing options.

## **The study**

The aim of the project was to evaluate the complex interrelated impacts that COVID-19 is having on households in housing affordability stress, and related vulnerabilities, including those shaped by low incomes and external stressors brought about by COVID-19.

Four Research Questions guided the research:

- **RQ1:** How are households impacted with regards to care, health, work, schooling, relationships, access to outside spaces, energy bills, food and privacy?
- **RQ2:** What coping mechanisms are being adopted by these households?

- **RQ3:** How are these households coping with policy interventions designed to alleviate impacts of COVID-19, including tenant protection, rent/mortgage relief and income substitution?
- **RQ4:** Which gaps in COVID-19 housing and welfare policy are exposed by the responses to RQ1–RQ3, and what are the implications for future housing policy interventions?

This project is longitudinal and qualitative, as it builds on pre-COVID-19 householders' accounts of housing and wellbeing to examine differential impacts of COVID-19 for households across tenures, housing types and household composition. The emphasis is on households in diverse forms of housing-related stress. Complex or unselected change has arisen across tenures, housing types and household compositions.

In order to interpret the interrelations of everyday decision-making and change, insights are required into the lived experience of housing. This points to a qualitative approach, most often including face-to-face, semi-structured interviews inside people's homes where they can show and describe what and how they cope with changes that, in this case, were wrought by COVID-19. This provides rich insights into how policy 'hits the ground'.

The project methods build on two large existing databases of interviews, photographs and household tours produced through two Australian Research Council (ARC) projects:

- Housing Energy Efficiency Transitions (HEET)—21 interviews
- Housing Outcomes Metrics and Evaluation (HOME)—19 interviews.

These databases were extended to enable the project to evaluate housing outcomes under COVID-19.

Online and telephone interviews were employed in this research to analyse the impacts of COVID-19, taking advantage of advances in remote methods both technologically and methodologically and, at the same time, considering the unavailability of in-home ethnographic methods during COVID-19. Various platforms such as Viber, Skype, Zoom, FaceTime and Microsoft Teams were used to conduct 22 telephone audio call interviews and 18 online video call interviews. The platforms and the choice of method were discussed and mutually agreed upon by the researcher and the participants. Participants were requested to take and send photographs of spaces and materials discussed in the interview by using their phone messaging platform or through emails.

# 1. Introduction

---

- Housing is a primary site of everyday life, which has taken on increasing significance with the COVID-19 pandemic.
- The project aim was to evaluate complex interrelated impacts that COVID-19 is having on households with a range of vulnerabilities.
- Impacts of COVID-19 can be expected to exacerbate already existing housing-related vulnerabilities, such as poor housing quality and location, housing affordability stresses (including energy poverty), and a range of social, mental and physical health conditions.
- The literature on disaster response reveals the centrality of vulnerability and resilience in recognising household inequalities, sensitivities and capabilities in coping with COVID-19.

### 1.1 Focus of the research and policy issue

The COVID-19 pandemic has affected households unevenly, and the direct and indirect changes wrought upon some of the more heavily impacted households has been a key focus of policy intervention related to COVID-19. Security of housing is recognised in these policy responses.

Moreover, COVID-19 has impacted an already uneven housing system with many perennial challenges. For example, homelessness, housing supply, housing affordability, tenancy and planning reform are priorities in the National Housing and Homelessness Agreement (Federal Relations Secretariat 2018). Much of what constitutes housing policy is based upon the recognition of the links between housing and a wide range of social, health and productivity outcomes, including the effectiveness of the welfare system:

From a social perspective, housing provides a stable base from which we can participate in society, form families, and enjoy retirement. Housing can determine lifetime education, employment, and health outcomes. From an economic perspective, housing has a significant impact upon investment, productivity and participation, as well as consumption and saving trends across the economy. Housing is also central to the effectiveness of Australia's welfare system. (DSS 2020)

Large-scale surveys can provide information about the quantitative changes taking place in people's homes and lives. However, in order to interpret the interrelations of everyday decision-making and change, insights are required into the lived experience of housing. This points to a qualitative approach, most often including face-to-face, semi-structured interviews inside people's homes where they can show and describe what and how they cope with changes that, in this case, were wrought by COVID-19. This provides rich insights into how policy 'hits the ground', which can then be used in large-scale surveys, or directly in policy making.

This research investigated housing outcomes during the first three months of the COVID-19 pandemic in Australia. The premise of the research was that COVID-19 posed a population-wide challenge, and that housing is a mediating factor in coping with the pandemic and associated change. At the time of the study, COVID-19 posed an immediate threat to health. Federal and state governments portrayed the public health risk as manageable and sought to prevent the spread by early lockdown measures and additional efforts to safeguard the health of susceptible people. Policy responses included:

- closing schools, offices and restaurants
- physical distancing rules prohibiting private and public gatherings
- stopping interstate and international travel.

Thus housing became the primary—and often the only—site of everyday life.

The emphasis of this study is on those diverse forms of housing-related stress. Complex or unselected change has arisen across tenures, housing types and household compositions. While COVID-19 support measures have been generally effective in providing income support for our participant group, wider impacts on security and wellbeing have been unevenly distributed. A key determinant of this uneven distribution is the contingencies of the participants' housing pathways in the period leading up to the pandemic. There are implications for housing and welfare policy, as well as for the role of digital inclusion competencies in the rapid shift to online and remote relationships and transactions because of the social distancing measures required to control the pandemic.

Sudden economic hardship disproportionately falls on lower income households (van den Nouwelant, Crommelin et al. 2016). Many lower-paid job sectors, such as hospitality and retail, do not have options. Households in poor-quality housing are often marginal and low-waged or unwaged, and some of these experience vulnerabilities compounded by isolation and energy poverty from increased use of electricity and gas (Petrova 2018; Waitt and Harada 2019). Low-income private renters, whose ontological housing security is least protected, may also experience anxiety about possible rent arrears and the threat of eviction, despite temporary tenant-protection laws. These households lack the funds and agency to thermally retrofit their homes for comfort, or will need to negotiate these with their landlords (Azpitarte, Johnson et al. 2015). Energy injustice (Willand and Horne 2018) is thus compounded while abilities to provide care (Power 2019) are compromised in multiple ways.

### 1.2 Project aim and research questions

The project aim was to evaluate the complex interrelated impacts that COVID-19 is having on households in housing affordability stress, and related vulnerabilities, including low incomes and unselected changes brought about by COVID-19.

Four Research Questions guided the research:

- **RQ1:** How are households impacted with regards to care, health, work, schooling, relationships, access to outside spaces, energy bills, food and privacy?
- **RQ2:** What coping mechanisms are being adopted by these households?
- **RQ3:** How are these households coping with policy interventions designed to alleviate impacts of COVID-19, including tenant protection, rent/mortgage relief and income substitution?
- **RQ4:** Which gaps in COVID-19 housing and welfare policy are exposed by the responses to RQ1–RQ3 and what are the implications for future housing policy interventions?

The project approach anticipates different impacts across locations and housing types, as well as socio-economic status and household demographics. For example, apartments as a housing typology create specific constraints (Troy 2017) as they are on average smaller than (semi)-detached dwellings (Kalantari and Shepley 2020). Minimum spatial allowances, inflexibility of room-use options and crowded conditions inhibit working from home, schooling, exercising within the home or the isolation requirements of infected members of the household. In choosing apartments, many households compromised on home size for proximity to services, yet these services were curtailed under COVID-19 restrictions—for instance, children’s playgrounds, open spaces, restaurants, gyms, etc. Workplaces that are now closed because of COVID-19 once provided not only income but also, variously, comfortable indoor environments, childcare and outside spaces.

In contrast, detached houses may afford more privacy and access to a garden than apartments. However, they may be more expensive to keep warm. Warmth is important to reduce the transmission of airborne infections and the survival of coronaviruses on surfaces (Casanova, Jeon et al. 2010). However, adequate warmth throughout the house may be unaffordable for low-income households—and this may add to existing concerns about job precarity and public health issues.

### Structure of report

The remainder of this report addresses the Research Questions. The findings are arranged thematically in Chapters 2–5.

Chapter 2 situates the impacts of the pandemic and associated interventions on household income, and access to local services outside the home. It also addresses RQ3 by presenting participants’ coping strategies in conjunction with income-based support measures implemented following the initial outbreak of COVID-19. These support measures include JobKeeper, JobSeeker and the Coronavirus supplement, plus access to lump sum withdrawals from superannuation, landlord-negotiated rent relief, and lender-negotiated mortgage relief.

Chapter 3 examines home-working, homeschooling, and changes to food and other domestic consumption.

Chapter 4 examines how restrictions on movement and proximity provoked changes in socialising and relationships, isolation and intimacy, including online activity.

Chapter 5 examines impacts upon social, physical and mental health.

Each of these chapters presents findings on household impacts (RQ1) and coping strategies (RQ2) for the relevant theme.

In addition, each of these chapters contains a final section: 'Implications for policy' (RQ3). These implications are brought together in Chapter 6, which also draws together the vulnerabilities identified across Chapters 2–5 in accordance with the theoretical framework presented in Section 1.3. Hence, Chapter 6 addresses RQ4 by identifying gaps in COVID-19 housing and welfare policy, and outlining the implications for future housing policy interventions.

### 1.3 Theoretical framework: disaster, resilience, capability

The COVID-19 pandemic has been classified as a disaster (Seselja 2020). Framed this way, the existing literature on disaster response reveals the importance of developing strategies that may promote resilience to ongoing risks or future events and enhance efforts of recovery. Learning from disasters involves the examination of impacts, the identification of differential vulnerabilities and the explorations of the conditions that have shaped them.

We draw on theories of the social sciences, climate sciences and disaster justice to define the concepts of impacts, vulnerability and resilience, and to explore the role of housing for this research (Birkmann, Cardona et al. 2013; Diderichsen, Hallqvist et al. 2019; Sen 1992; Van Zandt, Peacock et al. 2012; Verchick 2012). In this report, we refer to COVID-19 as the event of the pandemic.

#### 1.3.1 Terminology

Key terminology used in the report is outlined here.

- **Impacts** refer to positive or negative effects that were directly or indirectly attributed to the COVID-19 pandemic.
- **Differential vulnerability** expresses the variability in the potential for harm or detriment.
- **Vulnerability** sits at the nexus of the exposure to the negative impacts of COVID-19, sensitivity and capability to respond.
- **Sensitivity** refers to an internal characteristic of the unit of analysis that may influence the degree to which harm or detriment is experienced.
- **Capability to respond** reflects the opportunity to modify, mitigate or manage the exposure to the negative impacts of COVID-19.
- **Responses** may be in the forms of coping with negative impacts in the short term, adapting to them in the long term or being an active agent in the recovery process.
- **Resilience** is understood as the opposite of vulnerability.

#### Capability

Capability as an opportunity entails access to economic, social and other resources, and freedom, which includes aspects of agency, power and choice (Robeyns 2017; Sen 1990; Wolff and de-Shalit 2013). Therefore, capability is expected to provide insights on the equity of impacts of COVID-19.

The capability approach responds to the observation that ‘despite the best efforts of individuals and their communities, the heaviest burdens of disaster are borne by those with the least power—those who, for whatever social and economic reasons, are more exposed, more susceptible, and less resilient when disaster strikes’ (Verchick 2012: 23). The achievement of capabilities depends upon structures in society that shape the ability to respond to external stressors effectively or in a timely manner (Ton, Gaillard et al. 2019), including:

- economic systems or housing conditions
- social conversion factors—for example, social networks.

### Social vulnerabilities

Social scientists have used the concept of social vulnerabilities to understand the unevenness in meaningful response activities and outcomes (Alexander 2012). While lacking an agreed definition, the concept of social vulnerabilities acknowledges that social structures, demographic factors and economic characteristics may shape the vulnerability or resilience of communities to disasters and emergencies (Fatemi, Ardalan et al. 2017; Van Zandt, Peacock et al. 2012).

Identifying socially vulnerable population groups and communities and addressing these predisposing conditions may improve resilience to events in the future (Center for Disease Control 2020a). In the US, social vulnerability is associated with:

- socio-economic status
- household composition
- disability, minority status and language
- housing type
- access to a car.

Housing-related factors that may increase social vulnerability include multi-unit housing, crowding and shared homes (Center for Disease Control 2020b).

### Housing stressors

Housing stressors are housing-related conditions that are perceived to be challenging and to be threatening housing outcomes. Housing outcomes may be defined in terms of health, economic productivity, education and empowerment (New South Wales Department of Family and Community Services 2016).

Key determinants of housing outcomes are:

- housing affordability
- the meanings of home
- the quality and materiality of the dwelling
- the environment
- the community (Bonney 2007; Taylor 2018).

The meanings of home are influenced by the psychosocial benefits of homes, which can be categorised into privacy, retreat, freedom, status, control, progress, security, routine, safety and identity (Kearns, Whitley et al. 2011). The category of security, as ‘lack of concern about losing the home’ (Kearns, Whitley et al. 2011: 605), includes perceptions of affordability. The meanings of home are closely linked to the quality of the dwellings and may mediate social and psychological health outcomes (Willand, Ridley et al. 2015).

The quality and materiality of the dwelling include design, size and quality of construction—including energy efficiency, as a means to limit living costs associated with energy bills.

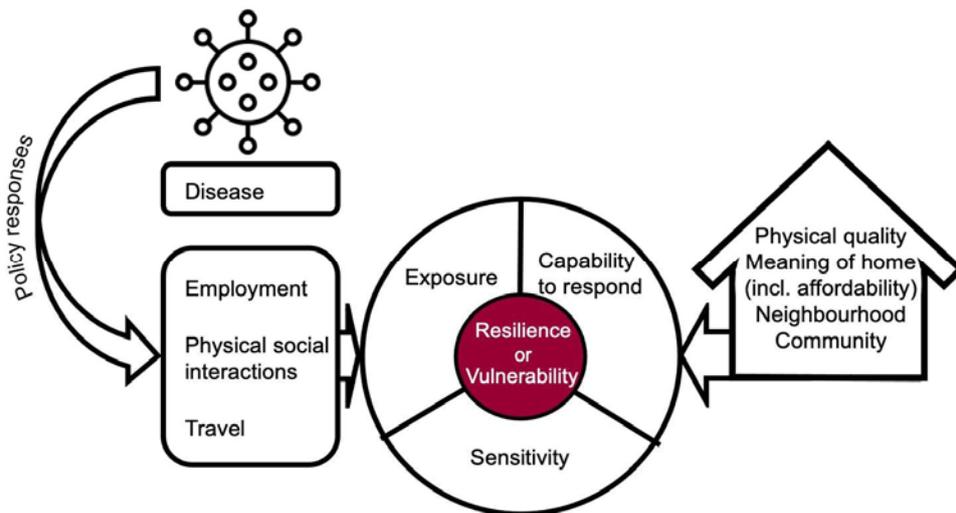
Neighbourhood environment captures noise pollution and perceived safety, as well as urban-planning characteristics such as opportunities for physical exercise and access to public green areas (Bonney 2007; Braubach and Fairburn 2010). Community quality refers to social cohesion, ties and support (Molinari, Ahern et al. 1998).

### 1.3.2 Examining impacts

In this context, COVID-19 is conceptualised as an external event that may directly or indirectly have influenced people’s practices, productivity and wellbeing. The study sought to investigate the role of housing-related material, psychosocial and structural conditions and mechanisms in participants’ responses to COVID-19.

In addition to the potential health effects of the disease on households and individuals, political pandemic control measures may have had indirect impacts on people’s experiences. When the research was conceived, restrictions on social face-to-face interactions, economic activities and people’s freedom of movement were in place. These restrictions potentially reduced income, spoiled plans and significantly changed and disrupted everyday practices of work, schooling, shopping, meeting friends and family, eating and exercising, as well as restricting travelling locally, nationally and internationally. Figure 2 represents the analytical framework of the study.

Figure 2: Analytical framework



Source: Authors.

## 1.4 Research methods

This project adopts some characteristics of a longitudinal qualitative methodology, in that each participant was interviewed twice—once before COVID-19, and again during the pandemic. The methodology used in this research and stages for the data collection and analysis are described below.

### 1.4.1 Methodology

#### A longitudinal approach

Although there were only two temporal data points for each participant, this represents a means to assess individual changes within a household associated with COVID-19, and thus presents some characteristics of a longitudinal study.

Longitudinal qualitative studies emphasise the role of time in the research, thereby including change in the analysis (Calman et al. 2013). They can address questions of lived experiences of change (or stability) (Calman et al. 2013). According to Menard (2002), longitudinal qualitative research constitutes the following:

- the data is generated over two or more separate time periods
- the data analysed is comparable across these time periods
- the analysis includes this data comparison across the time periods.

There are four kinds of longitudinal research, and the current research falls into the category that can be described as a 'follow-up [study], where an original study of participants is followed up after a period' (Calman et al. 2013: 2). Longitudinal studies have been previously used to understand how people respond to changes and adaptations to events and traumas (Holland, Thomson et al. 2006). They have also been used to understand the impact of changing circumstances on social organisation and human lives (Holland, Thomson et al. 2006).

This research project has leveraged pre-COVID-19 interviews from two current Australian Research Council (ARC) projects to analyse the impacts of COVID-19 through follow-up interviews with researchers who are known to the respondents. This provided continuity and trust in a time of uncertainty and change. Using this longitudinal qualitative approach, the project has examined a range of intersecting socio-material factors, and examined the change and adaptation in affected households.

### Online/telephone semi-structured interviews

Qualitative methods provide a means to elicit complexity in relations that are not able to be accessed through survey methods (Mason 2017). Qualitative online video interviews and telephone interviews have been used previously for hard-to-reach participants and for saving time and resources (Lijadi and van Schalkwyk 2015). More recently digital ethnography has also become a useful way to co-produce data and encourage new ways of researching and analysing (Pink, Horst et al. 2016). Telephone interviews have been in use for a long time and have been particularly used and planned into research design for longitudinal follow-ups (Burke and Miller 2001; Irvine 2010). The familiarity built up with participants in longitudinal research provides trust and rapport, for both the interviewer and the participant (Calman et al. 2013; Irvine 2010). This is especially advantageous for semi-structured interviews where the research is designed to explore complexities of everyday life and associated coping strategies. Another advantage that has been noted for telephone interviews is the relaxation it provides to both parties in terms of not needing to dress up, clean the house or travel long distances (Irvine 2010). Drawbacks such as not being able to take breaks, the risk of a poor connection, not being able to perform visual tasks together or pick up visual cues (for audio interviews) are acknowledged (Irvine 2010). At the same time, many researchers have found that telephone and online interviews, especially for longitudinal follow-ups, seem to provide a comparative (to face-to-face interviews) quality of data required (Archibald, Ambagtsheer et al. 2019; Burke and Miller 2001; Iacono, Symonds et al. 2016; Irvine 2010).

Online and telephone interviews were employed in this research to analyse the impacts of COVID-19, taking advantage of advances in remote methods both technologically and methodologically and, at the same time, considering the unavailability of in-home ethnographic methods during COVID-19. Various platforms such as Viber, Skype, Zoom, FaceTime and Microsoft Teams were used to conduct 22 telephone audio call interviews and 18 online video call interviews. The platforms and the choice of method were discussed and mutually agreed upon by the researcher and the participants. Participants were requested to take and send photographs of spaces and materials discussed in the interview by using their phone messaging platform or through emails.

### 1.4.2 Data collection

The project methods build on two large existing databases of interviews, photographs and household tours produced through the aforementioned ARC projects:

- Housing Energy Efficiency Transitions (HEET)—21 interviews
- Housing Outcomes Metrics and Evaluation (HOME)—19 interviews.

These databases were extended to enable the project to evaluate housing outcomes under COVID-19.

### Recruitment and study sites

To address RQ1–RQ2, we accessed our existing residents' dataset from our two ARC projects and selected 20 households to interview per project. We attempted to include various household types including one-person, sole parent, multiple/complex, multi-generational, shared, and blended household. We also included various locations: CBD, middle-ring suburbs and regional Victoria—Latrobe Valley. We conducted phone or online interviews with these 40 households to identify the range of impacts that self-isolation, self-quarantining or living through the COVID-19 lockdown was having on their households.

Potential participants were approached either via telephone calls or email. We conducted selective sampling on both groups of participants (HEET and HOME) so that participants who had expressed distress related to finances or energy use were contacted first. Participants who occupied the same house or apartment as in the first interview were also selected first for interviews. This approach was cohesive with the premise of this longitudinal project, which aimed to explore the impacts on COVID-19 on households under stress.

If participants agreed to a follow-up interview, they were either interviewed on the spot or at a future time of mutual choosing. This meant that the interviewer had to be prepared for the interview with the semi-structured interview guide, a transcript of the previous interview and the recording device. Consent was obtained verbally in the 'on the spot' cases and recorded, and a formal consent form was sent out after the interview. For other participants, a time and medium of interview were established in the recruitment telephone call or email. Participant Information and consent forms were sent by email or post (with a reply-paid envelope) and returned to us by the same method. A \$50 gift voucher was sent by registered post to all interviewed households after the interview was conducted.

The research focussed on Victoria, Australia, with multiple locations (CBD, middle-ring suburbs and regional Victoria—Latrobe Valley). Given the longitudinal nature of the research, it was expected that in some cases a change of residence would have occurred, although preference was given to participants who occupied the same place of residence in both interviews.

In total, 12 interviews indicated a change of residence, including three interstate (1 in Queensland, 1 in New South Wales and 1 in Western Australia). Participants' place of residence at the COVID-19 interview across local government areas (LGAs) in Victoria is distributed as follows:

- Moreland—15 households
- Melbourne—7 households
- Port Phillip—4 households
- Kingston—3 households
- Glen Eira—1 household
- Bayside—1 household
- Wyndham—1 household
- Latrobe Valley—6 households.

For project HEET participants, the sites of the study were carefully selected using spatial analysis of low-income households with a high uptake of the Victorian Energy Upgrades (VEU) program. This resulted in two areas being earmarked for the study, some residential suburbs in the city of Moreland, an area constituting inner Melbourne—closest to the CBD—and middle-ring suburbs, and some residential suburbs in the Latrobe Valley, a regional area approximately 200 kilometres from the Melbourne CBD.

For project HOME participants, the original selection of case-studies included design, tenure and housing market criteria, resulting in the selection of approximately six urban projects in four different cities, including Melbourne. To capture the different contexts for higher-density urban infill provision and apartment living, around 60 householders were recruited in Melbourne across three areas:

- CBD and surrounds
- middle-ring suburban areas—Cheltenham and Moorabbin
- high-amenity suburban centre—Box Hill.

### Interview guides

The semi-structured interview guides were designed to generate data about the diverse, unpredictable and combined vulnerabilities faced by low-income residents across dwelling typologies and their interacting effects—for example, energy poverty, coping with grief or isolation, unexpected economic hardship, and other factors. The interviews enabled rich, interconnecting data to be collected on affected lives and, through this, housing outcomes. In so doing, the interview was not positioned as COVID-19 research—instead, we intentionally started with a conversation about updating on coping with apartment living (HOME) or on coping with energy bills and plans for retrofitting (HEET).

Subsequently, the conversation inevitably covered changes to occupancy, relations and new challenges arising from COVID-19. This approach aligns with semi-structured interview techniques to elicit the respondents' own experiences rather than being directed by normative questions that reflect the researchers' expectations about the impacts of COVID-19 (Flick 2014).

The first set of questions focussed on the home itself, including household members and use of rooms. The second set of questions turned more explicitly to current housing issues:

- how they were keeping in touch with friends and family
- how they were coping with rent/mortgage and energy bills
- what their Internet access was like
- how contact with their landlords had changed.
- The questions also addressed urban spaces around them including:
  - maintenance of social networks
  - service access
  - safety
  - access to parks and open spaces.

At the end of each interview, we asked participants to take photos of their homes to show the areas where they were spending the most time, and any adjustments they had made under COVID-19.

Interviews were audio-recorded and professionally transcribed following a verbatim style and light editing. We have made a few linguistic changes to the way participants' speech was transcribed for better clarity—for example, in the expressions of culturally and linguistically diverse (CALD) groups.

### 1.4.3 Data analysis

Qualitative analysis software (NVIVO) was utilised for topic-coding to systematically analyse transcripts, and for extracting key themes and patterns from the data (Richards 1999). An Excel spreadsheet on a password-protected shared drive was used to bring together all the coding for further thematic analysis (Braun and Clarke 2019) and relate householders' accounts to the original design criteria.

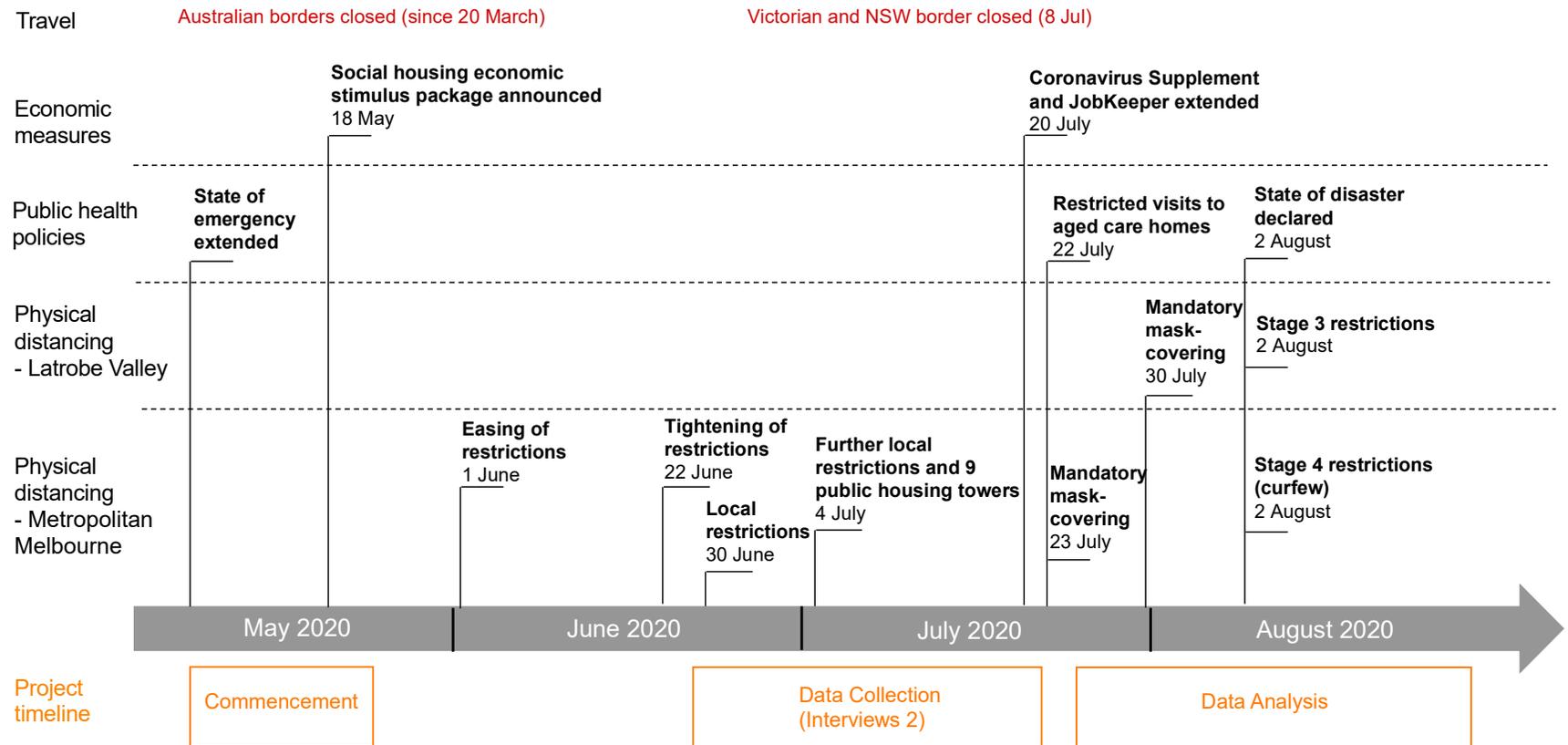
Analysis of the data to address RQ1–RQ3 involved concurrent consideration of the original material and the telephone/online interviews and photographs. Physical distancing measures, in particular, imposed different restrictions on participants during the data collection phase. A timeline (see Figure 3) has helped understand the current and potential challenges imposed by COVID-19. It also puts into perspective participants' responses based on what phase of the lockdown the responses may have been recorded and the potential challenges they might face given that future lockdown was imminent in some areas, possible in others. For example, when participants in the Latrobe Valley were interviewed, they were in a zone with lighter restrictions than metro Melbourne—and thus could not travel to or from metropolitan Melbourne. The interview questions have enabled us to elicit to what extent accessibility of services affected householders' quality of life and whether the following basic housing-related needs were met:

- health
- work
- schooling
- relationships
- access to outside spaces
- food
- privacy.

By comparing the current housing experiences of our participants with those revealed in the earlier interviews conducted in 2017–2019, change became the key focus of analysis, and put into perspective the relative impact of COVID-19 on housing outcomes.

We also enquired into adaptive responses, including efforts to access COVID-19-specific support. This has highlighted gaps in welfare and COVID-19 housing and income policy, such as tenant-protection initiatives. This has also allowed us to understand the diverse, unpredictable and combined vulnerabilities faced by low-income residents across housing tenures and typologies. To address RQ4, we have discussed how to improve policy responses in light of our findings, and included propositions to start mapping possible interventions.

Figure 3: Timeline of project and major policy responses in study sites



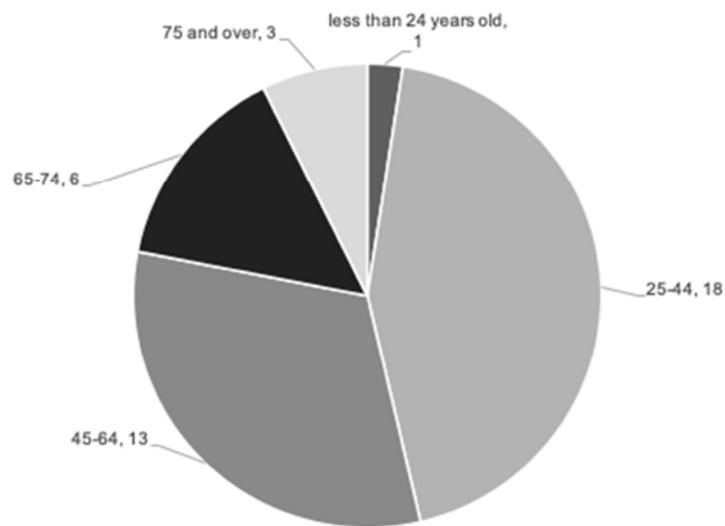
Source: Victoria State Government Health and Human Services Updates Archives, adapted from Duckett and Stobart (2020).

### 1.4.4 Description of households and participants

The study reached 40 households and 41 participants (as one interview included a couple). Twice as many women (28) shared their experiences as men (13). Three-quarters of participants (32) were of working age below 65 years of age (Figure 4).

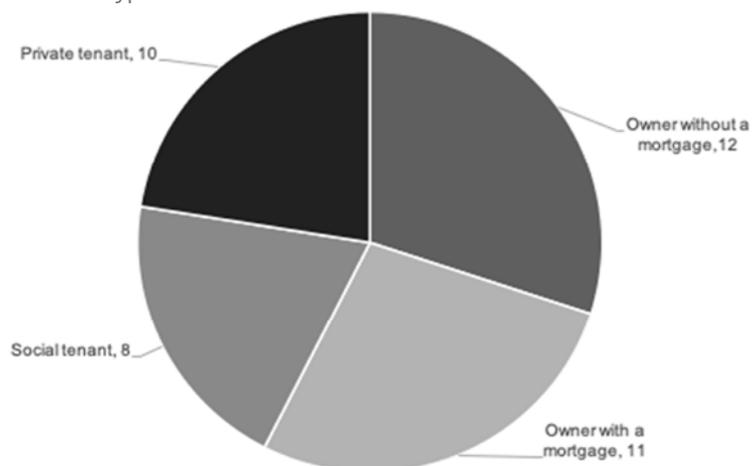
More than half of participating households (23) owned their homes (Figure 5), while tenant households were almost equally divided into private (10) and social housing (8) households (Figure 5). Half of the households (20) were single-person households, and only seven households included children (Figure 6). Almost half of the households (19) lived in an apartment and almost the same number (16) lived in a detached house (Figure 7).

Figure 4: Distribution of participants across age groups



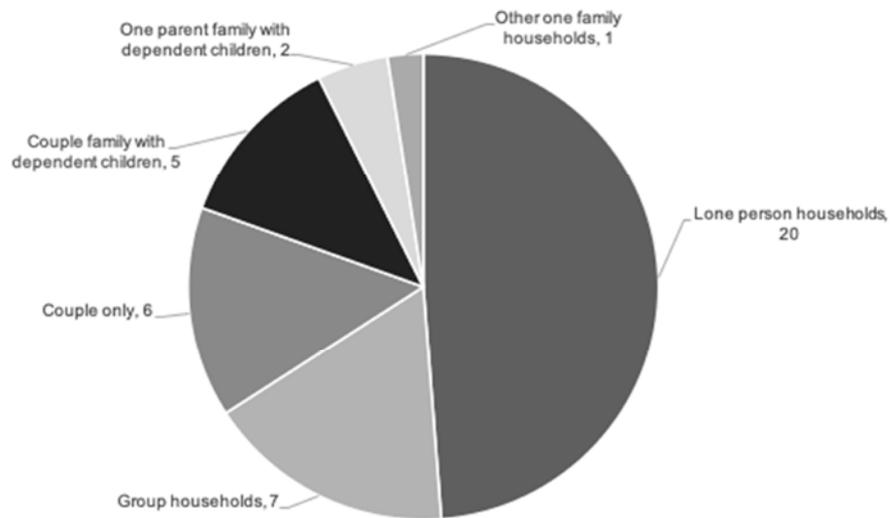
Source: Authors.

Figure 5: Distribution of tenure types



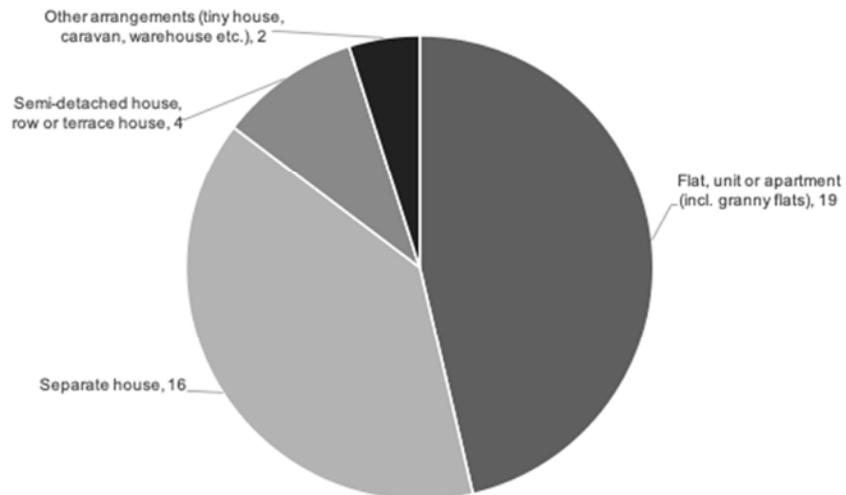
Source: Authors.

Figure 6: Distribution of household compositions



Source: Authors.

Figure 7: Distribution of dwelling structures



Source: Authors.

Following data collection, we identified participants' housing stressors at Interview 1 and Interview 2 to evaluate what changes may have occurred.

Table 1 summarises some key household information, any changes in housing stressors for each household, and the time between each data collection point. Housing vulnerabilities were shaped by the combinations of:

- poor housing quality
- poor housing suitability—such as overcrowding
- affordability stress
- low income
- health issues—physical or mental
- impaired meanings of home—such as tenure insecurity or neighbourhood stress.

Table 1 is intended to provide an overview of participants and some context within which housing vulnerabilities were most experienced and resolved. It does not capture the richness of experience and the narratives, which are reflected in the chapters that follow.

Table 1: Profile of participants

Participant	Gender	Age group	Housing tenure/ Typology	Household composition ('hh' = household)	Date Interviews 1, 2	Conditions that shaped housing vulnerability at Interview 1 ('moh' = impaired meanings of home)	Conditions that shaped housing vulnerability at Interview 2 ('moh' = impaired meanings of home)
P1	M	75-84	social tenant/ separate house	couple	Nov 2019 Jun 2020	poor housing quality, physical health issue	persisting poor housing quality, persisting physical health issue
P2	F	35-44	social tenant/ unit	lone person	Oct 2019 Jun 2020	physical health issue, mental health issue, low income	persisting physical and mental health issue, low income
P3	F	45-54	owner with mortgage / separate house	single parent, dep. children	Sept 2019 Jun 2020	poor housing quality	persisting poor housing quality, emerging mental health issue
P4	F	35-44	private tenant/ semi-detached house	lone person	Sept 2019 Jun 2020	affordability, poor housing quality, moh, mental health issue	exacerbated affordability/mental health issue, persisting poor housing quality
P5	F	45-54	social tenant/ apartment	lone person	Nov 2017 Jun 2020	neighbourhood issue, health issue	persisting neighbourhood issue/ health issue
P6	M	45-54	social tenant/ apartment	lone person	Nov 2017 Jun 2020	poor housing quality, mental health issue	persisting poor housing quality/ mental health issue
P7	F	45-54	owner without mortgage/ apartment	lone person	Feb 2017 Jun 2020	none	slight income improvement
P8	F	35-44	owner with mortgage / detached house	couple	Mar 2017 Jun 2020	poor housing suitability	poor housing suitability resolved, improved moh
P9	M	25-34	owner with mortgage/ apartment	couple	Mar 2017 Jun 2020	poor housing suitability, moh	poor housing suitability resolved, improved moh, loss of income
P10	M	25-34	private tenant/ apartment	lone person	Mar 2017 Jun 2020	none	improved moh
P11	F	45-54	social tenant/ apartment	lone person	Feb 2017 Jun 2020	moh, neighbourhood issue, income issue, health issue	exacerbated moh/ neighbourhood/ income/mental health issue, improved physical health issue
P12	M / F F F+M	35-44	private tenant/ row house	couple, dep. children	Oct 2019 Jun 2020	none	emerging mental health issue
P13	M	45-54	owner with mortgage / granny flat	family hh	Mar 2017 Jun 2020	none	none

Participant	Gender	Age group	Housing tenure/ Typology	Household composition ('hh' = household)	Date Interviews 1, 2	Conditions that shaped housing vulnerability at Interview 1 ('moh' = impaired meanings of home)	Conditions that shaped housing vulnerability at Interview 2 ('moh' = impaired meanings of home)
P14	M	45-54	social tenant/ apartment	lone person	Mar 2017 Jun 2020	neighbourhood issue, income, health issue, moh	exacerbated neighbourhood/mental health issue, physical health issue, persisting moh
P15	F	35-44	owner with mortgage / detached house	couple, dep. children	Aug 2019 Jun 2020	none	none
P16	F	45-54	owner, no mortgage / detached house	lone person	Oct 2019 Jul 2020	poor housing quality, mental health issue	persisting poor housing quality/mental health issue
P17	F	35-44	owner with mortgage/ apartment	couple, dep. children	Mar 2017 Jun 2020	poor housing suitability	poor housing suitability resolved, improved moh
P18	F	45-54	owner, no mortgage / detached house	single parent, dep. children	Nov 2019 Jun 2020	none	emerging income issues
P19	F	35-44	private tenant/ apartment	couple	Apr 2017 Jun 2020	poor housing quality, neighbourhood issue	poor housing quality resolved; neighbourhood resolved
P20	M	25-34	private tenant/ unit	couple	Feb 2017 Jun 2020	moh	improved moh (became owner)
P21	F	18-24	social tenant/ unit	couple, dep. child, relative	Nov 2019 Jun 2020	poor housing quality	persisting poor housing quality, loss of income
P22	F	55-64	owner with mortgage / detached house	lone person	Oct 2019 Jul 2020	poor housing quality, moh	poor housing quality, moh (retrofit unaffordable)
P23	F	35-44	owner with mortgage / detached house	couple, dep. children	Aug 2019 Jul 2020	income issue (due to injury)	income improved due to COVID-19 supplement
P24	F	35-44	owner with mortgage/ apartment	lone person	Apr 2017 Jul 2020	moh	emerging housing quality issue, improved moh
P25	F	25-34	private tenant/ apartment	adult, dep. parents	Mar 2017 Jul 2020	income, poor housing quality	income issue, persisting poor housing quality, energy bill
P26	F	55-64	social tenant/ apartment	lone person	Mar 2017 Jul 2020	neighbourhood issue, mental health issue	mental health issue exacerbated, persisting neighbourhood issue
P27	F	45-54	owner with mortgage / detached house	couple, dep. children & adult	Aug 2019 Jul 2020	poor housing quality	poor housing quality resolved (new house)
P28	F	65-74	owner, no mortgage / detached house	lone person	Nov 2019 Jul 2020	poor housing quality	poor housing quality, income loss, mental health issue

Participant	Gender	Age group	Housing tenure/ Typology	Household composition ('hh' = household)	Date Interviews 1, 2	Conditions that shaped housing vulnerability at Interview 1 ('moh' = impaired meanings of home)	Conditions that shaped housing vulnerability at Interview 2 ('moh' = impaired meanings of home)
P29	F	65-74	private tenant/ unit	shared hh	Oct 2019 Jul 2020	housing affordability	housing affordability, improved physical health issue, exacerbated mental health issue, moh
P30	M	35-44	private tenant/ apartment	shared hh	Mar 2017 Jul 2020	housing affordability	income, housing affordability improved (rent reduced by landlord)
P31	M	65-74	owner without mortgage/ apartment	lone person	Apr 2017 Jul 2020	poor housing quality, neighbourhood issue	improved housing quality/moh/ community/ neighbourhood
P32	F	55-64	owner, no mortgage / detached house	lone person	Dec 2019 Jul 2020	poor housing quality, housing affordability	poor housing quality, housing affordability, income, energy bills
P33	F	25-34	owner without mortgage/tiny house	couple, dep. children	Oct 2017 Jul 2020	housing affordability, moh, poor housing quality	moh, housing affordability, poor housing quality resolved
P34	M	65-74	owner without mortgage/ apartment	lone person	Mar 2017 Jul 2020	none	none
P35	F	45-54	owner rebuilding/ living rent free	shared hh (couple / parent)	Oct 2019 Jul 2020	poor housing quality, disability (legal blindness)	income, poor housing quality resolved
P36	F	45-54	owner with mortgage/ apartment	couple	Apr 2019 Jul 2020	none	none
P37	F	75-84	owner without mortgage/ detached	lone person	Jul 2019 Jul 2020	none	emerging mental health issue (social isolation)
P38	F	Over 85	owner without mortgage/ detached	lone person	Oct 2019 Jul 2020	poor housing quality	persisting poor housing quality, mental health (social isolation)
P39	M	55-64	owner with mortgage/ detached	lone person	Jan 2020 Jul 2020	poor housing quality, physical health, social obligations	housing quality, physical health, social obligations
P40	M	45-54	owner without mortgage/ detached	lone person	Nov 2019 Jul 2020	poor housing quality	persisting poor housing quality, emerging mental health issue (social isolation)

Source: Authors.

## **2. Employment, income, housing finances and local services**

---

- Pre-existing built environment inequalities were exacerbated, such as poor-quality open spaces.
- Coping with employment and income loss and income uncertainty revealed a range of strategies as well as uneven pre- and post-COVID-19 support.
- COVID-19 income and housing support measures were critically important in supporting household resilience.
- COVID-19 support left gaps in both income support and health and care with implications for resilient responses.

## 2.1 Introduction

This chapter presents the impacts of COVID-19 on employment and income, as well as access to local services. The concept of housing as a hub or sanctuary situates the ‘outside’ impacts and coping strategies householders adopted in response to COVID-19. These ‘outside’ impacts inevitably had knock-on impacts within the home and household, and these are examined in detail in the chapters that follow. By outside, we mean the services outside the home that households were accessing before COVID-19. In many cases, these services have changed, either directly or indirectly:

- **directly**—emergency restrictions curtailing the liberty to roam, changes in employment, changes in the availability of local services
- **indirectly**—through concerns about contamination or exposure when making outside trips for exercise, recreation, socialising or shopping.

All households were affected in terms of mobility patterns and venturing out. Changes ranged from patterns and practices of food and grocery shopping, to means of physical exercise, to a wide range of concerns and restrictions both in shared areas outside the home itself (including adjacent common areas) and in nearby streets and facilities. Some changes were self-imposed, others were seen as a necessary imposition.

In most cases, already existing inequalities were exacerbated. For example, a suburb with few local parks or poor-quality public open spaces offered fewer (or poorer) opportunities for local exercise to neighbourhoods that were restricted under COVID-19. It also affected suburban households with no car, where occupants were concerned about potential contamination associated with public transport.

However, there were also cases where already existing inequalities were reduced. Most notably, extra COVID-19 payments to JobSeeker recipients provided opportunities to build financial resilience that were not afforded prior to COVID-19.

Section 2.2 provides a brief review of the relevant literature. Sections 2.3 and 2.4 present the relevant findings that address RQ1 and RQ2, with policy implications in Section 2.5.

## 2.2 Housing, employment, local services and COVID-19

Well-established links between housing, employment and social, physical and mental health indicate both the complexity of these relations and the centrality of high-quality, well-located housing in supporting productive and healthy households. The benefits of decent housing and employment go beyond giving the ability to afford rent or mortgage payments and energy and food bills, extending to a range of ontological security-related outcomes.

Thus, housing policy should support and enable householders’ participation in social and economic life, including through:

- rent-setting policy
- targeted housing provision
- access to public transport
- access to childcare (Dockery, Feeny et al. 2008).

Housing policy must also extend beyond an assumption that blunt work incentives and housing assistance alone will ensure employment participation (Cigdem-Bayram, Ong et al. 2017).

Access to local services has also become an increasing focus of housing studies over recent decades. The unsustainability of private-car-based planned neighbourhoods relates to:

- environmental concerns
- equity concerns for those who cannot afford to run a car (or cars)
- equity concerns for those who cannot drive due to age, health or other reasons
- added health implications of long commutes (Badland, Whitzman et al. 2014).

Policy responses such as Plan Melbourne's 2030 strategy to create '20-minute neighbourhoods' (Department of Environment, Water, Land and Planning 2020) point to the need to provide local job opportunities and improved public transport in both existing and new suburbs. In addition, many car-based suburbs lack walkable parks, shopping centres and other daily services (Butt, Middha et al. 2020).

Housing affordability and inequality concerns have spread out to include mobility bills and the effects of gentrification. As housing affordability drives vulnerable groups into less advantaged places (Baker, Bentley et al. 2016), they remain or become vulnerable due to often hidden operating costs of living. Dodson and Sipe (2008) and Dodson and Berry (2005) illustrate the contribution of private transport costs in a locational 'vulnerability assessment for mortgage, petrol and inflation risks and expenses' (VAMPIRE) index, which indicates the burden of private transport costs upon lower income households. At the household level, Kellett, Morrissey et al. (2012) and Morrissey, Horne et al. (2012) have estimated 'urban locational efficiency' using future scenarios for fuel prices, current household expenditure on mortgage or rent, and daily commuting costs, revealing that mobility costs can rival housing costs in outer suburbs, as in other car-dependent societies such as the Bay Area of San Francisco (Urban Land Institute 2009).

In gentrified cities such as Melbourne, spatial inequalities are revealed in concentrations of inner-suburban, high-income, tertiary-educated, professionally employed households juxtaposed against outer urban areas—mainly greenfield developments—with high proportions of recent immigrants, lower income households and those with lower levels of education (Spiller and Forrest 2018). Lack of infrastructure in the outer growth areas has produced limited local employment opportunities and reduced access to employment in other locations (Denham, Dodson et al. 2018), leading to higher levels of commuting by private car (Nicholls, Phelan et al. 2018; VicHealth 2016).

Thus COVID-19 unfolds across an unequal urban landscape and has presented very different exposures to the disease, as well as different impacts across households. In the US, a recent Survey of Business Uncertainty by the University of Stanford found that '32–42 per cent of COVID-19-induced layoffs will be permanent, and that one-tenth of all workdays (one-fifth for office workers) will shift from business premises to residences in the post-pandemic world relative to the pre-pandemic situation' (Barrero, Bloom et al. 2020: 1).

This brings a focus back to housing as a site of future work, once again exposing the poor quality of much of the housing stock and the poor access to housing afforded to low-income households. Young and middle-aged Australians have been borrowing more to buy homes and accessing funds from their housing wealth in case of emergencies, which might lead to longer working lives to pay off these debts (Cigdem-Bayram, Ong et al. 2017). Given that unemployment is on the rise due to COVID-19, paying off these debts and the new withdrawals encouraged by the federal government—such as early access to superannuation—may have long-term negative implications for individuals' and families' housing arrangements.

## 2.3 Employment and income loss

Our participant group was not specifically selected to be representative of the wider population in terms of economic impacts. However, of our participants:

- 15 reported income loss from formal employment impacts
- 8 lost their jobs due to COVID-19
- 1 was made to take long-service leave/annual leave
- 1 quit their job due to COVID-19 health-related concerns
- 5 (or their partners) were obliged to reduce work hours (and pay) due to COVID-19.

In addition, one participant reported lost income from the decline in the informal economy due to COVID-19. So at least 40 per cent of our participant group were significantly affected by lost income. Of the remainder:

- 9 were on fixed incomes (see below)
- 2 continued working in essential worker roles
- 4 started working from home. (For this latter group, it meant reorganising the home, as detailed in Chapter 3.)

### 2.3.1 Coping with employment and income loss

Coping with employment and income loss and income uncertainty revealed a range of strategies, and a mix of uneven pre-COVID-19 and post-COVID-19 support.

Those participants in paid work prior to the pandemic, and who were eligible to access JobKeeper payments due to loss of work (P9, P28, P30), were in a situation of reduced income but seeking to maintain their pre-COVID-19 finances, including rent or mortgage and other commitments. This had the effect of relieving household tensions over finances due to loss of employment (P9), particularly when combined with the option to manage changed finances by accessing early superannuation release (P9). Another participant (P19) accessed other government support similar to JobKeeper.

On the other hand, those who were on JobSeeker payments prior to COVID-19 (P16, P23, P27, P29, P30, P32, P37, P39, P40) were already accustomed to living on very low incomes, and their incomes rose following the introduction of COVID-19 support payments. These provided immediate security, and served a variety of purposes beyond the immediate costs of dealing with changed circumstances, ranging from paying off pre-COVID-19 loans (P27) to saving:

Now with the bonus payments, so I'm trying to save a bit of that for later when they do stop. So that I've got, like what they say, save for rainy days. I'm saving for that rainy day that's coming soon. (P23)

Many households did not qualify for extra payments because of their sources of income, ranging from being mainly in the informal economy to earning rental income from property that was in the family. A group of six households on low incomes (P4, P7, P17, P19, P33, P35) managed income loss in diverse ways. Whether they were 'forced' to take leave without pay, or had partners who lost jobs, pre-existing networks, skills or practices were the most common starting point for coping. P17 took control by securing free childcare, and deliberately choosing to go for cheap or free entertainment, living frugally and 'enjoying' it.

P32 had long supplemented their income-support payments by selling home-grown produce and through running garage sales, buying and selling second-hand goods. However, with the pandemic, no one was buying or bartering locally grown produce anymore, and the garage sales business had dried up—leaving both a financial and a social void.

Uncertainty about future income weighed heavily among anxieties. While actual income loss prompted practical coping actions, the fear of future income losses provoked a sense of foreboding and loss of control. Two participants recounted worries about the loss of their home if their incomes continued to be affected (P24, P26), but at the same time they felt more fortunate than others. One participant asserted some form of control over their work uncertainty by unilaterally leaving their job due to COVID-19 and related life stresses (P3).

Another group of five households (P18, P22, P25, P29, P39) did not have their incomes affected by COVID-19, but had acquired careful financial-management practices long before the pandemic, which they called upon for thrifty shopping practices, such as stocking up on sale items: 'a year's supply of laundry detergent at half price' (P6).

### 2.3.2 Mortgage, rent and other housing finance coping strategies

Seeking mortgage or rent relief, and other housing finance strategies, revealed complexities around:

- pre-COVID-19 power relations between landlords and tenants
- trust relations between banks and mortgagees.

For private renters (n=10), seeking rent relief involved navigating existing relations with landlords and agents. While P30 showed little hesitation in seeking rent relief and was able to negotiate a manageable reduction, P29 was more circumspect:

I don't want to rock the boat. I'd rather just keep paying and then when it's due again next April, negotiate, hopefully, a reasonable lease that doesn't have too much of an increase. (P29)

For social housing tenants (n=8), the financial pressure was significantly reduced, as were anxieties around landlord power and motives. Instead, participants' concern was about balancing a sense of gratitude at having secure housing against a lack of control or agency over the property itself and its location. P11 was seeking a transfer due to health needs and local construction noise:

I'm also applying for a transfer ... There are seven construction sites within 500 metres, and it's all day, all night. I can see 13 cranes from my balcony, and that's not straining my head ... You get two minutes, if you're really lucky, because the rest of the time you're trying to prove yourself to this organisation that you're worthy of living in their property. So ... you're trying to say, 'I'm a good person, you want me in your housing. This is beautiful, this is magnificent, this is wonderful, this is ...' So, you're doing all of that, you're scanning the place as quick as you can. And you're saying, 'Yes, I'll be good, you won't get problems from me, I promise you. I will make the best ... I've got a perfect rental history, you can check it, because I do. I really do.' Then you're out of there, and you go back to their office and sign papers. Then you get told for hours how you have to be the best resident, and that's it. That's it, and all you want to do is ... and then you have to wait three or four weeks to move in, while you're still homeless. ... You don't have the opportunity to say no, because you get bumped to the bottom of the list. Yeah, you get put [at] the bottom of the list of 90,000 people. So, you can't say no.

Strategies for mortgagees (n=11) varied. Two participants showed little hesitation in approaching the bank. Among a raft of responses to their reduced income, P17 secured temporary mortgage relief:

We've put the mortgage on hold because my husband's salary's been halved during COVID. We have made cutbacks. We're not spending socially, put the mortgage on hold for three months. (P17)

Another participant also secured a mortgage payment moratorium (P27) and used the opportunity to save money to pay off other short-term loans to friends. One participant (P9) looked at the mortgage relief option but did not follow up with the bank due to the risk of building future debt:

I saw that there is a default program from the bank, but when we try to read through all the fine print, it's just that we are postponing the payment while the interest rate is starting to accumulate ... It's not worth it if you are going to defer, so that we didn't talk to the bank. (P9)

However, another participant decided not to pursue a payment moratorium because they did not trust the bank's long-term motives:

You know what? I just thought freezing them isn't going to help. Because you know what, when it releases, it's probably going to be a lot of extra fees, extra interest, extra things, I don't know. So, I just thought no, I don't want to be hit ... I don't want to get a shock at the end, so I wasn't sure. So, I didn't, no. (P23)

Participants who were landlords and relied upon the rental income were also caught up in the COVID-19 lockdown, as were households planning housing moves. P7 are landlords who were obliged to agree to a rent reduction on their property—a principal source of income. They tightened their belts by refraining from leisure retail spending on clothes and shoes. Two participants recounted the uncertainty and waiting until after things got 'back to normal' as they contemplated long-planned housing moves (P19, P27).

More intensive use of housing was evident as incomes contracted. P4 had to sublet a room to make up for income loss—and found real-estate agents to be a real barrier in the process, while P22 was in a large house but was unable to sublet. Another participant was in a bind over the prospect of letting a room: 'I could probably save for my renovations if I got someone, but I can't because I'd have to do the renovations first' (P22).

### 2.4 Local services and mobilities

Stage 3 restrictions and householder anxieties in isolation—or a combination—led in many cases to restricted movements outside the home. In this section, we are going to combine an account of the impacts of COVID-19 with documented coping responses. Many of the implications in coping were manifest in changes in the home (see Chapter 3), in relationships (see Chapter 4) and in health and wellbeing (see Chapter 5).

Several participants found that the immediate surrounds outside their front door (or back door) took on heightened importance. In large part, this appeared to be related to notions of an outside that was potentially contaminated or even hostile, contrasted with an inside that was safe and hygienic, separated by the domestic threshold.

Although it is not borne out by facts that most COVID-19 transmission is within households and homes, it was inferred in a variety of participants' concerns around the curtilage and common areas in multi-unit housing. Narrow public corridors, shared areas and common touchpoints—such as a door or waste chute handles, mailboxes and lift buttons—were well-founded concerns (Morawska and Cao 2020).

The study revealed that, for those living in apartments with owner's corporations' arrangements governing common areas, there was a marked split between better-off, better-organised owners' corporation and those where residents were practically left to their own devices regarding cleanliness outside the front door.

Seven participants (P5, P10, P14, P17, P30, P34, P36) recounted a variety of positive responses from owners' corporations and self-managed blocks that had organised cleaning rotas (P17). Notices and hand sanitisers had appeared in lobbies, and staff were looking out for older people (P5); lift restrictions had been instituted, so that residents had to go down for deliveries, while communal areas had been closed off; and visitors were forbidden (P36). In one case, a common rooftop had become a semi-private communal hang out (P30).

Coping strategies, whether relationship-related (see Chapter 4) or health-related (see Chapter 5), were facilitated in those better-managed blocks, especially where this was combined with continuity of employment, location and access to social networks—for example, near a river or waterscape. Such factors tended to combine in better-off households to improve COVID-19 resilience.

Living in lower-density and detached housing brings other inequalities. Once again, for those who had some income security and use of a car, use of the immediate 'outside' had become a renewed focus, with hobbies such as gardening taking off (see Chapter 3). On the other hand, for those in poorer quality, poorly situated dwellings with few local services—and lacking the permission or funds to garden—the lived experience of low-rise was more about spending additional time in cold, uninsulated or poorly heated homes, or needing to use public transport to access essential work—alongside well-founded anxieties about contamination.

Significant changes occurred for those who used public transport to get around before the pandemic. One hospital worker switched from train to car because they didn't feel safe anymore (P25), while another claimed that the trains were much better than before: 'But during the pandemic, the trains have been fabulous. There's been nobody in them' (P22).

However, this was a minority case, with many more participants expressing that they went to significant effort to avoid using public transport (P4, P5, P14, P18, P24, P25, P32). P14 expressed the lack of control over their personal space associated with being on public transport, as opposed to being in a private car:

They're not as busy as what they used to be at the moment, but they're still getting to the point where some parts of the day, you can't keep your personal safety distance, like social distance. It's impossible because more and more people get on. (P14)

As with work-related commuting mobilities, there was a focus upon minimising use of public transport. However, households that had a combination of anxieties about using public transport and were also on low income found it very difficult to substitute public transport for other means of mobility. Coping with this could involve forgoing services altogether. As a result:

- P5 stopped going to the clinic.
- P1 spent \$3,000 of their savings on a mobility scooter so they could get to the chemist, doctor and local supermarket.
- P11 was not able to use Uber as a substitute for public transport as they didn't have the required minimum \$50 available on their credit card.
- P35, who has a vision impairment, found that their helper was still prepared to help out with reading but was not prepared to drive them anymore—hence ending their trips out.

Local shopping trips became more anxiety-inducing (see also Chapter 5):

It was really scary at first and I was coming home, changing my clothes, having a shower, wiping everything down, really quite thorough. And became a little bit lax with it, but it's all starting again, but I don't wear the same shoes inside as I wear out. I change clothes. I don't necessarily wash them every time now, but I take those clothes off and put plain clothes on. Wipe down the cars. I wear gloves when I get petrol. I wear gloves and a mask when I go shopping. (P29)

Eight participants reported significantly curtailing their shopping trips as a result (P19, P23, P30, P31, P32, P33, P37, P39). One participant lost all confidence in driving (P37), although this may have been due to a range of stresses—including the loss of a life partner early in the pandemic. Another, who had a persistent cough because of a chronic obstructive pulmonary disorder, was anxious about going out and seeing people's reactions, as 'people get paranoid when they see you cough' (P39).

Other participants (P1, P2, P21, P24, P25, P27, P28, P29, P34, P40) reported fewer trips out and less frequent shopping (see Chapter 3). This group was generally already comparatively isolated pre-COVID. P29 had replaced visits to large supermarkets with a preference for local, smaller, less crowded and more familiar shops. P4 also switched to local cafes and shops, but out of a more overt stated desire to support local businesses that were doing it tough.

For a group of three participants (P8, P9, P10), any anxieties about contamination were overcome by the desire to venture out. As one of the few permitted reasons for people to leave home, this meant an increase in the frequency of shopping trips.

Leisure mobilities were curtailed mainly due to the facilities themselves closing. An active family, P17, had responded to this situation by replacing their multiple memberships (zoo, aquarium, museum, etc.) with local walks, bike rides and general exploring closer to home. In contrast, P23 was concerned about contracting the virus from library books, so stopped borrowing books and switched entirely online for everything, including groceries. P37 sought out online church services after their local church closed.

Access to local public open and green space was also fraught with pre-existing inequalities that profoundly affected resilience in coping with COVID-19. For those in zones of restricted movement, a more intensified experience of being hemmed in by their immediate surrounds served to emphasise the spatial inequalities of place. Two residents of the lower socio-economic suburb of Fawkner (P15, P16) separately remarked upon this disparity, with P16 expressing how the local streetscape made them 'very isolated', with Fawkner 'sort of an island'. P15 remarked:

It's gentrified over there in Thornbury and ... it's just depressing in Fawkner. People leave rubbish on the nature strip, which sits there for months and nothing happens. (P15)

The mirror image of these participants was represented by P12, who reinforced that they were lucky to have nice walkable place nearby. P10 also commented on the need for connection to the outside world and, in particular, to the city (see Chapter 4). P3 provided an evocative account of empty roads and streets, closed hoardings, a sense of the surreal, with glimpses of 'normal' life in between but, mainly, a desolate unreality, with life on hold.

Walking and other forms of exercise were interrupted, despite access to nearby parks and greenspace being generally available. One participant had stopped cycling and was now walking, but it was 'not the same' (P33). Another had taken to walking at night to avoid people (P23). At least six other participants (P1, P2, P3, P6, P7, P40) reported not much change, with their dog-walking, walks to the shops or walks around the block continuing more or less as before. This constancy spanned from a participant who would 'walk everywhere, always did' (P36) to another who actually preferred staying in and doing exercise online anyway (P7) (see Chapter 5).

### 2.5 Implications for policy

COVID-19 income and housing support measures were critically important in supporting resilient responses —as they allowed households that otherwise would have been unable to maintain their housing to hold on to some sense of normality during the first wave of the pandemic. This particularly assisted those with mortgages and those in private rental.

However, for households that were dependent upon the informal economy or did not qualify for JobKeeper, there is a policy gap that leaves workers who are already marginal with additional hardship. Policy implications include the need to:

- maintain JobKeeper for as long as it takes for those affected households to recover and re-enter their paid work
- investigate similar support for households that are financially impacted and unable to access JobKeeper.

Outside the home, policy implications fall into two categories: short-term and longer-term.

### Short-term implications

Short-term implications centre on the cleanliness and policing of COVID-19 distancing requirements on public transport and in common areas around multi-unit dwellings:

- Increased powers to regulate distancing and cleanliness of surfaces on public transport—and exercise of those powers. This would reduce concerns among low-income households and those without a car who are heavily reliant upon public transport.
- Placing responsibility on owners' corporations and strata managers to regulate distancing and cleanliness of surfaces in common areas of multi-unit dwellings. This would address inequalities between households across different developments and alleviate anxieties and health exposure.

### Longer-term implications

Longer-term policy implications apply to the urban form in cities, where inequalities in the distribution and quality of urban services such as parks and open space, local shops and other facilities are exacerbated under COVID-19 restrictions upon movement. Such impacts fall disproportionately upon those lower socio-economic suburbs that are least resilient and have poorer services. Policy directions need to address such inequalities in cities and to build resilience to disasters such as the COVID-19 pandemic.

# 3. Working from home, food and energy practices

---

- For people working and learning from home, making material changes to their homes formed an essential part of making it ‘work’.
- The burden of labour at home fell disproportionately on some householders, yet many showed resilience by using the opportunity to learn and teach new skills.
- Cooking and food-related practices increased, not only due to restrictions on eating out but also because of fears of contamination and having more free time.
- Changes in grocery shopping patterns were manifested spatially and temporally with negotiations around food, infection, contamination and trips outside.
- Many participants, aware of the growing energy and comfort challenges of being forced to spend more time in poorly designed homes, coped using learned practices; however, their efforts were constrained by the ability to make material changes or to afford energy bills.

## 3.1 Introduction

This chapter examines how people experienced the impact of COVID-19 on working and schooling, and which mechanisms they employed to cope with those effects. It uses participant voices to engage with the way housing outcomes during COVID-19 were shaped by the issues of working and learning from home, food provisioning and consumption, and energy and resource consumption.

While using the home as a site of various activities that were fully or partly off-site pre-COVID-19, participants adapted the way they used time, space and materials to cope with the impacts of the pandemic. These impacts were exacerbated in some participants' lives and homes because of their existing (and prior) circumstances. This further impacted how they coped with issues related to working from home, food provisioning and consumption, and energy consumption.

With the current COVID-19 pandemic and the subsequent lockdown, 'housing has become the front-line defence against the coronavirus. Home has rarely been more of a life or death situation' (United Nations Human Rights 2020). 'Stay at home' orders have meant that contemporary everyday life has shifted, and become lived mostly inside the home.

Geographers have previously expanded the meanings and boundaries of 'home' to include the wider neighbourhood and city (Blunt and Sheringham 2019). However, in the current pandemic and lockdown, the domestic sphere has become the prime site for practices, including those that may have previously been performed in the urban domain.

Thus, many urban practices have 'collapsed' into the dwelling:

- working and learning
- food provisioning that is increasingly turning online—and being spatially and temporally adjusted to match the hygiene and legal requirements of the pandemic and lockdown
- prolonged presence at home—increasing burdens associated with energy and resource use materially and financially.

It has also meant that connections to the 'outside' or the urban—such as food provisioning, working and schooling, and seeking comfort or spending time in different sites other than home—are now concentrated within the boundaries of a conventional dwelling (Dowling and Power 2012). This is not to say that these connections and relationships with the 'outside' have ceased. Instead, they have been renegotiated—spatially, temporally and materially.

Research on the three influenza pandemics in the 20th century—and on other disasters, such as Hurricane Katrina—have indicated the importance of considering social equity issues, especially regarding racial or ethnic minorities and lower socio-economic groups that may have limited capabilities (Hutchins, Fiscella et al. 2009). This chapter reflects these limitations, and analyses the diversity of the participants' stay-at-home practices and re-negotiations.

## 3.2 Working and learning from home

Working from home is not a new phenomenon for many people. As one participant observed: 'I worked from home before COVID. So, for me, it is nothing much different' (P7). Indeed, working from home has been studied and analysed in various contexts in the past few years. Many researchers have found that benefits abound in working from home because of the flexible nature of time and spaces associated with it, which allows a work-life balance while boosting employee satisfaction and commitment to the job (Baruch 2000; Collins 2005).

However, some researchers have found adverse impacts of working from home, such as:

- isolation
- alienation from co-workers
- guilt
- work–life conflict because of the constant connection with the Internet and technology (Haddon and Lewis 1994; Mirchandani 2000).

For some workers, working from home translates into an ‘ontological limbo of being neither here nor there’ (Tietze and Musson 2005: 1344). Further to this, Koslowski, Linehan et al. (2019) suggest that technology as well as furniture and human bodies form ‘boundary objects’ that are used to negotiate working from home situations. In sub-sections 3.2.1 and 3.2.2, our findings and analysis illustrate how and where participants negotiated connections between work or learning and home through material and spatio-temporal changes.

#### 3.2.1 Working from home

One of the impacts of the COVID-19 lockdown and the subsequent working from home requirements has been the ‘ontological limbo’ that participants are experiencing (Tietze and Musson 2005). Unlike previous flexible working from home arrangements—which tended to be permanent or at least long-term (Baruch 2000)—participants such as P17 (a mother) understood working from home arrangements as temporary, in the hope that lockdown would end soon:

So, we've got a very improvised home office corner, very small. He's got a small filing cabinet with his laptop. And he is using a kitchen chair to sit on, which isn't the best, but it's only going to be for maybe another two months. Hopefully he'll be back at work. And with the door shut and his own bathroom, my little boy kind of forgets he is there. (P17)

At the same time, an older participant (P6) expected this ‘ontological limbo’ (Tietze and Musson 2005) to go on for longer, especially for the creative performing arts community that he was a member of. He had made a rational decision to construct a stage in his dwelling for solo performances:

It's my reading of the whole social distance restrictions ... I'm saying we're going to be at least 12 months away before hitting any real change with venues around Melbourne to perform or to go to because it's just not going to happen with social distance restrictions. The way it's worded is that the venues will not open up again because it's uneconomic for them to actually open up. That's the reality of it. Building a stage into my place means that the way I'm thinking is that late 2020. (P6)

A young professional (P10), who lived alone in an apartment, had also made future plans that included working from home, as he expected these changes to be permanent—or at least long-term:

Because I like the working from home arrangement, so I would like to keep doing it, even after COVID ... I think with working from home, obviously with the monitor and, kind of some work documents, I would actually like to have some more space to dedicate it for work. At the moment, it's a bit of a merge of the living and working together. So that's why, with me looking to buy a new apartment, I want two bedrooms so that I can have the extra space, so that I can work from home and have that separation between working and living. (P10)

Having more space would have also made working from home easier in one household (P19). Our participant was disturbed by her husband's loud phone conversations and sought refuge on the balcony. Eventually, the partner went back to the office as working from home in a small space proved too difficult:

He worked from home for a couple of weeks, but because we have a very small space he couldn't work anymore from home. And he actually called his boss and asked to go back to the office ... he's in sales. (P19)

Working from home led to changes in material and social arrangements at home (see Figure 8). In shared apartments and houses, these changes aimed to minimise disturbance and to preserve the sanctity of communal spaces (P30).

But at first, she [housemate] didn't work with the desk there. So she was working in the kitchen every day for the first two weeks. And I realised that she was actually jarring me a bit, because I couldn't just get up and go open the fridge, because she was on a Zoom meeting from the table and they would literally see me. So, that's when I suggested that she take the desk from the lounge and take it into her room so that she could work from her room, which was a lot better when she did that, because she was interfering with the communal space. (P 30)

While temporary changes to the apartment made working from home easier, characteristics of the apartment itself—such as a good orientation and pleasant views—were also seen as supporting a 'work from home lifestyle'. As analysed in Chapters 4–5, these views formed an important part of how people coped with isolation and mental health challenges:

I also have a view to the city. So, my apartment naturally faces north-east and I can see all the high-rise buildings in Southbank and the CBD. And today's really sunny, so it's really good to be able to see that. (P10)

Figure 8: Working from home: converted spare room (P3)



Source: Participant. Reproduced with permission of the author.

#### 3.2.2 Coping with learning and working from home

Working and learning from home, especially with children, generated more domestic chores for participants—for example, from increased messiness. At the same time, participants recounted advantages such as teaching children new skills such as cooking, and sharing responsibilities of cleaning and gardening (P15, P18, P23):

I have to do a lot more work than when they go to school and work. But they are good kids. They are filling the dishwasher, so they are taking out the dishes, so they are helping a lot. Otherwise it would be very difficult. We don't go to the restaurants on weekend, I am cooking on weekends, too. I can do all this because of the cooperation of everybody. (P15)

One participant (P17) told us that her husband, who worked from home, benefited from the view out of the apartment and used it to cope with staying at home all day (Figure 9):

He's working in the bedroom. It's fine. He's got the ensuite. In the bedroom there's three-side fitted glass. Three floor to ceiling windows. He likes sitting there because he can have all the blinds up and he can have that ... Well, it's not the best view, because we've got the highway, but he can feel connected to the outside. (P17)

At the same time, a woman (P3) who lived with her three children believed that having a space for each child and a garden had been one of the ways they had coped well with working and learning from home:

COVID-19 definitely made me change my beliefs on how important it is to actually have enough space for everybody who lives there, because you can't always just escape from each other ... In the first few weeks of lockdown—when I was feeling very anxious and not really wanting to have any contact with the outside world—I was just so grateful that I have this space and that the kids and I, we can be in a room each, doing school, and doing work, and in the garden was a real lifesaver for me. And I thought so much, worried so much about people who are in flats or on their own or have health problems. I have two friends who live on their own in flats. One of them is on the 17th floor and she didn't leave her apartment, I think, for three weeks ... Like, I have had colleagues that you have video meetings with, and they're clearly in their bedroom, and that would be really horrible to have your work in your bedroom. (P3)

Figure 9: Couple's bedroom with incorporated home office for working from home (P17)



Source: Participant. Reproduced with permission of the author.

## 3.3 Food provisioning and consumption

Experience from previous pandemics such as the Spanish flu (1918), Asian flu (1957) and Hong Kong flu (1968) by the World Health Organization (WHO), national and state governments and the food and agriculture industry, has earmarked the importance of food provisioning and food insecurity in disaster planning (Ekici, Keskinocak et al. 2014).

Research from previous pandemics indicates the potential for adverse effects on food distribution, planning and management (Galanakis 2020; Hobbs 2020; Rizou, Galanakis et al. 2020). This research includes Severe Acute Respiratory Syndrome (SARS-CoV; 2002–2004) and the Middle East Respiratory Syndrome (MERS; 2012–present), alongside contemporary studies of the current COVID-19 pandemic and insights from previous economic downturns—such as the Greek financial crisis. All of these studies have emphasised the importance of food safety, access to nutritious food and the protection of food supply chains.

Sustainability in the food chain—such as waste reduction—may avoid or reduce the frequency of relevant food and health crises in the future, and keep a check on demand-side food access and consumption (Galanakis 2020; Hobbs 2020; Rizou, Galanakis et al. 2020). Many aspects of housing are important considerations in the context of food security. Access to affordable and healthy food is connected to:

- housing security and affordability
- the availability and appropriateness of space and facilities inside the dwelling
- access to quality and affordable food markets and supermarkets (King 2018; Kirkpatrick and Tarasuk 2011).

COVID-19 and the lockdown has brought these issues to the fore, as illustrated in this section.

### 3.3.1 Changes in eating patterns

Changes in eating and food-provisioning patterns were a prominent theme. Participants talked about changes in the frequency of buying takeaway food because of eating-out restrictions and fear of contamination. Explaining the change in their eating patterns, a mother (P3) who worked from home and lived with her three children, conceded:

We've got takeaway a few times, we have done that ... It [amount of takeaway] was much more than usual. Yeah. Significantly more. (P3)

A small respite from lockdown made some participants appreciate the pleasure and convenience of takeaway food or eating out, although they were still wary of contamination and restrictions (P15, P23):

You know the tandoori roti, yes? That's the beauty of this restaurant. They have tandoori roti just like our country, so it's so great. But one day I had the sickness [I got sick], we got the tandoori roti. So, after a long long time, we all appreciated that tandoori roti, all of us. (P15)

Today's actually his [partner's] birthday. So today we're planning to go out ... Our local restaurant is open, which is good, and we can go out. So, we're going to go out for lunch ... have a nice lunch ... If we were in another suburb, we'd have to eat at home, but it's nice to go out every now and then with the family and the kids and just it's nice to have family time out as well. (P23)

The impact of restrictions and not being able to go out to eat also translated into doing more cooking at home, and thus increased reliance on grocery shopping. With more time on their hands, some participants reduced takeaways. Cooking and baking became a way to hone cooking skills and to teach basic life skills to children (P17, P23, P30, P36). For a young couple with a child (P17) and a family of seven (P23), cooking at home provided the opportunity to cook healthy food within a budget and to reduce food waste:

We're not really eating out like we used to ... cutting back on takeaways. Doing a lot more cooking at home, which I actually enjoy because I've got more time. Because of COVID, I'm not working this long. I'm doing my normal advertised hours, but I was always going over those and working late, doing a bit extra, coming home late from work. So, I put a bit more time to cook and I'm really, really enjoying cooking. And I like the challenge of sort of working out the budget for food and trying to still eat healthily on a budget, and not waste food. Go to the pantry and see what I can make with what I've got. (P17)

I find that because the kids are home ... they do constantly eat. Kids constantly are hungry. Oh, my goodness. But yeah, they're constantly in the kitchen always. And, but that's ... it's fun. It's fun. Being a kid, eating especially, food is enjoyment. It's part of the enjoyment of life. ... We do a lot of baking more and cooking, get them into the kitchen to help me. And I think it's important to teach the kids to know how to cook and how to prepare meals from a young age. So, they can be self-sufficient when they need to be. (P23)

For older participants (P37), the restrictions often meant relying on help from relatives and resorting to meal services (P31), which helped them comply with the 'stay at home' orders:

Groceries I'm only getting them about once a month from Coles, because my daughter picks up anything in between, but I get Meals on Wheels three days a week. So that means that I don't have to go shopping all the time. (P37)

Impacts on the intake of fresh produce varied. A woman (P32) who was concerned about the risks of community transmission did not eat enough fruit, as she avoided going to the market. However, for one couple (P17), lockdown restrictions gave them a chance to try a new, more plant-based diet:

I really like more vegetarian food. I'm happy to cut out meat. Husband is okay with maybe one or two non-meat dinners. I'm trying to introduce him to more vegetarian food, and being more creative and making him really tasty, like roasted cauliflower or something like that. (P17)

#### 3.3.2 Changes in grocery shopping patterns

Changes in grocery shopping were apparent in spatial and temporal patterns.

##### Spatial changes in grocery shopping

The spatial changes in grocery shopping affected the type of markets participants shopped at, and the shift to shopping online. One participant with chronic health problems (P4)—who had lost her job as a chef due to COVID-19—had stopped her usual trips to Queen Victoria Market in Melbourne CBD because of her fear of crowds, and found another similar market where she could get discounted organic food items that had failed quality control ('seconds'). She indicated that she might continue to shop that way permanently, as it was on her way from her doctor.

Other participants had to change from where they had shopped previously, mainly indicating a change to local greengrocers because of:

- availability of items
- fear of contamination at larger supermarkets.

One young man (P20) had looked for alternatives, such as ‘local greengrocers and things like that’, while a middle-aged woman (P22) wondered why the smaller shops did not have the same issues with low stock that bigger supermarkets seemed to have, and were able to operate normally. Online shopping, generally seen as a convenience, became a privilege. Supermarket chains had restricted this option to seniors and other vulnerable people, so that healthy participants had been barred. Online grocery shopping had also become more expensive. For a woman (P7) who was barely affected by the COVID-19 restrictions, having to change her food-purchasing practices was one of the main challenges during the lockdown.

I did [online shopping] in March, there was priority for seniors, so I cannot order online shopping, I’m not eligible to order online shopping. So, I had to go to shop physically, that was just after pandemic. And now online shopping is available for [the] general public, but the home delivery fee is increased a lot ... Quite big change, now you have to shop more than \$200 [for free delivery]. (P7)

#### Temporal changes in grocery shopping

Frequency of grocery shopping had changed for several people, either because of:

- restrictions and various strategies imposed to avoid infection
- limited time availability.

The participants’ recounts around spatio-temporal negotiations revealed their uncertainty about the best strategy—for example, was it better to do frequent and small purchases, or to do big transactions that would provide groceries for more than a week?

When asked about the change in grocery-shopping patterns, the answers varied. Some participants had more time to do the shopping because of working from home arrangements. However, others feared infection and planned to purchase fewer items in more frequent transactions. P23 strategised, and decided to do frequent small purchases to reduce the time spent inside the shops:

I do go more often because I don’t like to spend too much time in the grocery, in the supermarket. Yeah, it makes me go more often, but spending less time in there. (P23)

Others reduced their frequency using various strategies, ranging from occasional bulk-buying to shopping online and thus spending less time in public places. One woman (P32) relied on bulk-buys—mainly to avoid infection and contamination:

A lot less, because I just eat my way through the cupboard and then when I go out, I tend to buy more in bulk. Like I buy a bigger bag of rice, or a bigger bottle of tahini or stuff like that. (P32)

Some participants experienced no change in their shopping frequency compared to their pre-COVID-19 routines. One man in his 50s (P6) continued to walk down to his supermarket once a day as he had done pre-COVID-19, as it was part of his budgeting strategy and helped him exercise during restrictions:

I do go outside frequently. Then, because ... there’s a supermarket which is relatively close by. I would usually go down there to see what is the ... special once a day, to see what it is. That would be part of my exercise walk [during] the social distance restrictions. (P6)

Some participants changed their routines as time went by, and included online shopping as and when it was available:

At the beginning, March, and I was doing a lot of online shopping orders. I really was. Now I sort of go once or twice a week but buy by bulk. (P18)

These navigations and negotiations with the place and time for grocery shopping were interconnected with the household's needs. One young mother (P21) described how her child demanded snacks, and that one bulk shop did not provide snacks or fruit and vegetables for a whole week or more. This forced her to go shopping more frequently than she would have liked.

Another woman with caring responsibilities for her mother (P16) had to include the groceries for her mother in her shopping. This was sometimes difficult, because of the restrictions supermarkets imposed on certain items to ensure that stock was available in-store. In order to purchase all necessary items for the two households, she had to repeat her visits to the supermarket, thwarting her strategy of going as seldom as possible. One woman (P29) adjusted her place and timing of grocery shopping to cope with her additional caring responsibilities during COVID-19. Shopping was her responsibility, as she was the only driver in the household:

When it first all happened, I did a very, very big shop and made sure I had extra loaves of bread in the freezer and extra meat, et cetera, et cetera. What I find is on the days that I'm doing dialysis or taking [my son] to work, I'll either get up a little bit earlier if it's [my son] and I might go to the shops really early before there are many people there. So, I tend to now do smaller shops more frequently, but early in the morning. (P29)

When asked which strategy she found less threatening to her safety, she explained:

The going early in the morning when there aren't many people there and I tend to shop more locally in Fawkner now. I used to go to the market, I don't do any of that. If I walk into a shop and there are too many people, I walk out. I just don't feel comfortable and I thought, 'I don't need to feel uncomfortable.' I can go somewhere else or I can do it the next day, earlier in the day. (P29)

With grocery shopping being one of the few ways to step out of the home during the lockdown, participants took this opportunity to get some fresh air. But for one household (P15), the frequency of buying groceries stayed the same, but the practice of grocery shopping as a family outing was missed. Pre-COVID, they would have taken the opportunity to take a stroll down vibrant Sydney Road while grocery shopping, which they now missed:

As far as supplies, no, we had no problem getting food. For the time, it really locked down and you couldn't move around too much, it was a way of getting out. Weekly, you go out shopping ... have a quick walk around, and deal with the shopping and come back. (P13)

I could order it online, but I don't buy enough to justify ordering it online, unless I do want to do that big bulk [purchase]. But that little bit of getting me out is healthier for me ... I'm going to get my cat and put her in a pet stroller... I bought recently online. And that gets us both out and into the fresh air, it's good for our mental health. (P5)

#### 3.3.3 Benefits of COVID-19 financial assistance on diet and food choices

According to the Australian Bureau of Statistics (ABS), food is the second-biggest category of household spending, after housing costs and before transport (ABS 2020). Previous research shows that compromises are made between food and energy and other household bills (King 2018). Our research suggested that when there was a bit of extra income due to the COVID-19 income-support measures, participants sought to improve the quality of food they had been eating pre-COVID-19. Four participants (P15, P16, P38, P39) noted that they could afford 'better food'—for example, more meat and cheese. Two participants noted an increase in variety of food in their diet, such as vegetables, meat and baking products as well as vegan products (P5, P17). One participant who lived alone was already anticipating the end of the income supplement (P5):

Now I know that I'm going to lose that in September, but even I had to write it down to actually see that significant drop ... I'm going to have to sit down and redo the budget from a food perspective because I won't have that ease into buying the food that I like. And that's a big change just in itself. (P5)

The income supplement combined with reduced spending allowed some participants to consume more than usual. One retiree told us how she was able to splurge on online shopping, which she found dear but affordable during the time of the study, as the lockdown inhibited other forms of spending.

Actually, at the moment I'm making money ... I've got no expenses. If you don't go out, you don't spend ... I haven't filled my car since March ... other than groceries, which are dear at the moment, the price you pay for delivery. (P38)

By contrast, for other participants, the loss of income or COVID-19-related price changes led to deprivation and new (or continued) austerity measures, which led to negotiations about nutrition and freshness of ingredients in their diets. Two participants (P20, P29) commented on the higher price of basic groceries during COVID-19. One woman (P11) continued to buy bread 'on special' from the convenience store to freeze and have later. She attributed her financial difficulties to the location of her social housing unit in the inner city of Melbourne, which was too expensive for her to live in, especially during COVID-19. She had asked for a transfer to another apartment and had been waiting for a while. For another woman (P21), the lockdown had caused her business to become more erratic, which made putting healthy and nutritious food on the table unaffordable:

So, because I've had a lot of cancellations, and running my own business, it's been going up and down like crazy. Some weeks I get, like over \$300, maybe more, and then other weeks it's like one job, maybe two, and that's it. And 60 bucks isn't going to afford food on the table for a week, unless we eat noodles ... At the moment, because there's no mince on the shelves, we've been having to get the expensive ... What is it? Five-star mince or whatever it is, which sucks, but I can only do what I can do, I guess. (P21)

Pre-COVID-19 and during COVID-19, several participants used budgeting techniques to make their income last longer. An older social renter (P1) claimed that he had been budgeting and bulk-buying for a few years, which helped him have extra money for luxuries even in times of COVID-19 lockdown. Another social renter (P6) regularly depended on supermarket specials to buy in bulk and save money, which helped him with budgeting before and during COVID-19. A third social renter (P5) had learned that buying one big packet and dividing it into smaller portions was more economical than buying several small packets all at once. These changes in buying practices had become necessary when some shops restricted some foods to one item per transaction:

I didn't have to give up [on necessities], I just don't get what I need in the one bulk-buy anymore. So, I have to work out what I consider buying on budget. My chicken breasts, I buy three and cut them in half, so therefore I've got six meals. So, I don't have to get that through another week and a half or so. I buy the steamed veggie pack; I get five in a pack and that just helps me with the veggies as well. So, I've just changed things around a bit to make it easiest to me, and also financially that suits my income as well. So it's been a really massive experience ... Because of that comes saving better and my money is stretching further out than what I realised it could. (P5)

Some participants regretted the lack of space (Figure 10) in apartments and the kitchen or access to better appliances, as it prevented them from participating in quarantine practices such as 'baking bread or stocking up':

The kitchen, because I love to cook ... I'm not very happy with the kitchen, because it's not too much space. And my oven is not good. It took me a while to start it, but I tried baking bread in quarantine, like everybody did it. And I wasn't very happy with the results, and my oven is not very good. It's the only complaint that I have about the kitchen. (P19)

The only other thing is just the general size of apartments. It's just small. And let's say we do want to stock up on food items in case of a lockdown, there's really no space that you're going to put all this stuff. Like there's not enough cupboards and stuff to put stuff in. Everything's just going to be sitting on a table outside. So, there's those kinds of things that maybe COVID-19 affected us. (P25)

Experiences of provisioning and food consumption had changed across all participants who talked about food and grocery shopping—including the meaning of going out and eating. This not only generated demand for specific products—such as flour and baking needs—but also some realisations around how much was affordable. This matches global narratives and conversations around changing consumer-buying behaviours concerning key items (Hobbs 2020). It also reveals sudden changes in consumption patterns, such as the transition from the food-service sector to meals prepared and consumed at home—but with the continuation of takeaways.

Figure 10: Limited space to store extra groceries (P25)



Source: Participant. Reproduced with permission of the author.

Some participants continued growing their own food (Figure 11) and eight participants started such practices (P1, P2, P3, P4, P13, P18, P22, P32). Participants variously grew food:

- as an opportunity to connect with the outside and get some fresh air
- as a way to involve their children
- for the mental health benefits (P2, P4).

Three participants (P4, P22, P13) took advantage of space in their backyards or front yards to grow their own food and enjoy the fresh air:

So that's [the new garden] happened over the last few months. A lot of produce starting to come through now. But we spend a lot of time outside, just in the sunshine, in the garden, pottering around. There's always something to do, but it's just lovely to be outside compared to being inside, enclosed, looking out. (P13)

Figure 11: Growing food before and during COVID-19 (P18, P22 and P32)



Source: Participants. Reproduced with permission of the authors.

## 3.4 Energy practices: managing comfort and energy bills

Energy scholars contend that managing thermal comfort is a ‘socio-technical process’ (Gibson, Farbotko et al. 2013; Shove, Chappells et al. 2008). While government advice about managing heat or cold rarely addresses the sustainability of the mode used, it depicts keeping cold or warm as an individual pursuit to either keep energy bills down or to be comfortable (Gibson, Farbotko et al. 2013). This advice includes making material changes to the dwelling, as well as changing individual behaviours and attitudes towards the use of appliances and consumption of energy in any form (Shove, Chappells et al. 2008). Such advice, which puts the onus of responsibility solely on an individual, raises questions of equity and justice, and largely disregards the competencies and resources available to individuals for doing so (Walker 2015). The next sub-section illustrates the varied ways in which COVID-19-related changes in bills and energy use affected participants, and the socio-spatial and material ways in which they tried to cope with these impacts.

### 3.4.1 Impact of COVID-19 lockdown restrictions

Participants relayed the impact of staying at home on energy use in two main ways:

- experiences of thermal (dis)comfort
- changes in energy bills.

An older man (P39), who lived alone, had been wondering since before the lockdown why his bills were going up, even though he had been cutting back on ‘everything in the house’. An older woman (P38), was self-deprecating when it came to saving energy or keeping warm:

I’m running up a higher gas bill because of the ducted heating, but basically, I’m flat-out keeping warm most of the time because I’m too mean to put the heater on. (P38)

Two other participants (P8, P18) acknowledged the rise in energy bills, but agreed that it was necessary to keep warm, and the best way was to be efficient in the way they used the appliances to keep warm. A mother of three (P18) used her reverse-cycle air conditioner to heat the three-bedroom house, and was planning to get another one of these efficient appliances:

Because everyone’s home and no uni. And my son didn’t have school from March to June. Secondary [school] was all closed down. But what I tend to do is to save costs. Our house has heating on at night. But also, I love the heating aircon we have in the living room. So, when we’re in the living room, I just put that on, and it heats up so good. And it comes out in the corridor as well. I’m actually planning to put another one in the house. (P18)

Some participants attributed the changes in thermal comfort and the purchase of new appliances to the change in the use of certain spaces, such as using a bedroom as a workspace (P12); or in the case of P28, having their mother home from aged care because of contamination fears in the facility where she lived. Participants tried to rationalise the thermal discomfort or higher bills by examining how their houses or apartments were materially constructed. This may have given them some sense of control by allowing them to make minor or major retrofits—or in some cases helped them resolve their sense of helplessness in keeping comfortable or being able to pay the bills (Scerri 2011). Four participants (P7, P8, P17, P25) noted various architectural and design features that they held responsible for the thermal discomfort in their homes:

The building structure is like this. Most of building like this in Melbourne or in Australia. So single glass makes too cold in winter ... I think some country have the double glasses [double-glazing] as a standard ... But here, that is not standard here. So, I don’t think it’s good. (P7)

We built this house with high ceilings because my husband is really scared of the hot weather, so that really cools the house down. But for me, I don’t like the cold weather that much and I find it difficult. So, what we’ll do is, because the living room is kind of an open plan, we only switch on maybe the central heating, maybe just at night for an hour, just to reduce the cost. (P8)

As a private tenant, P29 had persistent complaints about the house, many of which were design issues that had been previously conveyed to the landlord. According to the participant, these issues were heightened during the current period, due to the lockdown that had forced them to stay in the house more than before:

How they spent their [landlord] funds and ... if they had been a little bit more intelligent about their blinds and about providing [a] shady area outside ... and the fact that the heating unit downstairs is totally inadequate for the space. (P29)

Participants attributed not getting affected by potential rising energy bills to various factors: pay arrangements, solar power and dwelling orientation.

Some participants benefited from prior payment methods or arrangements reached with power companies (P6, P23 and P25), and one participant had changed energy plans when they realised that they were on a higher payment plan (P21):

I haven't noticed a big change with my energy bills because I don't buy my electricity the way most people buy it. The way I buy my electricity is [from a] utility company ... I get a three-months bulk pack because it's the cheapest way to do it. That averages out to around 90 dollars a month. (P6)

In the cases of P27 and P10, solar photovoltaics (PV) on the house had made the bills affordable:

No, that's [electricity bills] all good ... Because we've got the solar, we get some credit in the grid years, so it's been all right. (P27)

P10 felt that the superior quality of their house and its advantageous orientation had helped them feel comfortable. Having a well-oriented apartment kept one shared household (P30) warm, and they felt lucky:

We've been lucky with this apartment, because I know friends in the building, some of their apartments are very cold. And that's because they don't face the sun like we do, we face the west. So, in the afternoon it always heats up, always decent here, it never feels very cold. I feel that maybe in summer, it gets very hot in the apartment building, because we face the sun again, but we just use the aircon or as long as we have air moving with a strong fan that also helps. (P30)

In P3's case, reduced bills for other expenses seemed to balance higher energy bills:

Yeah. It's funny, there's things like ... the electricity bill has gone up, but I'm not really getting so much petrol. There are other expenses that have gone down. So, I'm doing okay. I'm probably spending a bit more money than I did before on running the house, but I'm doing okay. (P3)

#### 3.4.2 Coping mechanisms

Coping mechanisms for feeling warm or cold are learned practices. Most participants put the onus (and stress) on themselves as individuals to keep warm or cold and even resorted to deprivation to keep the bills down. Previous research suggests that this trend has been observed in Victoria since 2012, when energy prices started to rise disproportionately to the Consumer Price Index and forced households to implement 'vernacular adaptations' (Gibson, Farbotko et al. 2013: 59).

For example, a middle-aged woman (P7) just wore 'more clothes', and a participant on welfare payments (P16) was 'frugal with gas' to keep bills low. Using temporary do it yourself (DIY) retrofits was a popular method with participants to:

- keep the cold out
- make the house less draughty
- reduce noise coming from outside.

Some participants continued using behaviour changes to reduce energy bills (Figure 12), such as switching off appliances when not in use (P26). A social housing apartment renter (P11), who had owed a debt to her energy retailer for the last four years, was using newspapers to fill the gaps between the panes of her louvred windows to keep out cold and noise. Despite making changes in her behaviour, living through deprivation and extreme thermal discomfort, this participant (P11) was unsuccessful in reducing her energy bills. Another participant (P8) had researched various ways to apply energy-efficient measures around the house:

If it's cold, we just go to a smaller room ... If it's in the living room, it's quite big at night, we turn on the heater for about an hour, so it can heat up the house. It's a bit warmer. Again, really researching how we can do any energy efficiency around the house. Most of the window, where it releases a lot of cold air, we tried to put bubble wraps to prevent cold air from coming in a little bit more. And we have curtains that are quite thick so that we close them every night to prevent that. And we've got blankets and all that. So, we'll try our best to not use electricity as much, because it does go up in price every month for us. So, I guess we'll try the cheap or alternative methods to reduce cost ... (P8)

I have [bubble wrap] in areas of my house where we spend time in. Study room, master bedroom, bedroom one and TV room. (P22)

Figure 12: Using bubble wrap to stay warm (P8, P22)



Source: Participants. Reproduced with permission of the authors.

P3 also used DIY measures, such as strips under the door to draughtproof the house and to stay warm. Another participant (P28) had planned measures to retrofit the house to reduce the cold, and in the meantime was using perspex to insulate the window. However, COVID-19 and the lockdown had put the planned measures on hold. Now that she had her mother out of aged care for the duration of the lockdown, she was concerned about her mother's room being very cold, despite her being a 'hot person':

I've ordered new carpet with underlay to try and stop the cold from coming up through the floorboards but again, that's all gone on hold because of COVID. One of the other things we're going to get is new curtains and so hopefully they're maybe a bit heavier and block a bit more of the cold coming out that way. My bedroom is not too bad, I think maybe it's because it's got trees around it and they protect it a bit but the other bedroom which is the one that my mum stays in is cold and draughty. She's a hot person, she doesn't feel the cold much, but she did get cold in there a couple of nights, which means we just have to use electric blankets and heaters and more bed covers because I don't know how to stop [it]. Oh, the other thing the guy did, that builder that came, he filled up ... [the gap] around the window frames. It may have made a bit of a difference but it's still cold. (P28)

Spatial changes to cope with the cold, included instances of people moving into their (better insulated and warmer) office cum shed; and leaving animal companions in the main house (P16). While P16 had planned the change prior to the COVID-19 lockdown, she was satisfied with the move. P32 moved from her main bedroom to a spare room in the house because of the poorly considered placement of the reverse-cycle air conditioner:

But one of the issues with it is [reverse-cycle air conditioner], because the walls of this house were asbestos, the heater had to be put low so that it could be plumbed in through the floor rather than the wall. And I think it's the cold air that's being expelled from the aircon that's going under the house. Because usually they're up higher and then they just go out, but this one is hitting my fence and going under the house. And yeah, so I've been sleeping ... in the spare room in a single bed. So, I made that adjustment. (P32)

While most participants expected their bills to increase because of spending longer at home, one participant (P10) found the lack of change in his most recent bill was a pleasant surprise. Another participant (P7) had given priority to keeping warm, and reduced her overall expenses by compromising on her mobile phone service. One participant without financial stress (P31) had been noticing a slight but steady increase of his bill. He was keeping track of his bills and was considering retrofits in case the bills were becoming a concern:

Yeah, they seem to be creeping up. It's something I am going to monitor. I'm wondering whether I shouldn't put solar panels on the roof. I haven't made a decision, but yeah, I am noticing high energy bills creeping up and that could just because I'm using the split systems more or I've got more fridges here than I used to have. It's also [because] I am working every day from home with computers and that there's electricity usage. It hasn't got to the stage where I'm overly concerned, but it seems to be creeping up, yeah. (P31)

But for P29, the anticipation of higher bills was stressful and availing herself of the Victorian Utility Relief Grant Scheme was not an option:

It's hard to get [Utility Relief] because you can get it once every two years and I can't remember how much it is, but you have to prove that you're overdue with your bill and I don't want to get overdue with my bill because then if we don't get it, then it puts us in a very sticky situation. (P29)

The stress of higher bills affected some participants more, as they could not follow their practices from previous years to reduce their exposure to the cold due to COVID-19 restrictions. P38, who at the age of 86 lived alone, used to spend most of her days pre-COVID-19 at clubs and events—not only to socialise but also to keep her energy bills down. She could no longer participate in those activities, and spent a lot of time trying to keep herself warm in the house by using electric blankets and warm clothing. Similarly, a welfare recipient (P32) had always planned seasonal escapes to avoid being inside a cold house. While this year she had a new heater, she could not escape to avoid the inevitable higher energy bills:

No. I'm expecting it [electricity bill] any day, but it's going to be a lot more than anything I've ever had, because I'm using the reverse-cycle air conditioner more than I ever have. It's the first full winter that I will have used it. And I've been using it a lot because I've been home a lot more. I used to go out to events, music nights or whatever. None of that's on. And also visiting my family, I go down there, stay a while. And I always dreaded winter because it was so cold, so I always tried to organise something to get away in winter. This winter I'm here. (P32)

### 3.5 Implications for policy

COVID-19, the stay-at-home orders and the restrictions on movement outside the home meant that living at home was being experienced differently than before. It meant working and learning from home and making material changes to the dwelling—and also having family members home all the time when they used to be away for most of the day. This change impacted:

- how households were run
- how food was eaten
- how work was accomplished
- how energy was consumed.

Some participants found their homes unsuitable, and found themselves unprepared for and challenged by living in the home for prolonged periods. However, others were pleased with the situation and showed resilience in the face of the impacts of the pandemic on domestic practices. Some short-term and long-term policy implications associated with the challenges presented in this chapter are discussed below.

#### Short-term policy implications

Short-term policy implications include:

- support measures for people working from home for spatial adjustments, material needs and adjustments, such as changing the set up of rooms and multipurposing rooms to set up for working from home
- neighbourhood noise-abatement measures
- policies that address synchronisation with disturbances in the neighbourhood such as building works.

Further implications could address COVID-19-specific energy bill relief for energy-poor and low-income households to alleviate energy poverty and the high energy bills associated with staying at home for longer periods.

#### Long-term policy implications

Long-term policy implications include the following.

- A critical review of the appropriateness of housing designs, especially of apartments without balconies (or only small balconies), small kitchens and limited storage spaces.
- Urban planning initiatives that ensure proximity to healthy, affordable and walkable grocery shops and food outlets. This would provide health and environmental benefits that would extend beyond the pandemic period.
- Urban planning initiatives that include community garden allotments for apartment dwellers as another way of ensuring access to outside spaces and food security.
- Ongoing energy efficiency retrofit initiatives and economic stimulus for housing upgrades to enhance future pandemic planning, and to provide householders with much-needed support.

## 4. Social relationships, intimacy and digital interactions

---

- COVID-19 impacted all social relationships, but the degree of impact varied across weak and strong pre-existing ties, and with online capability.
- Social isolation and emotional suffering were exacerbated by COVID-19, and involuntary separation from family and reduced or cancelled care-worker visits were found to be particularly challenging.
- Participants sought voluntary separation inside their homes to find privacy and intimacy, while issues of acoustic and visual privacy worsened as a result of prolonged time spent within homes.
- Digital technology promoted social solidarity in coping with the loss of face-to-face interaction, but it was a poor substitute.
- Digital literacy, inclusion and confidence, together with concerns about online security, revealed uneven capabilities and access to support to achieve social connectedness online.
- Resilience to disconnection and distance was exhibited in various coping mechanisms—from creating new bonds locally to developing new technological knowledge or curating at-home spaces for self-development.

### 4.1 Introduction

This chapter presents the impacts of COVID-19 on householders' existing social relationships, and the coping mechanisms developed by households in housing stress to reduce these effects. In so doing, it demonstrates how pre-existing housing stress weighs on relationships, and even defines them. It also reveals how social ties can alleviate anxieties and help householders cope with stress. Our data shows how COVID-19 has altered ways of relating to each other, but has also changed coping mechanisms when communicating with and caring for people who was radically transformed. Pre-conditions of social relationships and housing in our participant group were being renegotiated by householders under the rapidly changing context of COVID-19.

Section 4.2 provides a brief review of the literature addressing relationships in the context of housing stress and the increase in digital interactions in the context of the COVID-19 pandemic. Subsequent sections present changes in householders' existing social ties (Section 4.3), strategies to maintain privacy and create intimacy (Section 4.4), and reliance on digital devices and media to maintain social bonds (Section 4.5). Section 4.6 presents implications for policy.

### 4.2 Social ties, housing and COVID-19

Housing ties and relationships are being deeply altered by the increased amount of time spent at home under COVID-19 lockdown restrictions, combined with the downturn of social relationships ordinarily performed outside the home. Housing and home are invested with relationships that lie at the centre of people's lives.

In housing research, researchers have widely revisited the notion of 'home', both interrogating constructivist conceptions of homemaking and debunking romanticised understandings of home as a place of safety, shelter and control (Brickell 2012; McCarthy 2020; Warrington 2001). Geographers have also turned to analyse processes of home-(un)making (Baxter and Brickell 2014) and of coming apart to understand how spatial relations at home may reflect relationships becoming undone (Bissell and Gorman-Murray 2019).

Existing research investigating the effects of COVID-19 on social ties within the home has already revealed how housing stressors such as poor housing quality, overcrowding and financial anxieties can heighten strains and exacerbate conflicts. While there is limited research on the lived experience of these relationships, evidence from the United Nations Women's report on 'COVID-19 and ending Violence against Women and Girls' (UN Women 2020) suggests a dramatic surge in domestic violence towards women and children, homicides and women's suicide globally.

Another effect of the COVID-19 pandemic on social relationships has been the accelerated transition towards digital modes of communication and exchange, hastening some households in using apps and technology—but excluding others. Digital media and devices are playing an unprecedented role in the COVID-19 pandemic. However, the limited preparation time has created uneven access and exposed unequal capabilities.

With the withdrawal of the welfare state and in the context of austerity, people are increasingly relying on family and on other intimate relations for material and moral support (Valentine 2008). Straughan, Bissell et al. (2020) have also recently emphasised the importance of interpersonal relationships such as friendships in everyday life and individuals' wellbeing, as well as the ways in which absence, distance and proximity are socially and spatially managed by individuals.

### 4.3 Changes in social ties: handling physical distance, negotiating closeness

#### 4.3.1 Self-perception

COVID-19 affected how participants saw themselves in various ways, affecting their willingness or ability to communicate or relate to others around them. Self-perception has recently been defined as contingent on material practices and habits, rather than as a pre-given of the human and social condition (Rose 2018). This understanding of self-awareness as ‘simply another capacity, an awareness born of problems and the ability to reflect on them’ (Rose 2018: 1124) was illustrated by participants’ remarks on their own social positions under the COVID-19 restrictions. The physical distancing restrictions imposed by the contamination risks of COVID-19 were apprehended in various ways by participants, reflecting different and fluctuating abilities to cope with new bodily and spatial restrictions. This, in return, worked to confirm or alter householders’ existing perception of themselves.

#### Awkwardness and disorientation

Identifying as an outsider, an ‘introvert’ (P19) or as a ‘sociable’ (P28, P30), ‘extroverted’ (P11) being was explicitly claimed by several participants as a way to make sense of their own—and of other people’s—reactions to the physical distancing measures. As shown in Chapter 5, participants’ awareness of social integration, acceptance and actualisation were heightened by COVID-19.

Claiming that they belonged to widely recognised personality types—introversion and extroversion—appeared as a way for participants to find reassurance about their own mental state, while allowing them to affirm their need for aloneness (P19) or socialisation (P30) inside their home.

Encountering others led to moments of self-awareness during which some participants felt particularly aware of their own social and spatial positions. There was also evidence that, at least at the beginning, the lack of knowledge about the virus and insecurity about the appropriate responses affected people’s confidence in their social future:

In the beginning of COVID-19, it was really, we’re all a little bit freaked out. Everybody was looking at each other and not sure and very hesitant. (P4)

This was accentuated for lone-householders for whom face-to-face interactions had become scarce. A woman living on her own (P16) recounted how finding herself around other people at the park made her feel uneasy and awkward. She evoked her perceived atmosphere of general suspicion, which she believed led walkers and dog-owners to fear one another, and which seemed to intensify her anxiety:

I do meet people at the park, but everyone’s wary of everyone else. It’s really scary actually. It’s like something out of a zombie film. Who’s got it and who hasn’t got it? (P16)

This observed feeling of disorientation, which refers to the loss of one’s ability to know how to behave (Bissell and Gorman-Murray 2019), also pushed some participants to feel uncertain regarding the avoidance of everyday encounters. For instance, this was the case for a young woman (P21) living in a detached house who related not knowing quite how to communicate instructions to the delivery person while feeling uncomfortable about it. The front door of her home acted as a tangible threshold—but it also created unease as it materialised distance and risk between the participant and occasional, unwanted visitors:

It’s been awkward when they knock on the door. You’ve got to yell through the door. And the postman, that’s been interesting. (P21)

A lack of confidence because of bodily changes during restrictions was also detected with one participant, for whom self-consciousness affected their desire to leave the house and perform their usual outings. For P35, having a visual impairment added difficulties to the limits imposed on exercise under physical distancing restrictions:

I've been a bit not sociable. Like normally I'll go do my public speaking or go and play table tennis or go and do volunteer work, community-based work. All my stuff has stopped. Also because I normally do lots of different ... I'm very active in the community and stuff. Obviously, I've put on a bit of weight, it's been hard in that way. (P35)

### Relief and self-assurance

However, a great sense of relief sometimes emerged in participants' narratives around the disappearance of pre-existing social obligations. One young woman—who was born overseas and recently migrated to Australia—felt great solace at the announcement of the physical distancing rules, as it reduced her fear of contamination in the apartment that she shares with her more sociable husband and released her from her social duties:

I can't say that I miss social life [...] I haven't seen anyone, except my husband's friends, and some of my husband's colleagues who came once or twice [to] us. And at the beginning I was like, 'Why?' He was asking me, 'Can [name of male friend] come to have a beer?' 'I don't know.' I was really scared to allow anyone inside. (P19)

Self-reflection was at times combined with a re-evaluation of a recipients' previous habits or way of living. At least three participants (P3, P6, P7) shared their newly acquired realisation that previous social activities might be futile and could be replaced with more meaningful, productive and rewarding activities—particularly creative activities. Two participants (P7, P19) explained how the suspension of 'social gatherings' created opportunities for them to 'better focus' (P7), to spend time more 'effectively' (P7), and 'focus on [their] passion' (P19). A certain sense of joy and optimism at the prospect of self-growth seemed to emerge from the momentarily lift of social 'obligations' (P7).

Two participants reflected on their situation as singles while pondering the differences of outcomes for single and partnered people. A middle-aged mother living with her children (P3) expressed relief about her own situation as a separated woman, and believed she was better off without the perceived strain of navigating proximity and togetherness. However, this was nuanced by the fact that she was living with her children:

I was going to say another thing that struck me, that I thought about lockdown, was I'm actually really glad I'm single. If I didn't have the kids, I wouldn't be, because I've got company, but so many people in couples who actually navigate being happy together all the time. I'm just like, I'm so glad I don't have to deal with that. (P3)

An older woman living on her own (P28) shared her observations on how social differences were supposedly enacted by people's behaviours. While there is no way to know if this participant was foreshadowing her own feelings about being single, this certainly underlines her increased awareness towards others' attitudes regarding communication:

Locally it was quite interesting, because I noticed the couples that I know didn't make any effort to connect. It was the single people on their own who were desperately trying to find other people. (P28)

### 4.3.2 Intimate relationships, family and friendships

With the physical distancing restrictions limiting social interactions to intimate partners and people living close by, COVID-19 placed strong-tie relationships disproportionately at the centre of participants' socialisation and everyday life. Resilience to the lack of contact with close relatives was shown by many participants, who made major readjustments to accommodate the restrictions. Reducing their social circles also had effects on participants' routines, increasing pre-existing stressors or creating new constraints—which revealed varying capabilities and levels of interdependence to partners, friends and family members.

#### Love and romantic partnerships

Only a few participants shared stories about how their current partnerships were evolving during COVID-19. This could reflect the limitations inherent in the online or telephone interview methods used for this project (see Chapter 1), which may have inhibited opening up to the researchers, or may have meant that other family members were in the room. This may have also been due to the relatively early date in the pandemic when interviews were conducted, as participants' relationships had not yet been tested by disease or other external stressors. Because we did not directly ask participants about their personal relationships, any mention signified the importance of this aspect in the participants' lives. One middle-aged man (P13) had mentioned his attachment to his wife during Interview 1:

I've found with [name of wife], she's been the one constant in my life, and we're very happy together. We've always had a good rapport with each other and a great love. And that's carried through. So, she's my one constant. (P13, 2017)

P3's attachment had persisted. During the follow-up interview the participant shared how their change of lifestyle—which had involved an interstate move and interruption to work—was directly linked to a desire to spend more time with his wife, who was suffering from a chronic illness. This participant benefited from a healthy financial situation and familial support that allowed these changes:

That's the other reason for this change: we can enjoy our time together, not have to work. (P13)

Romantic relationships and bonds were evolving amid the lockdowns and physical distancing restrictions. To the question 'What has changed in your home?' one participant (P20) reported his recent marriage and moving in together as a newlywed couple: 'We had the honeymoon and the wedding probably a couple of weeks before they started shutting everything down.' The participant, who was moving from living in social housing to privately rented accommodation, expressed much-improved meanings of home notably due to this new partnership, even though they started life together as a couple in lockdown.

As analysed in Chapter 5, a wealthy householder living in a spacious apartment with her husband also noted that working from home was strengthening her relationship:

There hasn't been any tension. As I say, it's easy to get on and there's only the two of us and we're both busy. I think it's reduced the chance of any tension ... Because we get on okay, anyway. (P36)

Social scientists have emphasised the key role of digital technologies in the way dating, romance and courtship are increasingly operated in Australia and worldwide. Researchers have analysed the emergence of 'networked intimacy' (Hobbs, Owen et al. 2017), in which digital technologies are shown to give greater agency to users in pursuing meaningful relationships (Hobbs, Owen et al. 2017). This was confirmed by one participant's story (P1). Although COVID-19 had put a hold on developing face-to-face relationships, romantic interactions between this participant's relative and his friend were transferred into telephone conversations and digital communication:

My friend [name of male friend] is coming around more often, because he's interested in my little sister. [...] And they're chatting away on Facebook, and telephones and such. And after this virus, she'll probably be out of here. And if things work out, they might get married. (P1)

A young participant living in the city (P30) recounted how restrictions on general social activity that still allowed visits to intimate partners increased reliance on existing romantic partnerships:

When Corona started getting serious and the restriction started, I obviously didn't have anyone over, but I was going over to my lover's place more. (P30)

Break-ups appeared to be harder to deal with amid COVID-19 restrictions, as individuals were left to cope with their emotions on their own. One participant spoke of the 'traumatic' event experienced by a member of her family when an intimate relationship ended. Physical distancing measures prevented him from accessing support, seeing family or getting adequate support, which complicated separation and their associated housing logistics:

My son and his partner broke up, which was a bit traumatic, but they didn't live with us. But they're obviously very close to us. (P29)

### Family

Nationwide, conversations around the role of family support and bonds during the COVID-19 pandemic were reflected in the participants' accounts of their existing relationships with relatives.

Representing 'the core of everyday social relationships' (Hall 2019: 773), practices and emotions of care-giving within families were at the centre of the householders' accounts of daily life during COVID-19. As underlined by contemporary research on intimate bonds, 'the notion of family is deeply rooted in how most governments convey messages of responsibility and distribute social benefits to citizens' (Hall 2019: 773). Like the concept of home, family relationships have often been romanticised (Morrison, Johnston et al. 2013). Our analysis confirms that during COVID-19, family relations were as much defined by emotional attachment and support as by frictions and detachment. No signs of domestic abuse or violence were reported.

Many participants told us that they had increased the frequency of contact and diversified their communication modes with their family (as covered later in Section 4.5). However, many participants also brought up accounts of separation from their parents (P5) or adult children (P6), which had manifested in emotional suffering and various mental health impacts (as presented in Chapter 5). COVID-19 increased pressure on lone-householders with already limited access to family networks. To the question 'What has changed in your family and social networks?', one participant who lived alone (P11) replied: 'It's shrunk. My family hasn't changed, they don't speak to me and that hasn't changed'.

A middle-aged man living alone (P6) also reflected on the great difficulties he felt overcoming month-long separation from his children, whom he normally visited by car every week. This separation was intensified by social isolation:

I couldn't see my adult children for four months. ... I haven't basically seen other people since February. Apart from going out to do shopping. ... How was I coping when I wasn't seeing my adult children? I wasn't coping. (P6)

The restrictions led to further complications for large families that were suddenly unable to spend time together. One participant (P29) believed that this had devastating effects on his nephew, who had a disability and was particularly concerned about falling ill:

With the pandemic, my nephew hasn't been able to see his children very much at all, so that's been very traumatic ... because his children are exposed to their stepsisters and brother, and there's lots of family involved there. (P29)

Two participants reported very limited, almost non-existent, communication with their family. One participant believed that his recent marriage and subsequent move interstate had led to the severance of communications with his sibling:

The funny thing was that when I told my brother in February that I was getting married, he basically didn't want anything to do with the situation and basically wrote me out of his life. (P20)

An older participant living on his own (P34) reported having 'no family really'. He reported to being estranged from his son and that his good health and comfortable living arrangements in an apartment building equipped with a gym compensated for this lack of care-giving and familial interaction prior to COVID-19. Thus he witnessed 'no real change' to the secluded situation he had created for himself.

Many participants living with children or a partner recounted their efforts to instil good values into everyday life and expressed upbeat family narratives. One young mother (P33) reported how COVID-19 led to practices of decision-making regarding housing finances 'as a family', showing how difficult choices to be made also brought about resilience and unity. Another participant shared their choice to 'provide financial help to family' (P36), underlining the importance and unevenness of family support when the COVID-19 income substitution proved insufficient. Recurrent expressions such as 'family-oriented' (P8, P24), 'family-friendly' (P8), 'family house' (P8, P28, P35), 'family business' (24) or even 'family friends' (P25) showed that strong family ties were seen as beneficial conditions for wellbeing, social capital and ontological security.

Family ties are closely linked to intergenerational caring practices, which are informed by policy landscapes (Morrison, Johnston et al. 2013). In the context of government recommendations to reach out to relatives, many participants told us about 'checking in' more frequently. One participant also told us how she was adapting her care-giving to physical distancing rules:

Last night we did video chat. Even with my brother, I had to give him video chat being in the hospital and friends. I was actually quite worried because we had not told some of my friends that my brother passed away. That was the day the restrictions came from 20 to five [limit of allowed visitors to private homes]. And some people rolled up that I didn't know they were going to come, and I started worrying. So I sort of said, 'Keep [your] distance'. (P18)

Pre-existing housing stressors such as poor housing quality and poor physical health heightened concerns and complicated processes of care-giving, particularly towards older people. This was shown as having negative consequences for both the care-giver and care-recipient. A middle-aged woman caring for her mother highlighted the conflict that was caused by the intersecting issues of the threat of contamination and the mental health risks posed by social isolation:

Because my main concern is looking after my mother at the moment. She's my only family. [...] she is completely self-isolating now up on the first floor. It's so lonely for people too. Between that and getting it, I'd rather be a bit lonely. (P16)

Another woman living on her own (P24) reflected on her familial duties to 'try to keep [her parents] busy', invoking the multiplicity of topics she talked about in a bid to distract them: 'cooking, everything, data, politics, movies, everything, price, shopping, everything' (P24).

While digital communication modes had transformed the way care-giving and familial relationships were performed between and within homes, it seemed that COVID-19, at the time of our data collection, had not changed the meanings and nature of family ties. In particular, one mother with family overseas (P3) nuanced the impact of the pandemic on the hierarchy of 'who matters' the most, although she also realised that more efforts could be made to stay in touch: 'I don't think any significant changes to who the people in my life are'.

### Friendship

Alongside intimate and familial relationships, friendship was central in participants' narratives on the biggest changes in their everyday lives. Friendship has been framed as essential to social cohesion, particularly in diverse metropolitan spaces (Kathiravelu and Bunnell 2018), providing support and interconnection as a form of voluntary kinship (Hall 2019). Friendship is also linked to spatial mobility (Bunnell, Yea et al. 2012), as analysed in Chapter 2, and to the affective management of distance and proximity (Straughan, Bissell et al. 2020).

Practices of solidarity, conviviality and care linked to friendship are attracting renewed interest from researchers and policy makers in the context of austerity and uncertainty. COVID-19 affected participants' friendships in various ways and suggested influences of gender roles, social context and employment.

Accounts of the role and nature of friendship reflected gendered and life-course differences within householders. Overall, the women in our study emphasised the importance of their friendship groups more than the men did. Three participants were concerned about the impact of lockdown on their children's friendships (P2, P12a, P21), and saw friendship as an empowering and important element in children and teenagers' lives. For instance, the importance of friendship through maintaining 'playdates' in the street for her children was emphasised by one young mother living in a detached house (P12a). Another mother living in a unit (P21) believed that the absence of 'sleepover, all that fun stuff' had a negative impact on her child's wellbeing, as emphasised in Chapter 5.

One young woman (P12a) communicated her suffering from being separated from her friends most strongly, expressing pain and distress at the idea of seeing people 'one last time':

That's really, really, really hard. I guess you keep feeling like, 'Oh, it's the end. The end is coming. We can get to see everyone soon,' but no, we can't again. (P12a)

This participant also missed the physical presence of her friends, which had a negative impact on her wellbeing. At the time of the interview, she was showing signs of deteriorating mental health:

I don't know if that's right to say, but I think I really, really need face-to-face interaction with my girlfriends, and they desperately need it as well. Even though we send very long text messages to each other, it's ... And at times I've been able to do a walk around the block and have six phone calls, one after the other, and it's been a long time just trying to manically catch up with friends. (P12a)

Two mothers (P12a, P15) declared that they lacked time to nurture friendships as their domestic chores and caring responsibilities had increased with COVID-19. Evoking the changes in the relationship induced by familial pressure, one mother lamented: 'It's still not the same because they have had to find time away from their kids or from their work' (P12a).

Accounts on friendships from transnational households also reflected the fluctuating nature of friendships in the context of migration and spatial mobility. Having existing interpersonal connections far away and being practised in digital communication modes also seemed to alleviate some of the negative impacts of COVID-19 on friendships:

Because I didn't always live in Melbourne, I used to live in Darwin, most of my friends are spread out throughout the other states anyway, so we just communicate on social media. ... So I haven't really missed out on seeing anyone. (P25)

Yet, for one participant under visa and income stress due to unemployment (P19), COVID-19 had made maintaining friendships even more challenging—particularly as regular workplace relationships had disappeared:

I used to have a lot of friends back home. But here, I can't say many. Maybe colleagues. And I have some colleagues who became to be closer to me, but I don't have too many friends. (P19)

### Grieving loved ones

Geographical literature asserts that 'living with absence as a result of bereavement is mediated through different material forms and practices' (Maddrell 2013: 501). Private domestic spaces such as the household commonly play an important role in grieving practices. As physical distancing rules limited attendance at funeral services, anxieties of bereavement revolved around the inability to leave the home to grieve.

Three participants at various stage of the life course (P11, P19, P37) explicitly shared with us their experiences of grief during COVID-19 and their strategies, if any, to cope with the death of loved ones.

For a young woman in her 30s (P19) and her husband, the inability to attend a funeral service for the death of a loved one provoked a reassessment of their future. While accepting to say goodbye from afar was almost intolerable for this participant, she displayed great mental strength and optimism later in the interview:

I don't know for us, because our families are back in Romania ... And my husband just lost his father now, like one month ago. It was a very unhappy situation with this COVID-19 thing, because he couldn't travel back to be with his family. And now we are just rethinking everything, because we don't know what we're going to do in the future. If we're going to stay here? If we're going to afford to stay here, because we have a late start in live in Australia. ... We don't know yet what we're going to do in the future. And this situation doesn't help us too much to figure out. But, for the moment we are still here. We are seeing our future here. (P19)

For a single woman nearing 50 years (P11), existing housing and personal stress made grieving particularly challenging, and her emotional suffering was fuelled by social isolation. The woman was struggling with the passing of an intimate partner and believed isolation was worsening her mental state: 'the isolation's been getting to me'. Neighbourhood conflicts and the recent death of a neighbour heightened her distress, spiralling into comments of hopelessness during the interview: 'I don't think I'll ever leave here except in a wooden box' (P11). These combined circumstances were also having concerning health effects for this participant, such as increased smoking, as shown in Chapter 5.

Dealing with death during COVID-19 appeared to be most devastating for an older woman (P37) who had lost her husband to illness some weeks before we interviewed her. This woman, who suffered from no prior stressors, found herself having to cope with several major losses at once: her husband, her church and, as she put it, her 'freedom'. The compounded effect of her struggle with grief and isolation due to COVID-19 were reflected in her account of the feelings of disempowerment and vacuity that characterised her life since then:

With this Coronavirus, well with the sickness, illness of my husband, it was constant backwards and forwards to the hospital. So that cut out any other activities and then his death at the end of March plus this lockdown thing, there's been nothing. It was a whole lot of nothing. What can you do? By the time you organised a funeral, which was just dreadful with 10 people and a big family and the aftermath of all of that. To be perfectly honest, I have done nothing. (P37)

### 4.4 Maintaining privacy, achieving intimacy

Privacy and the opportunity for intimacy are key aspects of ontological security and the meanings of home (Blunt and Dowling 2006). Our research shows that pre-existing housing stress combined with COVID-19-related stress affected how much privacy people had to work, study, relax or create intimate moments for themselves. Space within and between homes also created a major role in accentuating or mediating the impacts of COVID-19.

Our analysis revealed that COVID-19 was both exacerbating visual and acoustic issues—especially in apartment buildings—and creating new issues around intimacy in all housing typologies. In response, householders adopted various ways of using their time at home as an escape from the constraints of confinement.

#### 4.4.1 Privacy between households: visual and acoustic issues

Recent research on apartment living in Australia has shown that apartment buildings are prone to create visual and acoustic issues (Kerr, Gibson et al. 2018; Nethercote and Horne 2016). Such issues were raised at the time of Interview 1 and held true for three participants (P4, P10, P25) at Interview 2, who expressed an increased awareness of bad acoustic insulation within their homes or between apartments in multi-unit buildings. Nine participants explained that their new sensitivities to noise were because of their longer stays at home (P13, P14, P17, P18, P19, P25, P27, P30, P36).

Four households (P8, P9, P10, P20) under social and private rental tenancies managed to resolve privacy-related issues from apartments that afforded little privacy. They did so by moving to a new dwelling, which was made possible by sufficient agency and financial means, often provided by the stability of a partnership.

Conversely, social housing tenants who were single were unable to resolve such issues and were still struggling with the problem that residents in neighbouring buildings were able to look into their homes (P11, P14). One participant (P14) told us how staying home in an apartment with privacy issues under lockdown restrictions impinged on his wellbeing and meanings of home: 'My blinds are closed 24/7. I'm basically living in a dark concrete cell that I pay rent for.'

This was also observed with issues relating to noise. One participant with mental health issues had been particularly suffering from construction-related noise. He attributed the problem to the physical configuration of building shapes and surfaces in the neighbourhood. The noise pollution seemed to have been amplified in the participants' perception due to the stay-at-home requirements:

I'm now up to almost six years of construction noise coming into my home. ... it's not my imagination, the sound bounces off my apartment louder than other people's apartments, because I'm just in that magic spot. (P26)

By contrast, another apartment dweller (P30) shared his satisfaction regarding soundproofing and low noise levels in his building, further illuminating the widening of social acceptance and feelings of kindness and tolerance during COVID-19, as analysed in Chapter 5:

I thought maybe, they would may complain against me ... I think everyone has been pretty good in terms of sound. (P30)

#### 4.4.2 Privacy and intimacy within households: making a room of one's own

Increased time spent at home during lockdown restrictions created pressure to provide privacy and intimacy in the dwelling space. There were many differences between householders' access to private, separate space and time. Overall, physical and spatial separation inside the household was essential for participants to create moments of privacy.

In apartments, having an additional room allowed for multi-functionality with positive benefits, such as easier tidying; and for households with small children (P17) or teenagers (P18, P27), it gave the 'opportunity to close one door and just have another space' (P17).

One young woman sharing a one-bedroom apartment with her mother (P25) insisted on a strict division of space to maintain privacy and individuality. Another young man sharing an apartment with another person (P30) also underlined the strict allocation of activities per space to reduce conflict. As he occupied the windowless bedroom, he stayed in the well-lit living area for most of the day. This restricted his flatmate to her bedroom when working from home. Apartment-dweller participants on higher-incomes and living in larger homes benefited from increased levels of privacy through time-zoning and socio-material arrangements to perform various activities. For instance, a couple living without children in a large apartment was able to work in separate rooms during the day and to reunite in the evenings to spend time together:

We've set into a good routine actually ... We don't tend to interact very much during the day because we both have full schedules with work. ... And then try to knock off about five o'clock and then just relax for the evening. We've been very good. (P36)

Micro-spaces such as balconies were used to perform self-realisation (as seen in Chapter 5, with caring for plants, P11). One participant (P19) used her balcony as a refuge to escape the tension emerging from her husband's work life and dodge conflictual interactions. She told us about the objects she took outside (yoga mat, pillow, books) to make a space of her own—'a bed in the balcony' (Figure 13):

And when the lockdown started, and my husband worked from home, actually I stay all day in the balcony. ... I took some of my pillows, and I live there for the whole day, because I couldn't stand him. He was on the phone all day and everything. ... It's a drama every five minutes, and I said, 'I don't know, I think I'm having a heart attack just listening to you. I can't stay in.' And he's very loud as well. ... And I was staying in the balcony, and I couldn't hear him. ... Yeah, I'm using the balcony a lot. Not too much now because it's cold, but I love it. (P19)

Figure 13: 'My office' set-up with balcony bed and belongings (P19)



Source: Participant. Reproduced with permission of the author.

A man in his 50s (P13), who was sharing a house with his wife's parents, believed that the conversion of a garage into a studio helped with the forced closeness during the COVID-19 lockdown by creating separation between couples:

There [were] a lot of crossovers, and it was probably slightly heightened a bit with the COVID-19 environment: you can't go out so easily, so you're more conscious of people around you. We did find that a bit tense, but since we moved into the studio, we've had much clearer separation and it's been better for all of us. Each had a bit of space, the two couples, and then we see each other regularly throughout the day, but there's more separation if you need to. (P13)

For at least four mothers, retreating for an emotional refuelling was difficult due to carer responsibilities and lack of time (P3, P15, P21, P33). Only one mother shared that having a room for herself provided welcome relief from the busy family life:

Well, I spend more time in my own room just to have some space. ... I think I use [the lounge room] less than I used to because I need that separation. (P29)

Another mother suggested that her demanding schedule did not leave room to use the balcony for relaxation purposes: 'not much time to sit in the balcony or to have lunch or breakfast or something' (P24).

### 4.4.3 Coping strategies: technology, hobbies, praying

One of the main ways in which participants created individual time was by taking recourse to technology. Whereas two participants noticed that an increase of Internet users had slowed the network down (P5), or created tensions in the household (P27), at least three participants (P25, P27, P36) believed that technologies had helped creating downtime in the household.

There was a shared desire to vanquish isolation and to tackle lockdown by showing inventiveness and to 'turn this into something constructive' (P38) or 'productive' (P6). However, some participants who were used to living on their own declared themselves better prepared for COVID-19 restrictions and reported no particular change in their routines:

Honestly, the self-isolation when everybody was supposed to be in lockdown, that's what I do every day in my life anyways. So, there was no dramatic change. (P14)

Many participants reported feeling bored (P3, P24, P30), which led them to engage in creative hobbies and cultural practices, such as writing (P6). Physical distancing measures required open mindsets and innovative solutions to keep social activities going, including showing goodwill when meetings were limited to five people:

Our last book club, we could still meet, but there were too many of us. ... So five went to one house and the woman that I walk with and I went to her house. (P29)

Religiosity emerged as a further coping theme. The interruption of church attendance and ceremonies, and the lockdown prohibition on sharing funerals, had dramatic consequences on an older participant (P37) who suffered from this 'loss', altering both her grieving process and her social life. Praying assisted two participants in coping with the current risk of infection (P17) and the illness of a loved one (P18):

What's going to happen, and should we do this? What shouldn't we be? But we say that pray, for the situation. That's okay. (P17)

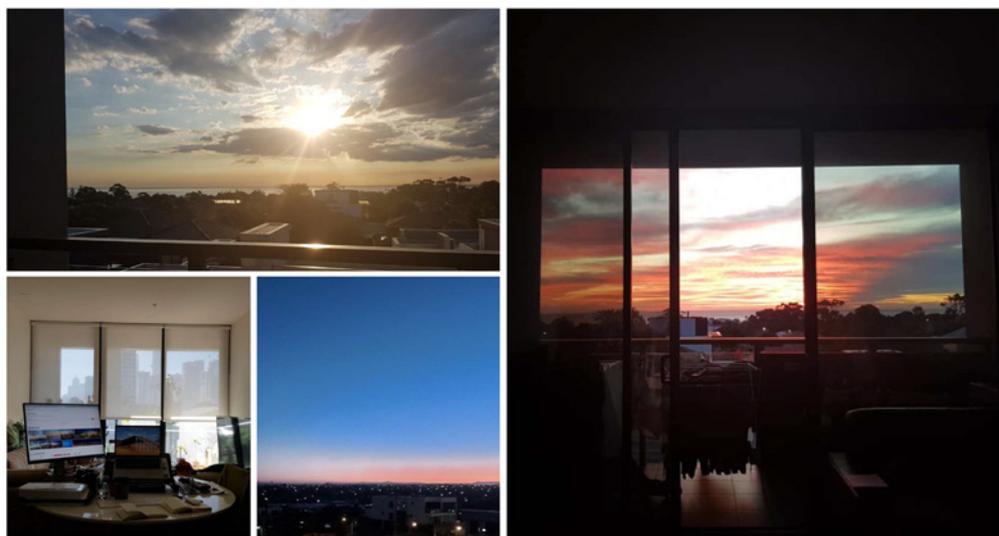
And also it sounds silly, but sometimes going out just by myself, I used to like to say a prayer to my brother. (P18)

A connection to the outside world was helped by having a view, even if amenities were minimal. Many participants shared photos of their views with the research team, highlighting the importance of this housing feature. A view of the city provided one participant with a sense of connectedness to the world. According to one young woman, a view of the highway gave her husband some relief from his work (as analysed in Chapter 3): 'for his mood and wellbeing, just feel that bit connected to the outside and watch all the cars go by' (P17).

The view was also seen as supplementing human connection by offering a metaphysical experience of the world and a mental breakout (see Figure 14):

I think to me, it's because I have the view, to the city. So I still feel like I'm connected to the world, like I don't just have four walls around me and not being able to see anything. (P10)

Figure 14: Viewing 'outside': apartment dwellers' sunset views from their homes (P5, P10, P19)



Source: Participants. Reproduced with permission of the authors.

### 4.5 Digital spaces and distant interactions

Valentine (2008: 2113) outlines the possibilities for the Internet to 'stretch intimacy beyond the boundaries of the domestic' in three main ways:

- knowing—finding information
- loving—for example, 'by enabling flows of feeling and emotionally binding together dislocated lovers and family members'
- caring—for example, through online shopping.

COVID-19 affected networking activities and physical attendance to group catch-ups and extra-curriculum activities (P2, P6), potentially inducing desocialisation and affecting the mental health of participants who relied on non-profit organisations to keep in touch with others (P2):

I have groups that I attend, so I get to see them at groups as well. I also get to see them over the phone. And because we have groups, like cooking groups or we have outing groups, or yeah, we have things like that. Craft groups. Yes, so I find getting into groups gets me a lot of friends as well. (P2)

However, participants overwhelmingly reported increased use of digital media and devices, including for regular social activities that had been transferred online. For example:

- choir
- University of the Third Age
- ‘girlfriends’ breakfast’.

Although many participants reported efforts to continue existing social interaction in the online environment, there was a shared perception that virtual meetings could not fully substitute for physical meetings. Conventional means of communication such as landlines and mobile phones remained central. Entertainment devices were also conventional, for example, television. However, COVID-19 also brought to the fore communication tools whose usage grew considerably. Five participants mentioned spending time on entertainment platforms—namely Netflix and YouTube—as a way to pass time and cope with boredom or loneliness. When participants did not own a desktop or laptop computer, smartphones were used as a substitution. All households were equipped with an Internet connection, even though not all equipment was connected because of financial resources and limited data plans.

### 4.5.1 Householders’ profiles as digital users

In the following analysis, householders are categorised by the degree to which they were using digital media and devices during COVID-19.

#### The ultra-connected

Many participants appeared to be ultra-connected, which can be defined as being almost permanently online or using multiple platforms and software. Two participants exemplified ‘ultra-connected’: ‘I do spend a lot of time scrolling through Facebook and email’ (P38), and ‘a lot of FaceTime, a lot of YouTube, a lot of Netflix’ (P25).

For one participant, who shared an apartment in the Melbourne CBD, his job loss coincided with the disappearance of his frequent outings and his busy social life. This created a vacuum which, given an unusual amount of time spent at home, led him to increase his digital engagement:

I’m a very sociable person. So, I used to host a lot of friends before all the restrictions happened, because I was so central to everyone living in the CBD. A lot of people would just message me even last minute and just ask if I was home and we’d hang at mine ... we’d spend time on the rooftop as well ...

But during this time of COVID-19, obviously I’m not working, I’ve just had more time to myself and in doing so, have posted more selfies and pictures and stories on Instagram and Facebook during the last few months. But now that the restrictions [have] ease, naturally, I’ve stopped doing it again. (P30)

Other participants relied on social networks to stay in touch with their friends and relatives, calling them a ‘blessing’ (P15). Alternatively, social networks were used to stay informed of current news and updates relating to the spread of COVID-19:

I’m looking forward to seeing the update and seeing what could possibly affect me and my family, because it’s pretty close to home at the moment this situation ... Facebook has a lot of other news updates and even the Premier, I’m following him on Facebook. So he puts updates regularly as well. And just, it’s good to be informed and updated. I think it’s really important. (P23)

### The phone users

Most participants reported talking to their relatives over the phone, with older participants believing that this was the most adequate and practical way to communicate. One interviewee expressed her reliance on the telephone to speak to her relatives interstate, oblivious to the use of other tools: 'I don't think I've Skyped at all. I forget about it' (P4).

A few participants who called themselves introverts were struggling with the pressure to use video technologies (P19, P33). They talked about the 'fatigue' that comes with video communication and questioned its value. Many participants mentioned having a 'trial' period, before relying heavily on the phone:

We did a lot at the very beginning of restrictions, and then this fatigue set in. I'm a bit of an introvert. I was trying to be like, 'No, we're still going to connect with people.' And then it's like, 'No, this is actually a bit odd and not necessary.' I mean necessary, but doing the video thing. We'd kind of ring people from time to time. (P33)

For one mother, the phone was kept close all day long, following her through her routine of domestic chores:

I tend to use my phone more than any other devices. I just find it's really handy. It's always on me, but the kids all have different devices, so we've got a lot of things accessible in the house, but I just mostly use my phone. (P23)

### The digital battlers

While the majority of participants aspired to join online groups or use video technologies, some were struggling to connect. This was either because they did not feel confident enough, or because they were undergoing significant mental health issues. This demonstrated the importance of pre-existing skills or support.

One participant believed that mental health disorders such as depression played a role in people's ability to 'move' their relationships online:

Some of them cope with it more than others. My son has a girlfriend who suffers from extreme depression and she's been a lot worse. (P32)

Older participants often thought of themselves as lacking the skills necessary to use online communication tools. As one participant mentioned, they felt as if they were 'not clever with technology' (P37). Yet these same householders showed a great deal of resilience and adaptation, using digital tablets and quickly learning new software. This was affirmed by a participant over 75 years old: 'I have learned to Zoom' (P38).

This negative self-assessment was often combined with a certain level of scepticism regarding the quality of interactions or how people felt they 'fitted' in this new digital landscape. Yet the social interactions and continuity of meet-ups afforded by these online gatherings provided a much-needed socialisation time for householders who were living alone and already isolated. Older participants therefore showed much adaptation in moving their games online, even if a little reluctantly:

I used to go out every Saturday night with a bunch of older ladies, which now we don't do. They've started to meet on Zoom once a week, but I find they talk a lot of twaddle actually, and it's a desperation move, I think, me going on it. (P38)

For this older lady living on her own, attendance at weekly meetings was crucial for maintaining her cognitive abilities and social networks. She evoked the desire to 'stay in the game', speaking of her high involvement in learning online with younger participants. To her, digital inclusion reflected a strong urge not to be excluded or left behind, and a desire to mentally and socially move up:

We all like to play up. You don't like to play down, if you know what I mean? (P38)

### The self-selected outsiders

Four participants chose to limit their engagement with social media and digital devices for varied reasons. A young woman (P19), who felt indifferent to the distancing restrictions, admitted she preferred being on her own. As she had struggled to establish a new social network in Australia, she admitted to voluntarily retracting even further from her social life and to 'disconnect' as much as possible:

I have work colleagues that, we have a group, but I put that group all the time on mute, because it's just annoying ... But I tried to keep them in touch. (P19)

An older man living alone in a luxury apartment shared his mistrust and straight-up rejection of social media, invoking the perceived lack of security associated with these platforms:

I don't believe that my friends and I would be the only ones with access, so I just don't use it. I haven't ever been on Facebook or LinkedIn or any of those things and never will be. (P34)

Yet even for this participant, the computer remained central within his home and he maintained an online presence:

I have my computer on my dining table and I probably look at it a couple of hours a day, but a lot of it is emails and not much communication with other people. I'm pretty well self-contained. (P34)

### The digitally excluded

Some people were excluded because of limited digital capabilities. This led to anxieties over the wellbeing of relatives for two participants whose parents were ageing and far away. One participant was extremely distressed over her parents' lack of digital capabilities, which led her to feel disempowered and to reconsider her plans to migrate to Australia.

In some cases, financial stress put limits on participants' access to the Internet. One participant (P17) considered herself 'a light user' as she was only connected through her phone rather than through her computer, and relied on the public library and free WIFI when she needed a lot of data:

I do have a computer, but it's not connected to the Internet. I just got a phone which is a very economical one-year plan. It's an oldie plan. ... I've got a bit of data on it. It's limited data. I'm a light user, so I can do my business by email. (P17)

A lone-householder (P11) expressed how her deep struggle with social isolation was exacerbated by her lack of capabilities with digital tools: 'I can't use computers, and that's made it even worse. I'm an extrovert, and not seeing any humans ... yeah. It's bad' (P11).

Finally, digital interactions were not always possible, particularly when householders' relatives were suffering from cognitive issues. Dementia, for instance, reportedly restricted people's technological capabilities:

I think it's like extreme cognitive decline. They know who we are and all that sort of thing, but they can't really cope with just about anything. So they have trouble with any sort of technology. (P22)

### 4.5.2 Establishing boundaries

One commonality between our participants across these different profiles was an emphasis on the need to create boundaries at home around digital devices. For most participants, the potential negative effects of digital interactions required them to be selective and to choose wisely, as well as allow some time for adaptation.

Many participants believed that social media could have negative effects on their mental health, which led them to establish perceived healthy engagement routines regarding their use of devices such as computers and television. For example, one older woman admitted to watching more television but stressed that ‘three o’clock is the earliest because I don’t like it in the daytime’ (P37). A middle-aged woman mentioned the need to ‘remain connected within reason’ (P26), which implied the perceived rules about healthy amounts of communication. A young man was aware of the potential negative effects of over-engaging with social media and was disenchanted with the perceived overuse of it by his peers. He recounted how he had switched his own content publication from sharing stories of travel and was considering sharing photographs of home-cooked dinners:

I just find it is pointless posting all of these stories. I’d rather just do my own thing without having to show it off. Unless I like to post travel pictures, which is my main reason for posting, but there’s been no travel. Unless I start posting pictures of my dinners, stuff like that. (P30)

The use of social media was also shaped by people’s psychological traits and preferences. A man in his 50s was reluctant to become involved in debates on social media and witness people disrespecting the lockdown rules:

Social media for me is something which I am intentionally not getting onto or engaging with. I do not want to get caught up with what other people might be thinking about social distance restrictions and a lot of the changes that you go through; I do not want to know about what they’re actually doing about it. (P7)

Finally, there was a widely shared perception that the quality of interpersonal interactions via digital media was inferior to face-to-face meeting. Three participants expressed their disappointment at the quality of interactions provided online:

- ‘It’s just not the same via messaging, and I’m still really feeling the difference.’ (P12)
- ‘My breakfast girls, we caught up on Zoom but it’s not the same.’ (P36)

Even though participants altered the way they connected online and, in some cases, had renewed their Internet access (P32), there were many mixed, reserved and uncertain feelings regarding digital interactions:

Well, actually, the beginning of COVID-19 I thought that I would be, so I thought, ‘Okay, with the extra money I’ll actually up my [data] ...’ because I was hotspotting from the phone. So, I got an Internet account again and there were a lot of meetings and things that I was interested in. I was actually flooded for requests for Zoom meetings, I felt absolutely Zoomed out. I just felt it was all too much. So initially I used it more, but now I’ve just been much more selective in how I use it, because even though it kind of stimulates social interaction, it can also make you feel a bit ... a bit more detached or something. It’s funny, it’s a mix. I’m not that keen on sitting in front of the computer. (P32)

### 4.6 Implications for policy

COVID-19 emphasised the importance of good social relationships at home and capabilities to engage with digital forms of communication.

There is a need to assist isolated householders to build resilience to cope with physical and emotional disconnection and distance. This involves addressing not only people's digital literacy and the availability and affordability of appropriate technologies, but also a set of social capabilities. These capabilities underpin self-efficacy, confidence, knowledge and social license, and tap into broader social structures governing agency, power and choice across diverse and often minority communities.

The online agenda also links to more established systems of social networks and social care and support. Many of these systems were withdrawn or forced hastily online following the onset of COVID-19 restrictions, leaving implications for policy linking mental health and relationships, which views relationships as important underpinning social capital that provides mental health resilience.

While in this study there were no signs of domestic abuse or violence reported, there are implications for domestic violence policy and support. COVID-19 policies that assume homes are safe havens and force households into close proximity might actually intensify the settings within which domestic violence is perpetrated.

Finally, our results highlight the importance of good design and built quality in creating noise-free environments that are conducive to privacy and wellbeing.

# 5. Social, physical and mental health

---

- Physical distancing rules and constrained care for older people actually translated into social estrangement and disintegration.
- The physical and social make-up of apartment buildings and neighbourhood either encouraged or hindered social integration.
- The general perception regarding hygiene was that the virus was an external threat that had to be prevented from entering the home.
- Experiences of infection control by apartment building management seemed to have been differentiated by socio-economic conditions.
- Efforts to cut transmission of COVID-19 also translated into interruptions to essential healthcare services and affected participants' exercise practices with indirect positive and negative impacts on bodily health.
- Mental health effects were shaped by the nature, severity, duration and compounding of stressors.

### 5.1 Introduction

This chapter presents the impacts of COVID-19 on the social, physical and emotional wellbeing of the participants. COVID-19 posed an immediate threat to public health.

Policy responses focussed on reducing the risk to physical health. However, the wider impacts of lockdown measures on social and mental health were largely neglected. Federal and state governments portrayed the risk as manageable, and sought to prevent the spread by early lockdown measures, along with additional efforts to safeguard the health of susceptible people.

Policy responses included:

- closing schools, offices and restaurants
- physical distancing rules prohibiting private and public gatherings
- stopping interstate and international travel.

By closing regular sites of social interaction, the restrictions challenged the social nature of wellbeing and human life, and raised concerns for the adverse mental and social health impacts (Dayrit and Mendoza 2020; Venkatesh and Edirappuli 2020).

### 5.2 Social health: impacts on social support

This section explores the impacts of COVID-19 on social health. Despite the shock and distress that disasters such as pandemics entail, they can also pull people together, provide strength through solidarity and collective actions (Corvo and De Caro 2020) and provide opportunities for social cohesion (Spoonley, Gluckman et al. 2020).

In this section, we investigate social health with regards to the participants' appraisal of their own social functionings and networks among friends, family and in the community (Larson 1996), while also acknowledging that social health is difficult to define, closely linked and often merged with mental health into psychosocial health. We consider interactions in both directions of giving and receiving support, and explore the influence of COVID-19 on social integration, social acceptance, social contribution, social coherence, social actualisation and social acceptance (Keyes 1998).

This section complements Section 5.4, which touches on the impact of physical distancing rules on the mental health of participants, and reveals how sociality seemed to have mediated the severity of emotional strain. The impact on social health was also connected to the impacts of functioning at work as a social site, which is covered in Section 5.2, and the receipt of professional care for physiological or mental ailments, which is covered in Sections 5.3 and 5.4.

#### 5.2.1 Social integration

Social integration refers to aspects of belonging and being part of society (Keyes 1998; 2005). The study found evidence that COVID-19 may have contributed to better social integration at the scale of the household, larger family and neighbourhood. Increased comfort and support within households included children, young adults and partners starting to help around the house. Help included assistance with finances (P22, P27), shopping, looking after younger siblings (P23), cleaning (P18) and care for family members with disabilities (P29). At the scale of the larger family, there were several incidences of gratitude from older people for the support from their children (P1, P37). Several participants, who had relatives outside their cities or overseas, continued or even increased communications using various electronic modes of communication because, for example, 'we have more time on our hands' (P17). For others, the enthusiasm had waned over time: 'We did a lot at the very beginning of the restrictions, and then this fatigue set in' (P33).

At the scale of the community, participants in houses shared that small interactions with neighbours, such as talking or sharing produce from their own garden (P22), had continued or increased. An older woman who was 'a bit hesitant to go out' was assisted by a neighbour who bought essential food and household items for her (P38). Another participant (P8), who had moved from an apartment to an estate but did not yet have any physical neighbours, was grateful that the establishment of a WhatsApp group within the estate helped her to stay informed and connected. In a more established neighbourhood, a street Facebook group was used:

- as a marketplace for herbs and homemade products
- to offer shopping services
- to facilitate new friendships among children (P12).

Social media was also used in a luxury apartment building, although neither of the participants had joined the Facebook group (P34, P36).

Disruptions to social integration within the community may have been better managed in neighbourhoods with detached houses than in apartment buildings. Many apartment dwellers reported that they had no (or only incidental) interactions with their neighbours in person or in the shared spaces, such as laundries (P11) and gyms (P34). One notable exception was in an apartment building with many younger residents. The shared rooftop space allowed for physical social interactions and, thus, the making of new friends. As restaurants, bars and nightclubs were closed, and physical distancing regulations prohibited at-home gatherings over five guests, the open-air rooftop terrace was able to accommodate gatherings provided the minimum space/person requirements were followed. While one young male participant missed out on his busy social nightlife, he was able to make new friends within his apartment building as residents flocked to the rooftop for a change of scene (P30).

Social fragmentation was evident in the way that people reacted to the threat of the disease or to other people's coping practices, creating categories of careful and carefree people. For one participant, the responsibility of caring for her mother necessitated that she continue to isolate from her friends, although physical interactions were allowed again (P28). One middle-aged man with chronic health issues reported the animosity he encountered when he reminded a stranger to keep to physical distancing rules:

And he goes, 'I just don't know what your problem is' ... This is why it spreads, because of people that don't care, really just don't care. (P5)

Masks appeared as a symbol of social disintegration. At a time when mask-wearing was neither compulsory nor recommended, one woman reported how she had encountered feelings of marginality. As the wearing of masks became more common, she was hopeful that this perception of her as an oddity was going to be reversed:

But now people are going to wear masks, I think that's good. ... I was wearing a mask sometimes when I was out. It was a little bit hard to bear the looks people gave you, but I did still do it more than ... a lot of people around here, they don't wear masks. I'm hoping that's going to change. (P32)

Another participant equated the erection of physical and chemical barriers between herself and others as a material representation of social isolation:

So I walk around with my mask on. If I get on a train, I'll check my mask and use sanitiser spray, really. And that's pretty much it. So very isolating. (P4)

### 5.2.2 Social acceptance

Social acceptance refers to the positive appraisal of other people's characters and actions, and is expressed in trust and tolerance (Keyes 1998; 2005). Perceptions of other people's responses to the COVID-19 health risk and fallouts were negative, and included:

- societal disapproval of bulk-buying without further enquiry
- conflict about the interpretation of physical distancing rules
- disapproval of workplace risk-management practices around COVID-19.

One participant with pre-existing antisocial behaviour patterns expressed his intolerance towards other people's lax interpretation of COVID-19 rules. He criticised the way some inner-city commuters and pedestrians neglected physical distancing rules as Melbourne emerged out of the first lockdown. This undermined his trust in his fellow city dwellers, and prompted him to buy and wear a gas mask in public:

[On the trams] they're still looking at their phones, they don't care about the social distancing aspect as much. You walk to a street corner in the city at a set of traffic lights, nobody's social distancing. They're all bunched up at the street corner. It's like they're completely arrogant to the health advice being passed around. ... Well, at this point of the pandemic and what not, [wearing the gas mask] will be when I'm on the trams. It will be when I go shopping because you can't trust the person you walk past. (P14)

One young participant disapproved of the way that his former employer managed the risk of viral infections—and resigned from his job in dental practice in response. He was afraid of exposing himself to the virus, and did not appreciate the lack of consideration or participation of employees in the decision-making.

I knew it was way too early. ... They didn't even ask me if I wanted to work, they just forced me to work. And I'm like, well, I have a choice and I don't feel comfortable going back to work in dental, especially we're high-risk and I didn't want to go back. So, the boss didn't even care to ask me if I wanted to. ... And I said, 'No'. And gave my resignation. (P30)

### 5.2.3 Social contribution

Social contribution is the assessment of one's value to the community, and includes the evaluations of personal responsibilities and how these are acknowledged. The impacts of COVID-19 on social contribution were most prominent in the shifts in care responsibilities. Previous outsourcing of care for children and older people to professionals—and the out-locating of their care to schools and aged care homes—was reversed, and care-giving and the burden of care was returned to families and relocated into private homes.

The interviews revealed that this contribution to public health was sometimes not appropriately recognised by the community, and not adequately valued. As much of the evidence in this section was drawn from interviews with female participants, this may also point towards a gendered impact of care-giving during COVID-19.

The increased vulnerability of older people to COVID-19 meant that adult children took on an increased burden of care. For all participants, taking care of elderly parents was considered a moral, filial duty. Children displayed a strong sense of duty to keep elderly parents safe within home and away from the threat of the virus in the outside world (P16, P27). One participant declared: 'We don't want people coming into the house and she's not allowing it either' (P35). Shopping services represented practical help (P21, P37).

Fear of cross-contamination also curbed family visits to older people. One woman in her 80s (P37) shared that her daughters-in-law, who were teachers, had stopped their visits as ‘they didn’t want to run the risk of bringing anything into me, which I respect ... They’re really respecting this, keep your distance, for my benefit’. Her sons had continued to support her in person, though. A middle-aged male participant had stopped visiting his father in regional Victoria. Three years earlier, these trips had been important reprieves from the environmental stressors in his social housing apartment: ‘Just to get away from all of this and get a little bit of serenity in mind, again, for a while’ (P14, 2017). Despite his increased need for respite from the city noises, he put his father’s health needs above his own: ‘but I don’t see him as much. My father has had a quadruple bypass, so I don’t really want to leave where I am, living in the middle of the city, to travel up to him with the possibility ... I may be asymptomatic’ (P14).

In another case, the fear of the increased risk of infection within aged-care facilities prompted one participant (P28) to transfer her mother into her own home. Care at home extended to facilitating access for the mother to join a Zoom meeting with her choir as a way of social interaction. However, managing care at home for the mother—who suffered from dementia—had proven difficult. The family discovered that there was a financial penalty for taking the mother out of the aged-care home. The dilemma between wanting to keep her mother warm (Chapter 3) and in the familiar institutional environment of the aged-care home—which the mother spoke of as ‘that place I normally live, they have activities and things to do’—versus keeping her safe from COVID-19 led to an uneasy truce—the mother was returned to the aged-care home with plans to take her out again if needed: ‘I would do it again if I think it’s the best thing for her’ (P28).

One daughter was prepared to forgo some of her own comfort to support her ailing mother. Attending to the mother’s needs after an orthopaedic surgery while staying in her own home had become complicated, because of police controls on people travelling between suburbs and concerns that a complete lockdown would prevent her from visiting altogether: ‘If I moved in with her, I could probably just sleep on the couch ... I’d be happy to do that just to keep her out of aged care’ (P16). The participant articulated the toll that the combined burden of care for her dogs, garden, house and mother took on her physical and mental health: ‘[It] is exhausting at the moment’ (P16). Moving in with her mother permanently would have meant loss of autonomy, but also given her peace of mind. Another woman also professed to exhaustion. Although her partner tried to help out, she had to shoulder most of the care for a nephew with chronic medical health problems. This included driving him to medical appointments and to his workplace, as public transport was deemed too risky and the NDIS support worker had stopped work due to concerns for his own health (P29).

For another woman, the fear of accidentally cross-infecting her mother was causing her to reconsider whether she should be continuing with her current employment, as she was ‘worried about passing the virus on to her’ (P16). The division of society into those with care responsibilities and those without—and feeling a duty of care to the wider society to curb the spread of infection—led some participants to feel that their care work was not valued. One woman who had voluntarily forgone outings felt estranged from her friends, and that her contribution to curb the spread of the disease was not acknowledged as much as she would have liked. She expressed her vexation:

I’ve got a colleague and she does not understand why I’m being so paranoid and cautious. She was going to markets with friends and doing this and that: ‘Why don’t you come and why don’t you do this?’ I say, ‘I cannot take that risk. It’s not just my mother, it’s everybody that lives in that aged-care facility’. (P28)

However, decisions around care sometimes required careful balancing of social values. In one household, the family had to consider the trade-offs between caring for children, caring for parents and caring for themselves. Moving to the grandparents’ house for the lockdown period would have given the children access to a garden. However, the need to minimise the parents’ incidental community interactions would have meant that their own freedom of movement would have been significantly restricted, which could have had negative impacts on their own wellbeing. In the end, the couple decided to stay in their own row house for the duration of the lockdown (P12).

Nonetheless, the study revealed that risk of community transmission was socially constructed, and that the conviction that the lockdown was the best way forward for the larger community was not shared by all. One older man in his 70s had managed to negotiate a compromise with his loved ones and only stayed at home reluctantly: 'They've asked me not to go out. So I said, "Well okay, I'll stay in, but I'm going to go shopping."' (P1). Another man of about the same age rationalised the risk of infection: 'It doesn't matter to me a lot, I'm not overly concerned, even though there seems to be another wave now. I think we'd be pretty unlucky to pick it up, the numbers are way less than we normally get with the flu each year' (P34). Despite these comments, he had refrained from using public transport.

Contributions to society beyond care-giving in an economic sense were also evident. At least one man who was in housing affordability stress made a point of regularly visiting 'cafes close by and just supporting them' (P4). A social renter prioritised the financial health of her cleaner over her own physiological health: 'I didn't stop [the cleaner] from coming because we can't take businesses away' (P2).

Care shown by landlords for their tenants also contributed to tenants' social wellbeing. One household reported that the landlord had always been responsive and reduced the rent when the tenant lost his income and that 'he's been an incredible landlord and I can't complain, so yeah. He's a huge reason as to why I've lived here for so long' (P30). A social housing tenant appreciated an email from the housing provider 'acknowledging the changes the government's put in place and to be mindful of it and that they're always there for us if we need to contact them' (P5).

### 5.2.4 Social actualisation

Social actualisation is the perception of the potential of society for positive growth (Keyes 1998; 2005). Social actualisation in the time of COVID-19 referred to people's mostly positive appraisal of new rules and practices as having the potential to be effective in stopping the spread of the disease and to bring about some greater good. This was manifested in the varied expressions of solidarity, such as 'everybody's warning everybody' (P14), 'it's interesting times for everybody' (P26) and 'I know everybody's impacted by it' (P36). An older woman was also accepting of the loss of physical contact with her immediate family in light of the expected public health benefits (P37).

In addition, one participant considered the switch to digital services as a sign of social flourishing. Although he was underlining the fact that the needs of people with disabilities had been neglected for many years, he was satisfied with the speedy progress that benefited him, too:

What is happening now? It's all what people with disabilities have been asking for for the previous eight years. The technology was there, and the rest of the world did not want to do it because they said it was too expensive. Because it's social distancing restrictions, suddenly it was something they were willing to do. (P6)

With regards to the community scale, at least one participant appreciated the efforts of their local council. A mother of three felt positive about the sanitising of outdoor touchpoints: 'I'm very proud of the council. What they've been doing. They hired people to go around spraying everywhere' (P18).

### 5.2.5 Social coherence

Social coherence captures the realistic appraisal of society, its structures and processes and it is closely linked with meaning-making and the predictability of the world (Keyes 1998; 2005). The participants' experiences revealed that COVID-19 represented a challenge for social coherence. Some of these challenges were due to the novelty of the challenge for businesses; others due to an ingrained sense of the inequality of the social housing system.

Some participants expressed reservations about the logic of some COVID-19 regulations and what they perceived as unfairness. Participants questioned rules about continuing fees for child and aged care even when the services were not used (P12, P28). Another participant categorised her work arrangement as 'weird' (P22). Despite privacy protection requirements, her transcription tasks could have been easily done from home, and there had been precedents for this in other states. However, she had been required to continue to go to the office and risk an infection. An older woman was very dismissive of the 'idiot who delivered [a parcel]' (P38). As the delivery person had presumably not knocked on the door, the parcel had been taken to the post office, which meant that she had to exit the house to collect it. This in her own words 'defeated the purpose of having it delivered in the first place' (P38). A household with a mortgage that was the beneficiary of COVID-19-related income support did not avail themselves of the mortgage relief as they questioned the sustainability of the offer and feared accumulating debt (P23).

I just thought freezing them [mortgage payments] isn't going to help. Because you know what, when it releases, it's probably going to be a lot of extra fees, extra interest, extra things. So I just thought, 'No, I don't want to get a shock at the end', so I wasn't sure. So I didn't, no. (P23)

The interviews also highlighted how established lack of faith in social housing allocation and provisioning and distress about existing shortcomings in housing quality collided with new COVID-19 stressors to undermine feelings of self-worth and social actualisation. Participants in the city were puzzled that loud construction works were still scheduled during the night and allowed to continue to disturb the sleep of residents in the vicinity. This seemed unreasonable as the rationale for the night works—the need to avoid blocking streets during the day—was no longer valid, as streets had become empty during the lockdown (P11, P14, P26). The explanation offered by one affected participant highlighted the perceived lack of status and power of social renters. It implied that social renters may be regarded as an underclass, for whom common rules of decent housing do not apply, and expressed the hurt experienced by the societal rejection:

I suppose we're the only building that's not up to code ... because we're just scum-sucking, slummy nobodies, because we're [community] housing. All the other buildings have got proper double-glazing or whatever, they're all standard, properly built. (P11)

A few participants also commented on the perceived shortcomings of housing-improvement policy initiatives. One owner-occupier who lacked the financial resources to improve her poor-quality house would like to have seen more proactive solar PV programs: 'It occurred to me [that] the government had never taken control of solar and how disgusting it is that they haven't and how it is left to us to do it' (P22). Another owner-occupier with a mortgage questioned the equity considerations of the HomeBuilder grant, which offered money for new construction or major renovations of at least \$150,000:

That's very out of reach of the average family. ... So I'd be happy to get that \$25,000, but what do I have to spend to get that? It's quite difficult. ... They should make it a bit more reasonable amount for the average family to access and to help. Yeah. (P23)

Incongruity between individual needs and social expectations was also evident in the secondary appraisal of a social renter's mental-health coping strategies. The woman, who had been deprived of her conventional measures to manage her unsatisfactory home environment, was venting her bottled-up emotions in the interview. However, she kept apologising for her words, as she thought it made her look ungrateful or entitled, and that this was not socially acceptable:

I'm sorry I'm dumping on you, but it's because I don't want to complain to family or friends. So this was an opportunity for me to be very real. ... I'm really sorry. I have just dumped and dumped and dumped. (P26)

This apology and the attempt to exercise self-control over her expressions highlighted how this participant felt that she was at the mercy of policy and society, and that she had no ability to modify or control her housing.

### **5.3 Physical health: practices of hygiene, physical exercise and impacts on health**

At the time of the study, COVID-19 was regarded as disease caused by respiratory pathogens. In keeping with the WHO's interim guidelines to reduce community transmission (WHO 2020a), Australia implemented the quarantining of infected persons, physical distancing rules and recommended personal and environmental cleaning procedures, according to the Australian Government's Department of Health (DOH 2020a). The guidelines in March recommended a combination of personal hygiene, physical distancing and indoor air-quality control measures.

Information for 'within households' reads:

- Practise good hand and sneeze/cough hygiene
- Avoid handshaking and kissing
- Regularly disinfect high-touch surfaces, such as tables, kitchen benches and doorknobs
- Increase ventilation in the home by opening windows or adjusting air-conditioning
- Visit shops sparingly and buy more goods and services online
- Consider whether outings and travel, both individual and family, are sensible and necessary (DOH 2020a).

Guidelines for multi-unit residences were published in July 2020. Under Stage 3 restrictions, communal areas such as gyms and barbeque areas had to be closed, as they could facilitate the spread of the virus. 'Outdoor physical recreation facilities' (DOH 2020b: 7) could remain open with a maximum of 10 people at a time, provided people complied with a minimum person-to-person distance of 1.5 metres. Signage was recommended, to:

- indicate maximum numbers of people for spaces
- provide information on symptoms and health
- provide hygiene measures.

There were also recommendations for increased cleaning and disinfecting of high-touch areas twice daily—for example, lift buttons (DOH 2020a).

#### **5.3.1 Infection control and hygiene**

None of our participants reported a COVID-19 infection in the home or building, or the requirements for quarantine measures. According to our participants, physical distancing was possible in the neighbourhood and home, and all participants had access to sufficient clean hot water. Nonetheless, the study revealed impacts on practices of infection control and hygiene at the three scales of the neighbourhood, the building and within the home, which included a combination of:

- reducing outings into the community
- avoiding touchpoints
- introducing physical barriers.

Efforts to reduce physical contact in the community included avoiding crowded spaces and keeping children at home from school voluntarily (P3, P10, P18). Five participants reported wearing masks and gloves in public in combination or isolation—although these were not required or recommended at the time of the study (P4, P7, P14, P18, P32). For at least two households, the car became an extension of the home and a safe space (P14, P29).

At the intersection of the community and the home, experiences of infection control were influenced by the actions of the apartment building managements. Social housing providers tried to reinforce public health messages through pamphlets and signs in lifts and in front of them (P6, P11, P14), although at least one participant could not recall what they said (P11). They also made hand sanitiser available in front of the lifts (P6, P14). However, one participant criticised the perceived delay in action: 'Okay, it took them ... let's just say, we only got hand sanitiser outside our lift about three weeks ago' (P11). These social renters could not recall any email communication.

Participants in privately managed buildings had mixed views of infection control within their buildings. It seemed that posters were placed in lifts and hand sanitisers were provided in some apartment blocks (P9, P17) but, as in the social housing apartments, the messages were not always received (P25). One participant commented that it was easy to comply with physical distancing in lifts as people rarely met each other, and because the residents were polite and respectful (P17). One householder in a small apartment building shared how the housing committee took responsibility for frequent cleaning, placing warning signs in common areas and instructions to prevent infections through the shared garbage chutes:

Posters in the lift and wiping down of the lift buttons and door handles. That was rather than being too much of a... Because that was twice a day. Between the committee members, my husband had the responsibility of Basement Level 2, door handles, everything, and he put his hand up to do that. Another guy took responsibility of Level 1. We just did that ourselves, because we're quite small. We don't have full-time concierge or cleaners or anything. We've only got 50 apartments in this building, so we manage that ourselves, to just not make it too much of an expense. There aren't any ... the sign things, sanitise, so many people in the lift. Yeah. Lots of signs everywhere [saying] 'If you are unwell, don't use common areas'. 'Cough or sneeze into your elbow'. Lots of pictures and diagrams. Even 'If you're sick, or anything wrong, double-bag your garbage before you put it down the chute'. (P17)

However, a young woman in another building felt that there had been very little communication on infection control (P24). And a young private tenant in an inner-city apartment was appalled by the lack of visible measures within the building. He perceived this as negligence compared with the seemingly disproportionate responses to the other public health risk of smoking, which was prosecuted fiercely:

They've made no efforts to put signs up, there's no hand sanitiser anyway. I don't think they have people cleaning any of the surfaces that are high-touch surfaces at all. And I don't think they've done anything. There's no marking or X's on the floor, nothing at all. ... I mean the body corporate always put signs up saying, No Smoking or someone's doing this or that. And they take pictures, but there's no mention of COVID-19, which is really surprising, not even at the front door. (P30)

By contrast, the two participants in luxury apartments were very satisfied with the proactive management of COVID-19 in their building. One older man praised the building manager and the way he 'policed' the measures. The other participant praised the early interventions:

So, very early on, visitors were not allowed in the apartment. And if you had deliveries, you had to go down, delivery people weren't allowed in. All of the communal spaces have been closed off and there's hand sanitisers on every entry and exit and in the lifts. And there're rules around how many people can access the lift at one time. And there're regular updates provided in the lifts around making sure that we maintain social distance and et cetera. (P36)

Participants' hygiene practices in the transition space between the outside neighbourhood and the confines of their own home varied. One mother stated that the family avoided 'touching buttons' and that they were 'using our elbows or tissue' (P17). A single woman admitted to doing 'nothing, I didn't do nothing. If I remember I pressed a lid button with the key, with my elbow. But most of the time I'm not remember this issue, and I press the button' (P24). The entrance gained new significance as a physical threshold for infection control. Leaving shoes at the entrance of dwellings was noted twice (Figure 15, P17, P29). Where the design of the home accommodated the removal and leaving of shoes without causing a visual nuisance, the new practice was likely to endure:

A lot more it's routine now all of us to wash your hands when [we] walk through the door. Shoes off at the door. We never used to keep our shoes like that in the hallway, but now we do ... We don't want to walk through into living area. And it's quite nice, the hallway is set around the corner, because of it I don't mind, I don't see the shoes in the hallway, they're out of sight. We might even buy a shoe rack now. The handwashing and the shoe thing, that's just part of life, and that will probably stick. (P17)

Figure 15: Shoes stored in the hallway (P17)



Source: Participant. Reproduced with permission of the author.

The quote also highlights how, for 15 of our participants, washing hands at the threshold between the outside world and the home had become 'the new normal'. However, some participants were still adapting to this new practice when coming home (P20, P31). By contrast, one woman also aimed at washing her outdoor clothes on the same day (P32).

Increased hygiene within the home was manifest in reports of increased time spent cleaning in general (P2) and 'probably wiping down doorhandles a lot more' (P21). Some were more concerned than others. One older woman with carer responsibilities also used disinfectant on soft furnishing and on the laundry (P29).

In some households, there was little or no change in cleaning, as the participant had 'been cleaning like crazy anyway' (P27). Some continued with their usual cleaning practices, but with only limited extra care. Keeping one job may have contributed to keeping a semblance of normality. Exemplary quotes were: 'So I'll wear a mask and I'll keep on hand sanitising. But no, I haven't really been doing too much more cleaning than that' (P22). 'In terms of the COVID-19 virus, I haven't done anything particularly different because basically I don't invite people to me home anyway' (P6). Perhaps having life experience helped to adopt a more pragmatic approach, as articulated in this quote by an 83-old woman:

I'm not running to wipe every package that comes into the house and things like that. You've got to be sensible, my love. There are other germs that can be picked up. I nearly died with legionnaire's disease a few years ago. And I think, well, how do I know where I picked that up? Well, I do know where I picked that up. I picked it up from potting mix. So you can pick things up from other places. (P37)

No participants mentioned the use of more frequent natural ventilation to minimise viral load.

### 5.3.2 Impacts on healthcare

The fear of admittance of the virus was also linked to an interruption in professional healthcare at home. In one household, the decision to pause professional care was done by the adult children to reduce the mother's risk of infection. Their explanation expressed the loss of trust in care-workers because of the insidious nature of the virus:

No, my brother keeps saying not to get [older and chronically ill mother's support worker] back. Because even though they clean, they go to people's houses. You don't know what people have got and she can't afford to get anything. It's killing too many people. (P35)

A vision-impaired participant shared how the type of work by support workers had been restricted. Housework and shared outings had been stopped. However, work that could be done remotely had continued, such as administrative tasks (P35).

COVID-19 also led to an upscaling of Telehealth, as face-to-face doctor visits were replaced by consultations by telephone or via an online visual means of communication. Six participants mentioned remote healthcare services by themselves or members of the family. One man in his 50s appreciated the swift billing for over-the-phone consultations (P13). Others were more hesitant in their evaluation. The perceived efficacy seemed to depend on the nature of the ailment. The diagnosis of an earache seemed futile over the phone (P21). In addition, Telehealth seemed to make it difficult to build a new relationship based on trust. A woman in a regional area, where medical practitioners reportedly changed often, found it difficult to establish a continuing relationship with one doctor and did not feel comfortable sharing 'intimate private details through that medium'. She said: 'I find it unnerving. I need a person there. I need to be able to read them' (P32), which highlights the importance of body language to build rapport and trust. Another woman agreed with that view: 'They're not allowed to see you, or meet you. So, trying to talk through a computer, or on the phone, and this person doesn't ... hasn't seen you, hasn't met you, doesn't know who you are' (P11).

### 5.3.3 Exercise and impacts on physiological health

Australians are encouraged to exercise every day of the week to improve physical, social and mental health (VicHealth 2010). Adults should achieve at least 2.5 hours of moderate-intensity activities each week, such as walking briskly, light bicycling or cleaning floors; or an hour of vigorous physical activity—such as jogging, fast cycling or playing soccer—in combination with strength and resistance training twice a week (DOH 2020b; WHO 2020b). The most recent evidence suggests that only about a third of Australians achieve the recommended levels of exercise, and female participation is lower than that of males (VicHealth 2010). Motherhood and disability are associated with lower level rates of physical activities (VicHealth 2010).

The Victorian Government's Department of Health and Human Services (DHHS) acknowledges that the built environment—comprising housing, neighbourhoods, parks and transport infrastructure (VicHealth 2010)—has an important role in supporting the goal of more active living (DHHS 2019). Key attributes of a health-promoting place include: 'safe, attractive, socially cohesive/inclusive and environmentally sustainable, with affordable and diverse housing linked to employment, education, public open space, local shops, health and community services, and leisure and cultural opportunities via convenient public transport, walking and cycling infrastructure' (DHHS 2019). The Victorian Government strategies to promote more active lifestyles include the improvement of neighbourhoods, better access to public transport and opportunity for active transport and reducing sitting time at workplaces and schools (DHHS 2019).

The closing of all gyms and swimming pools and places of gathering under the Stage 3 restrictions affected the exercise routines of almost a quarter of the participants (P7, P9, P10, P16, P19, P20, P24, P31, P35). Of these, two participants had used these facilities for allied healthcare (P20, P35). COVID-19 policy responses also affected physical health indirectly. One participant shared that her physiotherapist had been so overburdened by the double responsibilities of work and homeschooling that she closed her business (P11). Public health rules allowed as much outdoor activities as desired, provided people complied with physical distancing rules. However, this included the regular park run, in which one participant participated regularly (P7). Working from home also meant that at least one woman missed the incidental exercise of walking to and from lunch (P8). Another woman yearned for the incidental exercise of gardening in the community garden (P32).

The impacts of COVID-19 on exercise and physiological health were experienced in differentiated ways, which suggested an uneven distribution of capabilities. Many participants reported positive changes in terms of more exercise or satisfactory outcomes due to changes in routines and sites of activities. However, women seemed to have been more likely to be deprived of exercise because of care commitments and perceptions around safety, and people who had accessed these sports facilities for physiological therapy seemed to find it difficult to find adequate substitutes. This highlighted how gender roles and health conditions inhibited the freedom of choice, and how some people were unable to continue their preferred exercise.

One mother considered her family's exercise program to have been better than before, as the children's entertainment had shifted from indoor activities, such as visits to the museum and aquarium, to outdoor walks and bike rides around the neighbouring parks and beach (P17). A woman without children—who had lost her job but had access to parks and a friendly neighbourhood—also reported an increase of walking to up to 20 kilometres per day because the free time allowed her the time to exercise (P19). Increased walking was also reported by a young male who had lost his employment (P30), two participants who shied away from public transport (P22, P34), and a woman who was no longer able to swim or undertake hydrotherapy (P29).

Access to a local supermarket promoted walking, as it represented a goal (P6). Care for pets also helped with regular outdoor exercise of their owners, be it with a cat stroller (P5) or with dogs (P14, P16). As one participant explained: 'I still needed to keep her active and myself active' (P35). The perception of living in a family-friendly neighbourhood and having access to nature seemed to have encouraged walking (P8). The most popular time for walking appeared to be the early hours of the morning (P36, P18) or during the dark, when participants, who felt safe in their neighbourhood, wanted to avoid contact with other people (P5, P14).

Bike-riding was popular among three men and increasingly among children (P12, P27, P15, P33). One man who still rode his bicycle to work every day considered his exercise regime to be 'excellent' (P12b). Bike-riding was also the preferred way of exercise for another male participant (P3), whereas a third participant was still thinking about substituting his gym visit with bike rides (P31). The gender difference in cycling uptake was not readily explained through the given interviews.

COVID-19 also saw the emergence of more home gyms (P9, P20, P34, P35). Even though the rush for gym equipment had caused a product shortage (P20, P35), participants were able to buy some free weights, resistance bands, a treadmill and 'one of those sit on a chair and pedal things' (P38). However, a young woman with a visual impairment seems to have missed out: 'It'd be really nice if I were able to have help with getting some of the same exercise equipment. I'd be able to do something at home. That's hard when you can't see' (P35). Two women partook in online video exercise classes (P3, P7). A woman in her 50s discovered she could use the fire-escape stairs in her apartment buildings as a ready-made fitness tool (P5). One young male participant replaced his gym visits with personal trainer sessions, although the frequency of his training reduced from four sessions a week to one (P10).

Exercise in and around the home was also regarded as building emotional strength. Most of this seemed to take place in the mornings. One woman 'made a point of doing yoga' every morning (P26). Two mothers built early-morning walks into their daily routines (P36, P15). Another woman, a mother of three who had lost her job, also walked in the morning. It offered her time to herself when she could engage in planning and positive affirmations that gave her hope. She also shared her beliefs with friends:

I've had some friends, had some mental breakdown a bit. I've all told them go for walk. Walking is the best for mental health. ... I go out and then I'll start focussing what I have to do for the day or try to find encouragement to do more things or saying that life is going to get better. (P18)

Six women expressed a bad conscience and felt that they should have been exercising more. However, they were hindered from walking more by:

- early onset of dark in the winter months
- cold and wet winter weather
- an unknown neighbourhood
- carer responsibilities
- physical mobility problems (P15, P24, P27, P28, P37, P38).

One woman shared that she found it difficult to establish new exercise practices, as ever-changing COVID-19 rules and uncertainty about their development made it difficult to plan and maintain the frequency of activities: 'It's changing so much, it's really hard to get into a routine because you just don't know what's going to happen next' (P28).

Negative impacts of reduced exercise on physical health were experienced by five participants. These adverse effects included:

- weight gain (P24, P35)
- shortness of breath (P14)
- exacerbation of arthritis symptoms—for example, stiffer joints and increased pain (P29).

One woman also shared how the loss of regular exercise affected her mental health and had contributed to her loss of motivation for life (P38). Another woman felt that the stop to her physiotherapy also meant the loss of a friend (P11). The experience of an older woman suggested that indirect harmful effects of COVID-19 on physical health may not be reversible quickly in older people: 'I can see physical deterioration and perhaps, if we ever were allowed out, if they find a cure for COVID-19, I might not be physically able as much as I was say, six months or eight months or something, ago' (P38). No participants reported that they had given up smoking, started eating healthier or taken up extra exercise to improve health to improve their resilience to the virus and its effects.

## 5.4 Mental health: impacts on emotional wellbeing

The WHO recognised the mental health needs of people in quarantine in their early communications (WHO 2020b). However, by the start of the data collection, researchers had already raised the threat of COVID-19 for mental health across whole populations (Amerio, Brambilla et al. 2020; Gualano, Lo Moro et al. 2020; Rajkumar 2020). In addition to concerns for people's physical health, participants were facing stressors due to policy rules and regulations, such as loss or decrease in income, physical distancing and stay-at-home rules and closure of services and uncertainty about the future.

Medical literature distinguishes between four types of stress experience. Stress can be either:

- an external stimulus
- a response
- an individual or environmental interaction
- an individual or environmental transaction (Biggs, Brough et al. 2017).

*Stress as an external stimulus* is rooted in the physical concept of strain and fatigue, and conceptualises stress as an external pressure whose severity or cumulative load over time causes damage or collapse.

*Stress as a response* is based on the three-phased physiological reactions to adverse external stimuli of alarm reaction, resistance and—if the pressure persists—exhaustion. This sequence is also assumed for stress as a psychological response (Butler 1993).

*Stress as an individual or environmental interaction* is based on the understanding that stress is shaped by the relationship between external or situational conditions and internal personal resources and acknowledges the dynamic relationality of the phenomenon.

*Stress as an individual or environmental transaction*, as advanced by Lazarus and Folkman (1984), extends this cognitive concept of stress by emphasising the bidirectional cause and outcome relations.

As people appraise external demands and attribute meanings to external negative stimuli, they may adopt coping mechanisms which, in turn, may change, mitigate or resolve the external challenge. Secondary appraisal denotes an individual's assessment of coping efforts or outcomes, which may add or reduce distress (Biggs, Brough et al. 2017; Butler 1993).

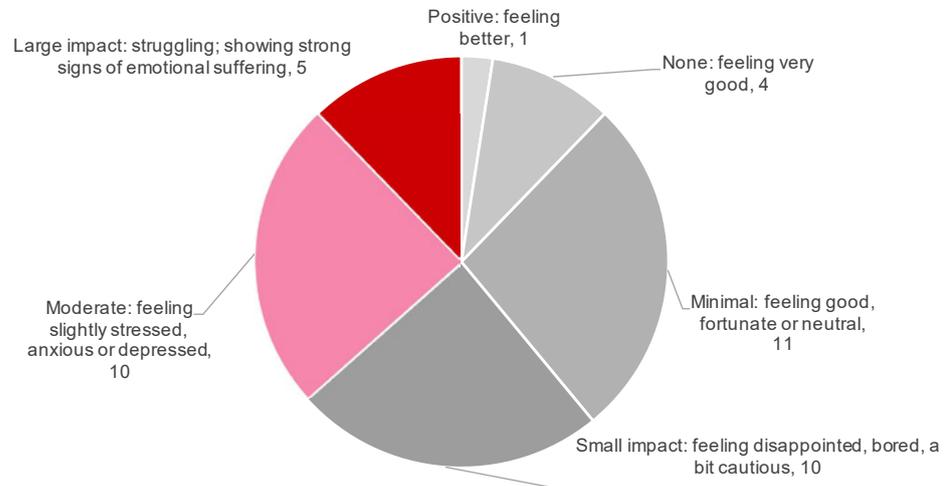
Coping may be defined as a set of cognitive and behavioural efforts to manage stressors (Biggs, Brough et al. 2017; Butler 1993; Carver and Connor-Smith 2010; Lazarus and Cohen 1977). Despite the varied definitions and theoretical nuances in understanding the phenomenon (Biggs, Brough et al. 2017; Carver and Connor-Smith 2010), the literature distinguished four main types of coping:

- emotion-focussed coping
- problem-focussed coping
- social-focussed coping
- meaning-focussed coping.

### 5.4.1 Impacts of COVID-19 on emotional wellbeing

Impacts of COVID-19 on the emotional wellbeing of the 41 participants were highly differentiated, and were moderated by the housing environment, changes in employment, engagement in social networks and personal characteristics. Figure 16 presents the distribution of COVID-19 related impacts on emotional wellbeing.

Figure 16: Distribution of COVID-19-related impacts on emotional wellbeing



Source: Authors.

### Feeling better

One participant (P7) reported to 'feeling better'. This owner-occupier without any prior or new housing stressors or health issues, and only a slight reduction in income, welcomed the increase in solitude and relief from social obligations. Social restriction rules gave her the opportunity to excuse herself from unwanted commitments and interactions with friends and work.

Four participants also expressed mostly strong positive emotions. These owner-occupiers felt 'safe', 'secure at home' and 'comfortable' at home, highlighted how they could walk to local amenities, reported they were very busy in their paid or domestic work, in harmonious relationships with other household members and 'quite relaxed about it all'. Two of these householders lived in luxury apartments with praiseworthy views. Echoing the participant who felt better due to the enforced physical distancing rules, one of these participants stated:

I don't have an issue with iso [isolation]. I don't have an issue with it anyway because I've got lots of things that I can do ... So I'm someone that is used to their own company, while I enjoy mixing with others, I don't mind entertaining myself. I'm not finding iso a problem. (P31)

Since his interview three years ago, this participant had been able to extricate himself from a highly distressing apartment environment, which 'wore [him] down', and tensions with the building's management community and moved into a sole occupancy dwelling. Although he regretted having the lost the view and the convenience of an inner-city apartment, he felt that he had benefited mentally by 'having [my] own front door and more control and [being] less surrounded by neighbours' (P31).

Eleven participants reported only minimal impacts on emotional wellbeing. They described themselves as 'fortunate', that they were not 'directly affected' or that COVID-19 'didn't really impact [them] in any way'. In general, keeping their job was regarded as 'extremely lucky' or 'very fortunate', and downward social comparison of Australia's situation with countries that had been worse affected by COVID-19 or with people who had financial stress provided a sense of achievement. Not having to care for small children was regarded as an advantage. Another participant stated that having 'a simple lifestyle that we could support' helped, although she felt a slight unease due to the lockdown, which she expressed as a strain: 'There's a low undercurrent. You didn't feel like you could quite relax' (P13). Ten participants reported a slight impact such as disappointment, boredom or feeling a bit cautious.

### Deterioration of wellbeing

However, pre-COVID-19 wellbeing was not always optimal. The mental and social health of one social apartment dweller (P14) had deteriorated significantly since the last interview. Three years earlier, he had already characterised himself as ‘a bit of a home dweller’ who avoided crowded places and having people over in his apartment. However, he had recounted that he knew ‘most of the people in the building ... maybe, five to six people on every floor’, that he had rallied the support of residents for the provision of blinds, and that he had helped fellow residents to deal with antisocial behaviours of others. In 2017, he had valued the ‘stability’ of the apartment and been ‘too scared to get a transfer’ despite considerable irritation over noise from the street and adjacent construction sites. However, over the years, distress over external noise pollution had driven him to aggressive behaviour. He had broken off contact with all other residents in the building, and he raged about city planning decisions that seemed to disregard the needs for quiet, privacy and safety in the neighbourhood. He was frustrated, as had been waiting unsuccessfully for a transfer for years despite urgent medical indication, and he felt stuck in his ‘concrete cell’. His pre-COVID-19 emotional state had been shaped by anger and a lack of belonging to the community. Hence, social restrictions did not affect this participant much—as they seemed minor, compared to his severe chronic housing stressors.

A common theme in this group was disruptions to plans. One owner-occupier, who had a secure job, mentioned that ‘what’s stressful from Coronavirus is that it takes opportunity to have plans. So it’s a little bit disappointing, boring or something like this’ (P24). A tenant who was receiving JobKeeper recounted that she and her husband had ‘put on hold’ their plans for the future, including dreams of their own home. She was preoccupied with thinking through various scenarios, the prospect of future income losses and how to deal with financial uncertainty (P19). Another participant revealed that COVID-19 had upset her plans for her long-service leave. COVID-19 had not only disrupted her professional life but also her social life and the volunteering work that had given this vision-impaired woman a sense of purpose: ‘All my stuff has stopped’ (P35).

Two other participants mainly expressed concern about the health risk of COVID-19. In one case, the fear of contracting the disease had been temporary when, at the beginning of the pandemic, the couple had lived in a hotel, and concern about the vulnerability of the husband—who had a chronic lung disease—made them ‘want to hunker down and not go out, basically’ (P20). However, moving to a smaller city had relieved this anxiety. Another woman was primarily concerned about the risk of inadvertently infecting her elderly mother (P25). And an older man with chronic health issues (P39) was also seeking shelter at home, coping with the threat of the pandemic with patience and hope: ‘I just don’t really like getting out of the house so, better off just keeping to yourself and take it all as it comes until everything gets better in the world.’

Although the study did not include many families with small children, the comment of one mother suggested that the forced isolation from friends may have been harder for them. Despite persistent housing quality problems and some loss of income, she described her own situation as ‘good and okay’. However, talking about her young son she shared:

It’s been a little crazy with the little one, not being able to go to the parks and stuff. Because he’s used to every weekend going to the park or going out, or seeing his friends, having a sleepover, all that fun stuff. [...] it’s definitely impacted him. He hates it. (P21)

One in four participants (10) seemed to have had their emotional health moderately affected by COVID-19, and reported some signs of emotional suffering, such as anxiety and depression, which were often linked with hedge words. Expressions of emotional distress included:

- ‘I’ve been up and down.’
- ‘I got quite depressed.’
- ‘I got quite anxious about the whole thing.’

Commonly attributed causes were social restrictions that kept participants away from family and friends, and the amount and content of news of the evolving emergency locally and internationally (in isolation and in combination). Concern about their own vulnerability was mentioned less frequently as a cause for emotional suffering. Concern about loved one's health was more prominent (as covered in Section 5.2).

Two older women showed resilience in coping with enforced social isolation. One woman, who had lost all the social activities that filled her days, expressed hopelessness and low levels of motivation as signs of emotional suffering. However, her use of self-affirmations and rationalisation and her engaged tone of voice indicated that she was able to cope with her situation psychologically to a certain extent:

Although I don't really stress about it, I'm more practical thinking, I feel I'm sitting around here waiting to die, because I can't see any great future ... I'm getting older. I'm getting less able to do anything. I'm probably struggling ... it's probably my own self-motivation ... It doesn't stress me, as I said, I don't really worry about it. ... As I say, I'm very poorly self-motivated. ... I'm over 80. The house is over 60 years old. I can't see the point doing any major renovations ... My philosophy is 'I could be dead tomorrow'. (P38)

Another older lady also showed resilience when COVID-19 restrictions coincided with another significant life event—the death of her husband. The combination of stressors left her numb physically and mentally. However, she derived solace from the emotional and practical support of her adult children, and was adamant that she was not going to succumb to self-pity:

I lost my husband, my church and our freedom all at the same week. ... I could get very depressed about the whole business, but I'm not the sort that gets depressed. But if I wasn't careful, I think you could sit back and be depressed, but I don't want to do that. You've got to look at the bright side and just get yourself moving, haven't you? ... Well, there's not much point sitting back in the corner and howling and willing and wailing. You've got to get on with it. No one is going to give you any sympathy for that. It's not going to make me feel any better. It's not going to bring my husband back and it's not going to get rid of the COVID-19 ... You've just got to make the best of what you can. (P37)

### Mental health struggles

Five of the interviewed householders appeared to be struggling with the fallout of COVID-19 by expressing strong signs of emotional suffering, such as depression, self-harm and mental and physical exhaustion. In general, these participants seemed to have bundled predisposing factors, such as a combination of chronic housing and health problems and low or precarious income.

COVID-19 removed existing coping mechanisms and acted as a precipitating factor that increased the severity of problems, or triggered existential fears and severe depression.

Participants were outspoken about their problems. One private renter—who lived in poor-quality housing and had pre-existing mental health problems—had her rent-affordability stress exacerbated by her COVID-19-related loss of employment, and was powerless to sublet her unit for financial support. She admitted:

My mental health is pretty bad with this COVID-19 stuff. So the isolation is not a good thing, but also, I don't feel very well. So mental health is pretty downhill at the moment. (P4)

One social renter (P11)—with pre-existing physical and mental health problems, chronic housing-environment stress and loss of social connections within her apartment community over the last three years—shared that her self-harming behaviours had flared up during lockdown. This was due to a combination of factors:

- isolation rules
- loss of her carers, who had given her physical, social and emotional support
- lack of computer literacy
- persistent noise pollution from surrounding construction sites.

She expressed suicidal thoughts when she sent photographs of her home. These thoughts had been triggered by the news that her transfer application had been lost—and that she had slipped to the bottom of the waiting list again.

COVID-19 restrictions also exacerbated the depressive tendencies of another social renter (P26). This woman was suffering from a stressful home environment as new high-rise buildings in the neighbourhood had deprived her of daylight and her view of green spaces, and exposed her to constant construction noise. Pre-COVID-19, she had actively managed these stressors—for example, by taking refuge in surrounding park areas ‘to counteract where I’m living’. However, this simple coping strategy had been taken away. She mentioned multiple signs of stress, such as difficulty concentrating, and feelings of constant anxiety, depression and exhaustion. She felt the urge to change her accommodation but considered herself stuck in the housing provisioning system.

In her interview, she was repeatedly mentally weighing up ontological security against the psychosocial benefits of the home as a haven. Three years ago, what she had valued most about the home had been the security and constancy offered by community housing. Her 2020 interview revealed that this conviction—and her gratitude for having shelter—was wearing thin, and that she was struggling to deal with her housing stressors effectively as ‘it all feels a little bit magnified at the moment’. Her decline in mental health was intensified by the realisation that she would need to abandon her plans of taking on full-time work again to keep her rent affordable. Prior to the pandemic, she had been about to take up a new job that would have raised her income. Higher income would have increased her rent, which was calculated as a percentage of her wage. The housing organisation had warned her that the rent would never be adjusted down again if she lost those extra earnings. As her depression re-emerged because of the COVID-19 pandemic, she recognised that her ability to maintain employment was precarious. Going back into employment would have improved her social health and financial capabilities—but may also have put her rent affordability at risk at a later date.

With another participant (P28), severe emotional suffering was caused by the combination of:

- perceived unfair treatment at her workplace
- income loss
- new carer responsibilities.

She was distressed about her lack of power regarding her job loss, and concerned that her home was too cold for her frail mother. She spoke of nightmares and personality change—both signs of emotional suffering.

The severity of mental health impacts was also shaped by time. Some participants expressed a sense of shock, that their professional and social accomplishments were ‘all taken away and then some’. One participant (P5) emphasised that ‘at the start it was extremely difficult. It actually really was. It was a massive adjustment.’ She had been in medically indicated self-isolation prior to the pandemic. COVID-19 shattered her hope of seeing her friends and family again, and left her depressed and despondent over the prospect of seeing them in the near future: ‘Where’s that road at the end of the tunnel? How long was it going to be?’ However, outside exercise and guided meditation had helped her over the ‘extremely difficult’ start: ‘I’m now better than what I was. I still have some down days, but not like I was.’ (P5).

The second lockdown was also perceived as being more difficult to bear than the first one. For one woman, the sense of solidarity that had made the strain bearable during the first lockdown, but the second one was going to require a stronger cognitive coping response:

[Lockdown] felt in a sense kind of doable and fine because everyone was doing it. ... I felt quite good and I maintained lockdown really quite well. ... So, I cooperated fully with the lockdown. I think maybe once a week I went to my 7/11, got a coffee or whatever, and I felt quite happy, yeah, to join in, for the betterment of the community or whatever. [Reacting to the announcement of another lockdown:] I'm going to give it great effort. (P26)

One woman expressed that she had been anticipating the relaxation of the social restriction phase and catching up again with her friends. She was desolate that there was little prospect at the time of the interview 'and that [was] really, really, really hard' (P12a). These sentiments were shared by another woman, who attributed her lack of motivation to the second lockdown.

### 5.4.2 Coping with emotional stressors

In response, participants employed a variety of coping strategies to manage the mental strain of the COVID-19 pandemic. The narratives of participants revealed all four types of coping strategies (Biggs, Brough et al. 2017; Carver and Connor-Smith 2010).

#### Emotion-focussed coping

Emotion-focussed coping attempts to avoid or modify the negative feelings associated with the stressors (Biggs, Brough et al. 2017; Carver and Connor-Smith 2010). Emotion-focussed coping was the most common control coping behaviour revealed in the interviews. One widespread strategy was keeping busy through cooking and entertainment, as seen in Chapters 3 and 4.

Access and control over a garden—or even small balcony—were beneficial for emotional wellbeing during COVID-19. The equation of a garden with good mental health echoed the words of an apartment social renter three years earlier who had been gardening every day: 'My garden, my balcony, it's my life. It's my slice of heaven, it's my sanity' (P11, 2017). For this participant, her balcony was also the source of great pride—as it was much admired by family and friends—and control, as it was a place that she could shape. For another social renter, it was the small change of a heating lamp in his house that provided warmth in the bathroom that picked up his spirit (P6).

Maladjusted coping was rare. Two social housing renters reported smoking of marijuana and tobacco in response to COVID-19, accompanied by justifications: 'I'm rolling a smoke because I'm a bit stressed' (P11); 'to keep me sane' (P14). However, it was not clear to what extent this was in response to the overall burden of stress or whether it was precipitated by COVID-19. Interviewees did not mention incidences of alcohol abuse.

#### Problem-focussed coping

Problem-focussed coping seeks to actively mitigate the cause of distress (Biggs et al. 2017; Carver and Connor-Smith 2010). Problem-focussed coping with the emotional distress caused by COVID-19 was limited to actively seeking information and to avoiding the news. One woman recounted that she had to ring her aged-care provider to find out if her cleaner was still coming (P29). Another participant shared that she had limited her consumption of news to half an hour a day, as she felt it was affecting her wellbeing and her ability to perform her everyday chores:

Because then if I watch too much of it, I feel like I get really ... I can't even function for the day ... Like everyone feels it, it's a bit too much. (P18)

### Social-focussed coping

Social-focussed coping entails reaching out to people for support (Biggs, Brough et al. 2017; Carver and Connor-Smith 2010). A few participants reported social-focussed coping by looking for support with professionals and in their social networks. At least four women accessed professional help. A mother, who had been affected by anxiety about COVID-19, had reached out for counselling through an employee-assistance program. She had benefited from three or four appointments (P3). Another woman—whose mental health was deteriorating due to loss of employment and the physical isolation—was seeing a psychologist (P4). One woman who struggled mentally with her COVID-related job loss reached out to several people. She contacted a friend overseas who put her in touch with a counsellor. She also visited her GP, who praised her for seeking help. The GP urged her to view her dismissal from the perspective of the overall economic turndown and to not take it personally. Digital communication technology supported her coping efforts significantly:

Look, I don't have a huge network here, locally or even in Melbourne, but I've got a really big support network globally. Nowadays, you can access them all. (P28)

The third participant had accessed help through advocates. These had arranged respite for her in hotels twice over the COVID-19 period so that she could escape the noise pollution from surrounding construction sites (P11).

It should also be noted that participation in the study is likely to have represented a social-focussed coping tool for at least three of the five participants, who showed signs of severe mental stress and who vented their anger and frustration during the interviews. Consciously or unconsciously, the researchers represented conduits to convey their discontent to decision-making authorities about perceived injustices. These participants' narratives included reports of unsatisfactory communications with organisations that had the power to make decisions against their will. Causes of distress included:

- city planning decisions
- police actions
- noise pollution rules
- social housing allocation processes
- dismissal from work.

The study gave the participants hope that their opinions might be heard.

### Meaning-focussed coping

Meaning-focussed coping aims to change the negative meaning attributed to the distress (Biggs, Brough et al. 2017; Carver and Connor-Smith 2010). The interview also revealed incidences of meaning-focussed coping attempts, such as the use of humour, acceptance and positive reinterpretation. One older woman, who showed remarkable resilience with the death of her husband coinciding with COVID-19, declared: 'If life dishes out lemons, make lemonade' (P37). In anticipation of the second and dreaded lockdown, another woman affirmed her self-efficacy: 'I'm going to be very proactive, because you can only sulk so long' (P26). One woman used the enforced home confinement as an opportunity to compile a collection of her mother's recipes—a meaningful activity that had been ignored in the past through lack of time.

Normalisation was evident in the secondary appraisal of coping strategies, which participants believed may be frowned upon by the researcher or society at large. One woman reported that 'obviously, after a few weeks, I began to pick up a bit of chocolate if I did go out' (P26). Another watched 'a bit of TV, obviously, as well' (P34). Subconsciously, this downplaying of behaviours sought to ease ethical dilemmas and social anxieties.

### 5.5 Implications for policy

While impacts upon social and emotional health are a ubiquitous feature of COVID-19 and associated restrictions, the severity of the impacts was shaped by pre-existing conditions and individual responses to COVID-19 restrictions. Two key implications for policy are apparent.

First is the issue of capability, as expressed through opportunities to harness economic, social and other resources to exercise control, agency, power and choice over one's health and environment.

Second is the quality of provided environments and services. Ensuring access to gardens and balconies—or having a view—seemed to build resilience. Access to a safe, walkable neighbourhood was fundamental for people's physical health, but also for improving their sense of belonging. Finally, having the capability to modify dwellings was transformative in people's wellbeing, and gave them a feeling of control over their housing situation.

# 6. Intersecting issues and policy development options

The research questions for this study related to:

- how households were impacted (RQ1)
- what coping mechanisms they adopted (RQ2)
- how they coped with policy interventions designed to alleviate impacts of COVID-19 (RQ3)
- which gaps in COVID-19 housing and welfare policy are exposed by the responses to RQ1–RQ3.

RQ1 and RQ2 are addressed within the main text of Chapters 2–5. RQ3 is addressed in the 'Implications for policy' sub-section within each of these chapters.

This final chapter draws together the impacts and coping responses identified across Chapters 2–5 into the theoretical framework presented in Section 1.3. It also draws together the policy implications across these chapters. Hence, Chapter 6 addresses RQ4 by identifying gaps in COVID-19 housing and welfare policy, and by outlining the implications for future housing policy interventions.

The strength of this study is its longitudinal design. As information on housing quality, living practices and health before COVID-19 was available, inferences about the impact of the pandemic were possible. The study highlighted the harmful effects of the various long-term housing stressors that were amplified by the reduction of life to the site of the home. It also revealed structural deficits in the housing systems, such as:

- the conflicts in the household or housing fit
- the gap between household expectation of warmth and cold, and the provision or assistance with energy efficiency retrofits and appliance provision or upgrades.

The study reveals how the experiences of housing during the COVID-19 lockdown were varied and shaped by a complex interaction of personal, housing and employment conditions within the wider economic and urban contexts. It also reveals a wellbeing divide between more affluent households that were secure in their office-based jobs, could easily shift to working from home, enjoyed great views and felt safe, comfortable and secure in their homes, and those low-income households that had suffered income losses due to the precarity of their employment, who were cold in their homes and did not feel able to modify the quality of their home environments.

## 6.1 Intersecting issues

COVID-19 has affected households directly and indirectly:

- **directly**—through disease (although there were no cases of COVID-19 among our participants)
- **indirectly**—through limiting employment, loss of income, and restrictions on movement outside the dwelling.

Set against this were a range of policy interventions, including:

- financial payments and guidelines around housing costs relief
- policing of the restrictions on movement and social distancing
- recommendations for cleaning and sanitising.

These interventions brought significant challenges and responses inside homes, in terms of reconfiguring internal spaces for new, more intensive use caused by confinement—such as homeschooling and working from home—as described in Chapter 3. They also had significant knock-on effects upon relationships (Chapter 4), and upon social, mental and physical health and wellbeing (Chapter 5).

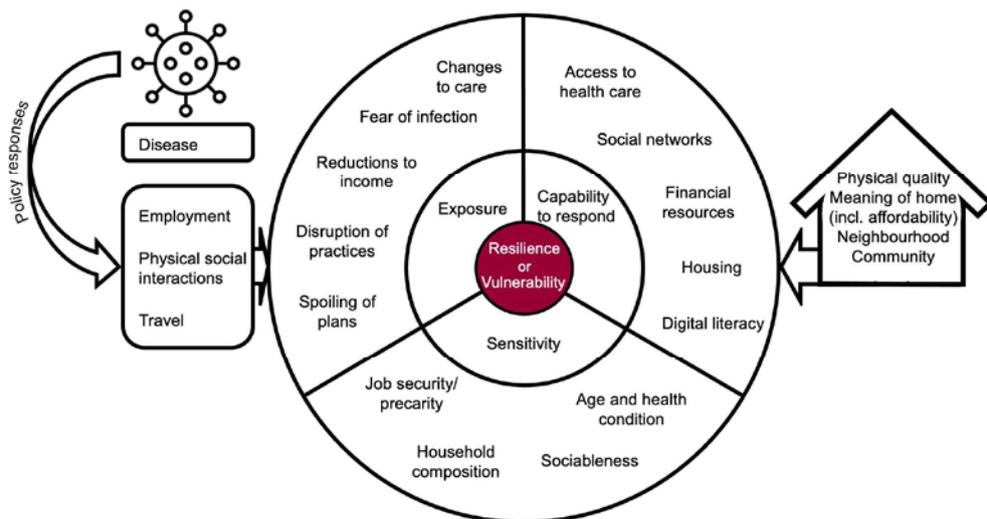
The resilient responses of participants occurred against a backdrop of intersecting pre-existing vulnerabilities. As shown in Figure 17, these vulnerabilities are described as the result of the intersection between:

- exposure to the impacts of COVID-19
- sensitivities to harm—pre-existing job security or poverty, health and age, household composition, caring responsibilities
- capabilities to respond—access to financial and social support; agency, power and knowledge and the social/digital licence to use it; resources, decent housing and rights to manage housing needs.

Thus, three sequential observations frame resilience in this context:

- Pre-existing vulnerabilities provide an unequal basis for confronting the pandemic.
- The pandemic and socio-economic responses affect these underlying vulnerabilities and therefore act to re-order their intersections and the resilience response.
- The pandemic and socio-economic responses also bring new vulnerabilities that add to the mix of pre-existing vulnerabilities, creating new inequalities in resilience response.

Figure 17: Research findings



Source: Authors.

Housing provides a key site of sanctuary and a hub for control measures instituted to manage the COVID-19 pandemic. As such, it is a key factor in mediating the impact of COVID-19, and takes on even greater significance in society as a result. Set against this importance are already existing inequalities in urban form, housing condition and affordability, which provide for unequal vulnerability when joined with sensitivities such as job precarity, age, health, household composition and social networks. Moreover, tenure, typology, property condition and the rights, responsibilities and resources to improve and maintain decent housing are central in shaping capabilities; economic, social and other resources enable agency, power and choice.

Sensitivities are a key consideration in the manifestation of COVID-19 impacts because they are not all immediately apparent, nor are they arranged as they were prior to the pandemic. The study found that on top of the changes in practices mandated by regulations, such as working from home, many other actions were undertaken voluntarily—for example, shunning public and crowded places.

Moreover, the experiences of the older participants suggested that the disproportionate risk of COVID-19 for the older population group may not be limited to the disease itself. As older participants were discouraged, barred or refrained voluntarily from social activities and physical meetings in and outside their home, these respondents seemed likely to develop feelings of loneliness. This seemed to have been exacerbated by limited digital literacy, and the feeling that contact via social media:

- was not meaningful
- did not meet the need to belong and be understood.

This combination of physical and digital disconnection from community was also experienced by one younger social renter who lacked digital capacities.

It is in the intersection of multiple exposures, sensitivities and contingent capabilities to respond that the response to the COVID-19 disaster is experienced, either as:

- life-affirming, solidarity-inducing set of resilient responses, or
- multiple, reinforcing vulnerabilities that bring life crashing down into an isolated, marginalised, powerless cul-de-sac of existence.

The potential stressor of sudden income loss or housing precarity seems to have been lessened by the introduction of JobSeeker and JobKeeper income support, along with rent and mortgage moratoriums. Housing affordability was closely linked to job security. The continuation of paid employment, wage and welfare support contributed to ontological security.

Social conversion factors that facilitated functionings were good social networks—for example, having good neighbourhood integration, or adult children who helped with care-giving—including shopping to achieve sustenance—and cleaning. Resilience was enhanced by:

- access to shops, workplaces and services within walking or cycling distance
- capacity to drive
- mobilisation of family networks
- supportive social networks.

Resilience was protected by having the financial resources, the ability and some freedom to make decisions. The freedom to move was also important.

Social renters had security of tenure, but little opportunity to choose a home that suited their individual conditions and preferences before the pandemic and were, thus, experiencing housing stress beyond affordability concerns.

Lack of storage space meant extra trips outside into potentially contaminated shopping environments that amounted to a significant new burden upon mental and physical resources, when combined with low income, underlying health conditions and anxieties and constraints on mobility.

When existing sensitivities were combined with isolation—whether self-imposed or not—it created a potentially catastrophic situation where it was increasingly difficult to see meaning in life and in a positive future. The presence of pre-existing housing stressors in housing design and environment rendered tenants and low-income households vulnerable to multiple interacting stressors, including limited access to energy services, lack of digital literacy and job precarity.

Thus, housing and its location were found to be a key material mediator of vulnerability and resilience of participants. The important role of housing and urban design in coping with the pandemic suggests that housing policy can play a part in adapting and recovering from the COVID-19 pandemic and preparing for possible future emergencies that may confine people to their homes.

### 6.2 Policy development options

Policy development options arising from this research relate to mechanisms to build resilience by addressing sensitivities, exposures and capabilities as they relate to housing at the nexus of employment, health and society.

#### Financial support

First, given the undoubted success of JobKeeper, JobSeeker and the Coronavirus supplements, these should be maintained for as long as it takes for those affected households to recover and re-enter their paid work. In the case of those without work and on JobSeeker, the enhanced payments should continue, in order to provide financial resilience in the face of future disasters.

The rent and mortgage support measures have been less successful and should be reviewed in light of the ‘soft power’ relations they have revealed, including householders’ reluctance and lack of trust to engage with landlords and banks in what they view as uneven power relations.

#### Cleanliness

Other short-term policy options related to the cleanliness and policing of COVID-19 distancing requirements on public transport and in common areas around multi-unit dwellings. Increased powers—and exercise of those powers—to regulate distancing and the cleanliness of surfaces on public transport would reduce concerns among low-income households and those without a car who are heavily reliant upon public transport. Placing responsibilities upon owners’ corporations and strata managers to regulate distancing and cleanliness of surfaces in common areas of multi-unit dwellings would address inequalities between households across different developments, and alleviate anxieties and health risks.

#### Urban design

Another set of policy development options relates to urban design, where inequalities in the distribution and quality of urban services such as parks and open space, local shops and other facilities, are exacerbated under COVID-19 restrictions upon movement. Here, impacts fall disproportionately upon those lower socio-economic suburbs that also have poorer services, and are least resilient.

This points to a need to redouble policy directions to address such inequalities by (re)building accessible 20-minute neighbourhoods with high-quality local urban space, services and employment opportunities. Each chapter in this report points to this in its findings and ‘Implications for policy’ sections, which demonstrates the importance of this issue.

The imperative to design and retrofit walkable neighbourhoods coincides with already existing agendas, such as the development of age-friendly neighbourhoods in response to an ageing society, as well as the broader liveability agenda. The COVID-19 pandemic reinforces the need to support health and liveability, and for accessible local services that provide access to local biodiversity spaces.

### **Building design**

This study points to policy development opportunities in building design and retrofit. While households in smaller apartments demonstrated remarkable ingenuity in reconfiguring and using multifunction spaces for purposes that had never been envisaged at the time of the first (pre-COVID-19) interviews, it was clear that in many respects limits imposed by the design were insurmountable. These included acoustic privacy, lack of circulation space or floorplate flexibility. Access to a balcony or garden—whether individual or communal—contributed to better mental health, as did views of greenery. This is also a matter for building design codes.

In larger, more separate dwellings that could accommodate working from home and opportunities for retreat, the policy challenges revolve around regulations that mandate more energy-efficient homes through improved building code stringency and through mass-upgrades to the energy efficiency of the housing stock across Australia.

Across all homes, policy responses to allow for reconfiguration of dwellings to accommodate home-working and homeschooling are currently limited to a range of tax provisions regarding working from home. These should be reviewed to allow low-income households equitable access to such upgrades.

### **Community cohesion**

Another policy development opportunity relates to how housing can promote community cohesion and social support to build resilience among households that are potentially disconnected or socially isolated. Digital inclusion and online connections to neighbours were an observed source of resilience. Social and community services, ranging from care-giving to libraries, provide essential sources of connection; our participants found that these services were curtailed, often at the same time that other sources of household resilience were being undermined. Recognising these as essential services is important in ensuring a base resilience and maintaining provision of these services in the face of future disasters.

### **Social housing**

Finally, social housing must be re-imagined in terms of its value to the community in the face of COVID-19—as it provides much more than shelter and continuity. Social housing tenants benefited from their tenure, although they had little opportunity to choose a home that suited their individual conditions and preferences before the pandemic and were thus experiencing housing stress other than housing affordability stress. This finding concurs with previous research that has highlighted the often complex needs of social housing tenants, the community context and the limited capabilities to move to other housing (Muir, Powell et al. 2020). A significant expansion of social housing stock would facilitate more choice, and also access to housing for a much larger number of households that work in what we now know to be precarious work conditions, where they require secure housing options.

### 6.2.1 Conclusion

In this study we have borrowed theories from the social sciences, climate sciences and disaster justice to develop our framework, which centred on resilience and the ways that housing may have supported outcomes including productivity, practices and health during the beginning of the COVID-19 pandemic. Key to the framework was the concept of capabilities to capture conditions that may have shaped variations in housing outcomes during this time. The study has revealed multiple ways that the material quality and meanings of the home shaped or were shaped by COVID-19-related changes to everyday life, at the scales of the neighbourhood, building and dwelling. Capabilities were shaped by resources, but also by social networks and agency as well as individual and socially shared values. Housing emerged as an important factor in people's ability to withstand the immediate and potentially longer-term effects of COVID-19-related stressors as the pandemic develops.

At the time of writing, Victoria's Stage 4 lockdown has just been extended and people are still restricted to their homes and allowed only brief excursions within a five-kilometre radius of their dwelling. However, COVID-19 housing-policy-related responses have still focussed almost exclusively on resources covering aspects of housing affordability, security and supply.

Although these are undoubtedly important issues for housing, there is little attempt to account for ways that design, urban planning and community affect people's quality of life, or to what extent structural conditions may have shaped housing outcomes. The diverse lived experiences of householders in this study—and the apparent uneven effects of COVID-19 on their lives and wellbeing—suggest that a COVID-19 recovery needs to target not only the quantitative factors but also the quality of housing and neighbourhoods. In light of the ongoing pandemic, persistent lockdown and physical distancing measures, urgent responses may be required.

# References

- Alexander, D. (2012) 'Models of social vulnerability to disasters', *RCCS Annual Review*, no. 4, <http://journals.openedition.org/rccsar/412>
- Amerio, A., Brambilla, A., Morganti, A., Aguglia, A., Bianchi, D., Santi, F., Costantini, L., Odone, A., Costanza, A., Signorelli, C., Serafini, G., Amore, M. and Capolongo, S. (2020) 'COVID-19 lockdown: housing built environment's effects on mental health', *International Journal of Environmental Research and Public Health*, vol. 17, no.16: 5973, doi: 10.3390/ijerph17165973
- Archibald, M.M., Ambagtsheer, R.C., Casey, M.G. and Lawless, M. (2019) 'Using Zoom videoconferencing for qualitative data collection: perceptions and experiences of researchers and participants', *International Journal of Qualitative Methods*, vol. 18, doi:10.1177/1609406919874596
- Australian Bureau of Statistics [ABS] (2020) *Household expenditure survey, Australia: summary of results, 2015–16*, Australian Bureau of Statistics, accessed 23 August 2020, <https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/6530.0MainFeatures32015-16>
- Australian Government Department of Health [DOH] (2020a) *Coronavirus disease (COVID-19): social distancing guidance*. Canberra, accessed 25 August 2020, <https://www.health.gov.au/sites/default/files/documents/2020/03/coronavirus-covid-19-information-on-social-distancing.pdf>
- Australian Government Department of Health [DOH] (2020b) *Australia's physical activity and sedentary behaviour guidelines and the Australian 24-hour movement guidelines*, Australian Government Department of Health, Canberra, accessed 21 September 2020, <https://www1.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-phys-act-guidelines#npa%20fam>
- Azpirtarte, F., Johnson, V. and Sullivan, D. (2015) *Fuel poverty, household income and energy spending: an empirical analysis for Australia using HILDA data*, Brotherhood of St Laurence, Melbourne, accessed 13 August 2020, <https://www.bsl.org.au/research/publications/fuel-poverty-household-income-and-energy-spending-an-empirical-analysis-for-australia-using-hilda-data/>
- Badland, H., Whitzman, C., Lowe, M., Davern, M., Aye, L., Butterworth, I., Hes, D. and Giles-Corti, B. (2014) 'Urban liveability: emerging lessons from Australia for exploring the potential for indicators to measure the social determinants of health', *Social Science and Medicine*, vol. 111: 64–73, doi: 10.1016/j.socscimed.2014.04.003
- Baker, E. Bentley, R. Lester, L. and Beer, A. (2016) 'Housing affordability and residential mobility as drivers of locational inequality', *Applied Geography*, vol. 72: 65–75, doi: 10.1016/j.apgeog.2016.05.007
- Barrero, J. M., Bloom, N., and Davis, S.J. (2020) *COVID-19 is also a reallocation shock*, NBER Working Paper No. 27137, National Bureau of Economic Research, Cambridge, MA, <https://www.nber.org/papers/w27137>
- Baruch, Y. (2000) 'Teleworking: benefits and pitfalls as perceived by professionals and managers', *New Technology, Work and Environment*, vol. 15, no.1: 34–49. doi:10.1111/1468-005x.00063
- Baxter, R. and Brickell, K. (2014) 'For home unmaking', *Home Cultures*, vol. 11, no. 2: 133–143. doi:10.2752/175174214X13891916944553
- Biggs, A., Brough, P. and Drummond, S. (2017) 'Lazarus and Folkman's psychological stress and coping theory', in C.L. Cooper and J.C. Quick (eds), *The Handbook of Stress and Health: A Guide to Research and Practice*, 1st edn, John Wiley & Sons: 351–364.
- Birkmann, J., Cardona, O.D., Carreño, M.L., Barbat, A.H., Pelling, M., Schneiderbauer, S., Kienberger, S., Keiler, M., Alexander, D., Zeil, P. and Welle, T. (2013) 'Framing vulnerability, risk and societal responses: the MOVE framework', *Natural Hazards*, vol. 67, no. 2: 193–211, doi:10.1007/s11069-013-0558-5
- Bissell, D. and Gorman Murray, A. (2019) 'Disoriented geographies: undoing relations, encountering limits', *Transactions of the Institute of British Geographers*, vol. 44, no. 4: 707–720, doi: 10.1111/tran.12307

- Bonnefoy, X. (2007) 'Inadequate housing and health: an overview', *International Journal of Environment and Pollution*, vol. 30, no. 3–4: 411–429.
- Blunt, A. and Dowling, R.M. (2006) *Home*, Routledge, New York.
- Blunt, A. and Sheringham, O. (2019) 'Home-city geographies: urban dwelling and mobility', *Progress in Human Geography*, vol. 43, no. 5: 815–834, doi:10.1177/0309132518786590
- Braubach, M. and Fairburn, J. (2010) 'Social inequities in environmental risks associated with housing and residential location—a review of evidence', *The European Journal of Public Health*, vol. 20, no. 1: 36–42, doi:10.1093/eurpub/ckp221
- Braun, V. and Clarke, V. (2020) 'One size fits all? What counts as quality practice in (reflexive) thematic analysis?', *Qualitative Research in Psychology*, doi:10.1080/14780887.2020.1769238
- Brickell, K. (2012) 'Mapping' and 'doing' critical geographies of home, *Progress in Human Geography*, vol. 36, no. 2: 225–244, doi:10.1177/0309132511418708
- Bunnell, T., Yea, S., Peake, L., Skelton, T. and Smith, M. (2012) 'Geographies of friendships', *Progress in Human Geography*, vol. 36, no. 4: 490–507, doi: 10.1177/0309132511426606
- Burke, L.A. and Miller, M.K. (2001) 'Phone interviewing as a means of data collection: lessons learned and practical recommendations', paper presented to *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, accessed 27 August 2020, <https://www.qualitative-research.net/index.php/fqs/article/%20view/959/2094>
- Butler, G. (1993) Definitions of stress, *Occasional paper*, vol. 61, no.1, accessed 20 August 2020, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2560943/pdf/occpaper00115-0007.pdf>
- Butt, A., Middha, B. and Li, T. (2020) *Living locally—Beveridge North-West Volume II: consideration of, precinct structure planning and 20-minute neighbourhoods in greenfield areas*, Centre for Urban Research, RMIT University, Melbourne, accessed 13 September 2020, [https://www.planning.vic.gov.au/\\_data/assets/pdf\\_file/0023/464225/Beveridge-North-West-Scenario-modelling-20-minute-neighbourhoods-in-greenfield-areas.pdf](https://www.planning.vic.gov.au/_data/assets/pdf_file/0023/464225/Beveridge-North-West-Scenario-modelling-20-minute-neighbourhoods-in-greenfield-areas.pdf)
- Casanova, L.M., Jeon, S., Rutala, W.A., Weber, D.J., and Sobsey, M.D. (2010) 'Effects of air temperature and relative humidity on coronavirus survival on surfaces', *Applied and Environmental Microbiology*, vol. 76: 2712–2717.
- Center for Disease Control (2020a) *CDC social vulnerability index (SVI)*, U.S. Department of Health and Human Services, accessed 25 August 2020, <https://data.cdc.gov/Health-Statistics/CDC-Social-Vulnerability-Index-SVI-/u6k2-rtt3/data>
- Center for Disease Control (2020b) *CDC SVI 2018 documentation*, U.S. Department of Health and Human Services, accessed 25 August 2020, [https://svi.cdc.gov/Documents/Data/2018\\_SVI\\_Data/SVI2018Documentation.pdf](https://svi.cdc.gov/Documents/Data/2018_SVI_Data/SVI2018Documentation.pdf)
- Calman, L., Brunton, L. and Molassiotis, A. (2013) 'Developing longitudinal qualitative designs: lessons learned and recommendations for health services research', *BMC Medical Research Methodology*, vol. 13, no.14. doi:10.1186/1471-2288-13-14
- Carver, C.S. and Connor-Smith, J. (2010) 'Personality and coping', *Annual Review of Psychology*, vol. 61, no.1: 679–70. doi:10.1146/annurev.psych.093008.100352.
- Cigdem-Bayram, M., Ong, R. and Wood, G. (2017) *A new look at the channels from housing to employment decisions*, AHURI Final Report No. 275, Australian Housing and Urban Research Institute Limited, Melbourne, <https://www.ahuri.edu.au/research/final-reports/275>, doi: 10.18408/ahuri-5307201
- Collins, M. (2005) 'The (not so simple) case for teleworking: a study at Lloyd's of London', *New Technology, Work and Employment*, vol. 20, no. 2: 115–32, doi:10.1111/j.1468-005X.2005.00148.x
- Corvo, E. and De Caro, W. (2020) 'COVID-19 and spontaneous singing to decrease loneliness, improve cohesion, and mental well-being: an Italian experience', *Psychological Trauma: Theory, Research, Practice and Policy*, vol. 12, no. S1: 247–248, doi:10.1037/tra0000838
- Dayrit, M. and Mendoza, R. U. (2020) *Social cohesion vs COVID-19*, SSRN, accessed 10 August, <https://ssrn.com/abstract=3555152>

- Denham, T., Dodson, J., Palm, M., Whitzman, C., Hamilton, C., Kellett, J., Maginn, P. and Martinus, K. (2018) *Transformational infrastructure projects In Australia's fast growing outer suburbs*, Centre for Urban Research [CUR], RMIT University, Melbourne, <http://hdl.handle.net/11343/212237>
- Department of Environment, Water, Land and Planning (2020) *20-minute neighbourhood*, accessed 28 August 2020, DEWLP, Melbourne, <https://www.planmelbourne.vic.gov.au/current-projects/20-minute-neighbourhoods>
- Department of Health and Human Services [DHHS] (2019) *Victorian public health and wellbeing plan 2019–2023*, Victorian Government, Melbourne, accessed 22 September 2020, <https://www2.health.vic.gov.au/about/publications/policiesandguidelines/victorian-public-health-wellbeing-plan-2019-2023>
- Diderichsen, F., Hallqvist, J. and Whitehead, M. (2019) 'Differential vulnerability and susceptibility: how to make use of recent development in our understanding of mediation and interaction to tackle health inequalities', *International Journal of Epidemiology*, vol. 48, no. 1: 268–274, doi:10.1093/ije/dyy167
- Dockery, A., Feeny, S., Hulse, K., Ong, R., Saugeres, L., Spong, H., Whelan, S. and Wood, G. (2008) *Housing assistance and economic participation*, AHURI Research Paper, NRV1 Final, Australian Housing and Urban Research Institute Limited, Melbourne. [https://www.ahuri.edu.au/\\_data/assets/pdf\\_file/0012/2703/NRV1\\_Final\\_Research\\_Paper.pdf](https://www.ahuri.edu.au/_data/assets/pdf_file/0012/2703/NRV1_Final_Research_Paper.pdf)
- Dodson, J. and Berry, M. (2005) *Is there a spatial mismatch between housing affordability and employment opportunity in Melbourne?* AHURI Final Report No. 80, Australian Housing and Urban Research Institute Limited, Melbourne, <https://www.ahuri.edu.au/research/final-reports/80>
- Dodson, J. and Sipe, N. (2008) 'Shocking the suburbs: urban location, homeownership and oil vulnerability in the Australian city', *Housing Studies*, vol. 23, no. 3: 377–401, doi.org/10.1080/02673030802015619
- DOH see Australian Government Department of Health
- Dowling, R. and Power, E. (2012) 'Sizing home, doing family in Sydney, Australia', *Housing Studies*, vol. 27, no. 5: 605–19, doi:10.1080/02673037.2012.697552
- Duckett, S., and Stobart, A. (2020). Australia's COVID-19 response: The story so far, *Grattan Institute*, 11 June, accessed 20 October 2020, <https://grattan.edu.au/news/australias-covid-19-response-the-story-so-far/>
- Ekici, A., Keskinocak, P. and Swann, J.L. (2014) 'Modeling influenza pandemic and planning food distribution', *Manufacturing Service Operations Management*, vol. 16, no. 1: 11–27, doi:10.1287/msom.2013.0460
- Fatemi, F., Ardalani, A., Aguirre, B., Mansouri, N. and Mohammadfam, I. (2017) 'Social vulnerability indicators in disasters: findings from a systematic review', *International Journal of Disaster Risk Reduction*, vol. 22: 219–227, doi:10.1016/j.ijdr.2016.09.006
- Federal Relations Secretariat (2018) *National housing and homelessness agreement*, accessed 10 September 2020, [http://www.federalfinancialrelations.gov.au/content/npa/other/other/NHHA\\_Final.pdf](http://www.federalfinancialrelations.gov.au/content/npa/other/other/NHHA_Final.pdf)
- Flick, U. (2014) *An Introduction to Qualitative Research*, Sage Publications, London.
- Galanakis, C.M. (2020) 'The food systems in the era of the Coronavirus (COVID-19) pandemic crisis', *Foods*, vol. 9, no. 4: 523, doi:10.3390/foods9040523
- Gibson, C., Farbotko, C., Gill, N., Head, L. and Waitt, G. (2013) *Household Sustainability: Challenges and Dilemmas in Everyday Life*, Edward Elgar Publishing, Cheltenham, UK.
- Gualano, M.R., Lo Moro, G., Voglino, G., Bert, F. and Siliquini, R. (2020) 'Effects of Covid-19 lockdown on mental health and sleep disturbances in Italy', *International Journal of Environmental Research and Public Health*, vol. 17, no. 13, doi: 10.3390/ijerph17134779
- Haddon, L. and Lewis, A. (1994) 'The experience of teleworking: an annotated review', *The International Journal of Human Resource Management*, vol. 5, no. 1: 193–223, doi:10.1080/09585199400000010
- Hall, S.M. (2019) 'Everyday austerity: towards relational geographies of family, friendship and intimacy', *Progress in Human Geography*, vol. 43, no. 5: 769–789, doi:10.1177/0309132518796280
- Hobbs, J.E. (2020) 'Food supply chains during the COVID-19 pandemic', *Canadian Journal of Agricultural Economics*, vol. 68, no. 2: 171–6. doi:10.1111/cjag.12237.
- Hobbs, M., Owen, S. and Gerber, L. (2017) 'Liquid love? Dating apps, sex, relationships and the digital transformation of intimacy', *Journal of Sociology*, vol. 53, no. 2: 271–284, doi: 10.1177/1440783316662718

- Holland, J., Thomson, R. and Henderson, S. (2006) *Qualitative longitudinal research: a discussion paper, Families and Social Capital ESRC Research Group Working Paper No. 21*, London South Bank University, London, accessed 19 August 2020, [http://lsbu.staging.squizedge.net/\\_data/assets/pdf\\_file/0019/9370/qualitative-longitudinal-research-families-working-paper.pdf](http://lsbu.staging.squizedge.net/_data/assets/pdf_file/0019/9370/qualitative-longitudinal-research-families-working-paper.pdf)
- Hutchins, S.S., Fiscella, K., Levine, R.S., Ompad, D.C. and McDonald, M. (2009) 'Protection of racial/ethnic minority populations during an influenza pandemic', *American Journal of Public Health*, vol. 99, no. S2: S261–S270, doi:10.2105/AJPH.2009.161505
- Iacono, V.L., Symonds, P. and Brown, D.H. (2016) 'Skype as a tool for qualitative research interviews', *Sociological Research Online*, vol. 21, no. 2: 1–12.
- Irvine, A. (2010) 'Using phone interviews', *Realities*, National Centre for Research Methods [NCRM], accessed 26 August 2020, <http://www.manchester.ac.uk/realities/resources/toolkits>
- Kalantari S. and Shepley M. (2020) 'Psychological and social impacts of high-rise buildings: a review of the post-occupancy evaluation literature', *Housing Studies*: 1–30, doi: 10.1080/02673037.2020.1752630
- Kathiravelu, L., and Bunnell, T. (2018) 'Introduction: urban friendship networks: affective negotiations and potentialities of care', *Urban Studies*, vol. 55, no. 3: 491–504, doi: 10.1177/0042098017737281
- Kearns, A., Whitley, E., Mason, P., Petticrew, M. and Hoy, C. (2011) 'Material and meaningful homes: mental health impacts and psychosocial benefits of rehousing to new dwellings', *International Journal of Public Health*, vol. 56, no. 6: 597–607, doi: 10.1007/s00038-011-0275-3
- Kellett, J., Morrissey, J. and Karuppanan, S. (2012) 'The impact of location on housing affordability', *Proceedings of the Australasian Housing Researchers' Conference*, Adelaide University, South Australia, accessed 21 August 2020, <http://hdl.handle.net/2440/88741>
- Kerr, S.M., Gibson, C., and Klocker, N. (2018) 'Parenting and neighbouring in the consolidating city: the emotional geographies of sound in apartments', *Emotion, Space and Society*, vol. 26, February: 1–8, doi:10.1016/j.emospa.2017.11.002
- Keyes, C.L. (1998) 'Social well-being', *Social Psychology Quarterly*, vol. 61, no. 2: 121–40, doi: 10.2307/2787065
- Keyes, C.L. (2005) 'Mental illness and/or mental health? Investigating axioms of the complete state model of health', *Journal of Consulting and Clinical Psychology*, vol. 73, no. 3: 539–48, doi: 10.1037/0022-006X.73.3.539
- King, C. (2018) 'Food insecurity and housing instability in vulnerable families', *Review of Economics of the Household*, vol. 16, no. 2: 255–73, doi:10.1007/s11150-016-9335-z
- Kirkpatrick, S.I. and Tarasuk, V. (2011) 'Housing circumstances are associated with household food access among low-income urban families', *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, vol. 88, no. 2, doi:10.1007/s11524-010-9535-4
- Koslowski, N.C., Linehan, C., Tietze, S. (2019) 'When is a bed not a bed? Exploring the interplay of the material and virtual in negotiating home-work boundaries', *Culture and Organization*, vol. 25, no. 3: 159–77, doi:10.1080/14759551.2017.1349128
- Larson, J.S. (1996) 'The World Health Organization's definition of health: social versus spiritual health', *Social Indicators Research*, vol. 38: 181–92, doi: 10.1007/BF00300458
- Lazarus, R.S. and Cohen, J.B. (1977) 'Environmental stress', in I. Altman and J.F. Wohlwill (eds), *Human Behavior and Environment: Advances in Theory and Research*, vol. 2, Plenum Press, New York: 90–128.
- Lazarus, R.S. and Folkman, S. (1984) *Stress, appraisal, and coping*, Springer, New York
- Lijadi, A.A. and van Schalkwyk, G.J. (2015) 'Online Facebook focus group research of hard-to-reach participants', *International Journal of Qualitative Methods*, vol. 14, no. 5, doi: 10.1177/1609406915621383
- Maddrell, A. (2013) 'Living with the deceased: absence, presence and absence-presence', *Cultural Geographies*, vol. 20, no. 4: 501–522, doi: 10.1177/1474474013482806
- Mason, J. (2017) *Qualitative Researching*, Sage, Thousand Oaks, California
- McCarthy, L. (2020) 'Homeless women, material objects and home (un) making', *Housing Studies*, vol. 35, no. 7: 1309–31, doi: 10.1080/02673037.2019.1659235

- Menard, S. (2002) *Longitudinal research*, vol. 76, Sage, Thousand Oaks, California
- Mirchandani, K. (2000) “‘The best of both worlds” and “Cutting my own throat”: contradictory images of home-based work’, *Qualitative Sociology*, vol. 23, no. 2: 159–82 doi:10.1023/A:1005448415689
- Molinari, C., Ahern, M. and Hendryx, M. (1998) ‘The relationship of community quality to the health of women and men’, *Social Science and Medicine*, vol. 47, no. 8: 1113–1120.
- Morawska, L. and Cao, J. (2020) ‘Airborne transmission of SARS-CoV-2: the world should face the reality’, *Environment International*, vol. 139, doi:10.1016/j.envint.2020.105730.
- Morrison, C.A., Johnston, L. and Longhurst, R. (2013) ‘Critical geographies of love as spatial, relational and political’, *Progress in Human Geography*, vol. 37, no. 4: 505–521, doi: 10.1177/0309132512462513
- Morrissey, J., Horne, R. and Kellett, J. (2012) ‘Urban locational efficiency: long term energy and affordability implication of residential location decisions’, in E.F. Cavalcanti and M.R. Barbosa (eds), *Energy Efficiency: Methods, Limitations and Challenges*, New York: Nova Science Publishers: 119–33.
- Muir, K., Powell, A., Flanagan, K., Stone, W., Tually, S., Faulkner, D., Hartley, C., Pawson, H. (2020) ‘A pathway to where?’ *Inquiry into understanding and reimagining social housing pathways*, AHURI Final Report No. 332, Australian Housing and Urban Research Institute Limited, Melbourne, <https://www.ahuri.edu.au/research/final-reports/332>, doi:10.18408/ahuri-7118001
- Nethercote, M. and Horne, R. (2016) ‘Ordinary vertical urbanisms: city apartments and the everyday geographies of high-rise families’, *Environment and Planning A*, vol. 48, no. 8: 1581–1598, doi: 10.1177/0308518X16645104
- New South Wales Department of Family and Community Services (2016) *Measuring social housing outcomes: desktop review of evidence: interim report*, FACS, Ashfield NSW, [https://www.facs.nsw.gov.au/\\_data/assets/file/0008/388349/3779\\_FACS\\_Measuring-Social-Housing-Outcomes\\_Cover.pdf](https://www.facs.nsw.gov.au/_data/assets/file/0008/388349/3779_FACS_Measuring-Social-Housing-Outcomes_Cover.pdf)
- Nicholls, L., Phelan, K. and Maller, C. (2018) ‘A fantasy to get employment around the area’: long commutes and resident health in an outer urban master-planned estate’, *Urban Policy and Research*, vol. 36, no. 1: 48–62, doi:10.1080/0811146.2017.1308859
- Petrova, S. (2018) ‘Encountering energy precarity: geographies of fuel poverty among young adults in the UK’, *Transactions of the Institute of British Geographers*, vol. 43, no. 1: 17–30, doi: 10.1111/tran.12196
- Pink, S., Horst, H., Postill, J., Lewis, T. and Tacchi, J. (2016) *Digital Ethnography: Principles and Practice*, Sage Publications, London.
- Power E.R. (2019) ‘Assembling the capacity to care: caring-with precarious housing’, *Transactions of the Institute of British Geographers*, doi: 10.1111/tran.12306
- Rajkumar, R.P. (2020) ‘COVID-19 and mental health: a review of the existing literature’, *Asian Journal of Psychiatry*, vol. 52, doi: 10.1016/j.ajp.2020.102066
- Richards, L. (1999) *Using NVivo in Qualitative Research*, Sage Publications, London.
- Rizou, M., Galanakis, I.M., Aldawoud, T.M.S. and Galanakis, C.M. (2020) ‘Safety of foods, food supply chain and environment within the COVID-19 pandemic’, *Trends in Food Science and Technology*, vol. 102: 293–9, doi:10.1016/j.tifs.2020.06.008
- Robeyns, I. (2017) *Wellbeing, Freedom and Social Justice: The Capability Approach Re-Examined*, OpenBook Publishers, London.
- Rose, M. (2018) ‘Consciousness as claiming: practice and habit in an enigmatic world’, *Environment and Planning D: Society and Space*, vol. 36, no. 6: 1120–1135, doi: 10.1177/0263775818784754
- Scerri, A. (2011) ‘Rethinking responsibility? Household sustainability in the stakeholder society’, in R. Lane and A. Gorman-Murray (eds), *Material Geographies of Household Sustainability*, Ashgate Publishing Limited, Surrey, England: 175–92.
- Sen, A. (1990) ‘Welfare, freedom and social choice: a reply’, *Recherches Économiques de Louvain / Louvain Economic Review*, vol. 56, nos. 3/4: 451–485.
- Sen, A. (1992) *Inequality Reexamined*, Clarendon Press, Oxford, UK.

- Seselja, Z. (2020) *Incentivising increased support for charities in response to COVID-19*, media release, Assistant Minister for Finance Charities and Electoral Matters, Canberra, accessed 25 August 2020, <https://www.financeminister.gov.au/assistant/media-release/2020/05/06/incentivising-increased-support-charities-response-covid-19>
- Shove, E., Chappells, H., Lutzenhiser, L. and Hackett, B. (2008) 'Comfort in a lower carbon society', *Building Research and Information*: 307–311, doi:10.1080/09613210802079322
- Spiller, M. and Forrest, B. (2018) 'Better value from greenfield urban infrastructure', *Planning News*, vol. 44, no. 4: 26.
- Spoonley, P., Gluckman, P., Bardsley, A., McIntosh, T., Hunia, R., Johal, S. and Poulton, R. (2020) *He oranga hou: social cohesion in a post COVID-19 world*, The Future is Now Conversation Series, accessed 24 August 2020, <https://informedfutures.org/wp-content/uploads/Social-Cohesion-in-a-Post-Covid-World.pdf>
- Straughan, E.R., Bissell, D. and Gorman Murray, A. (2020) 'Friends disconnected: how mobile work transforms friendships through absence and presence', *Area*, doi:10.1111/area.12659
- Tietze, S. and Musson, G. (2005) 'Recasting the home-work relationship: a case of mutual adjustment?', *Organization Studies*, vol. 26, no. 9: 1331–52, doi:10.1177/0170840605054619
- Ton, K.T., Gaillard, J.C., Adamson, C.E., Akgungor, C. and Ho, H.T. (2019) 'Expanding the capabilities of people with disabilities in disaster risk reduction', *International Journal of Disaster Risk Reduction*, vol. 34, March: 11–17, doi:10.1016/j.ijdrr.2018.11.002
- Troy, L. (2017) 'The politics of urban renewal in Sydney's residential apartment market', *Urban Studies*, vol. 55, no. 6: 1329–1345, doi: 10.1177/0042098017695459
- United Nations Human Rights (2020) '*Housing, the front-line defence against the COVID-19 outbreak*', says UN expert, UNHR Office of the High Commissioner, Geneva, accessed 20 August 2020, <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=25727&LangID=E>
- United Nations Women (2020) *COVID-19 and ending violence against women and girls*, United Nations, accessed 20 August 2020, <https://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2020/issue-brief-covid-19-and-ending-violence-against-women-and-girls-en.pdf?la=en&vts=5006>
- Urban Land Institute (2009) *Bay Area burden: examining the costs and impacts of housing and transportation on Bay Area residents, their neighbourhoods and the environment*, Urban Land Institute, Washington DC, accessed 27 August 2020, <http://uli.org/wp-content/uploads/2012/05/Bay-Area-Burden-10-13.pdf>
- Valentine, G. (2008) 'The ties that bind: towards geographies of intimacy', *Geography Compass*, vol. 2, no. 6: 2097–2110, doi:10.1111/j.1749-8198.2008.00158.x
- van den Nouweland, R., Crommelin, L., Herath, S. and Randolph, B. (2016) *Housing affordability, central city economic productivity and the lower income labour market*, AHURI Final Report No. 261, Australian Housing and Urban Research Institute Limited, Melbourne, <https://www.ahuri.edu.au/research/final-reports/261>
- Van Zandt, S., Peacock, W.G., Henry, D.W., Grover, H., Highfield, W.E. and Brody, S.D. (2012) 'Mapping social vulnerability to enhance housing and neighbourhood resilience', *Housing Policy Debate*, vol. 22, no. 1: 29–55, doi: 10.1080/10511482.2011.624528
- Venkatesh, A. and Edirappuli, S. (2020) 'Social distancing in COVID-19: what are the mental health implications?', *British Medical Journal*, vol. 369, doi:10.1136/bmj.m1379
- Verchick, R.R. (2012) 'Disaster justice: the geography of human capability', *Duke Environmental Law and Policy Forum*, vol. 23: 23–71, <https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1238&context=delpf>
- VicHealth (2010) *Participation in physical activity: research summary*, VicHealth, Melbourne, accessed 20 August 2020, [https://www.vichealth.vic.gov.au/~/\\_/media/ResourceCentre/PublicationsandResources/Physical%20activity/Participation\\_in\\_physical\\_activity\\_Research\\_summary.ashx](https://www.vichealth.vic.gov.au/~/_/media/ResourceCentre/PublicationsandResources/Physical%20activity/Participation_in_physical_activity_Research_summary.ashx)
- VicHealth (2016) *Planning and designing healthy new communities: Selandra Rise-Research summary*, Victorian Health Promotion Foundation, Melbourne, accessed 22 July 2019, [https://www.vichealth.vic.gov.au/~/\\_/media/ResourceCentre/PublicationsandResources/General/Selandra\\_Rise\\_Final\\_Summary\\_Report.pdf?la=en&hash=A58AAB5A27486863DBEA8B18D3B5188A407F50BE](https://www.vichealth.vic.gov.au/~/_/media/ResourceCentre/PublicationsandResources/General/Selandra_Rise_Final_Summary_Report.pdf?la=en&hash=A58AAB5A27486863DBEA8B18D3B5188A407F50BE)

- Waitt, G. and Harada, T. (2019) 'Space of energy well being: social housing tenants' everyday experiences of fuel poverty', *Transactions of the Institute of British Geographers*, doi:10.1111/tran.12320
- Walker, G. (2015) 'Beyond individual responsibility: social practices, capabilities and the right to environmentally sustainable ways of living', in Y. Strengers and C. Maller (eds), *Social Practices, Intervention and Sustainability*, Routledge, Oxon: 45–60.
- Warrington, M. (2001) "'I must get out": The geographies of domestic violence', *Transactions of the Institute of British Geographers*, vol. 26, no. 3: 365–382, doi:10.1111/1475-5661.00028
- WHO see World Health Organization
- Willand, N., Ridley, I. and Maller, C. (2015) 'Towards explaining the health impacts of residential energy efficiency interventions—a realist review, part 1: pathways', *Social Science and Medicine*, vol. 133, May: 191–201, doi:10.1016/j.socscimed.2015.02.005
- Willand, N. and Horne, R. (2018) 'They are grinding us into the ground'—The lived experience of (in)energy justice amongst low-income older households', *Applied Energy*, vol. 226: 61–70, doi:10.1016/j.apenergy.2018.05.079
- Wolff, J. and de-Shalit, A. (2013) 'On fertile functionings: A response to Martha Nussbaum', *Journal of Human Development and Capabilities*, vol. 14, no. 1: 161–165, 10.1080/19452829.2013.762177
- World Health Organization (2020a) *Considerations for quarantine of contacts of COVID-19 cases: interim guidance*, accessed 26 August 2020, [https://www.who.int/publications/i/item/considerations-for-quarantine-of-individuals-in-the-context-of-containment-for-coronavirus-disease-\(covid-19\)](https://www.who.int/publications/i/item/considerations-for-quarantine-of-individuals-in-the-context-of-containment-for-coronavirus-disease-(covid-19))
- World Health Organization (2020b) *What is moderate-intensity and vigorous-intensity physical activity*, World Health Organization, accessed 21 September 2020, [https://www.who.int/dietphysicalactivity/physical\\_activity\\_intensity/en/](https://www.who.int/dietphysicalactivity/physical_activity_intensity/en/)



**Australian Housing and Urban Research Institute**

Level 12, 460 Bourke Street

Melbourne VIC 3000

Australia

+61 3 9660 2300

[information@ahuri.edu.au](mailto:information@ahuri.edu.au)

[ahuri.edu.au](http://ahuri.edu.au)

 [twitter.com/AHURI\\_Research](https://twitter.com/AHURI_Research)

 [facebook.com/AHURI.AUS](https://facebook.com/AHURI.AUS)

 Australian Housing and Urban Research Institute