Distancing measures in the face of COVID-19 in Australia. Summary of national survey findings.

Survey 2 Report, July 2020

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City of
Canada Bay
Social distance to help save lives.
At least
1.5m
We ask that all dog park users follow social distancing protocols to help save lives and stop the spread of COVID-19.
For the latest advice and recommendations visit:
health.nsw.gov.au/coronavirus
For Council updates visit: canadabay.nsw.gov.au/covid19

OVERVIEW

An online survey was conducted from 28 April–6 May 2020 to gain understanding of how people (N=1020) in Australia are thinking, feeling, and behaving in relation to the COVID-19 pandemic and the physical distancing[1] measures in place at the time. A large percentage of respondents (N=732, 71.8%) had previously completed the same questionnaire in Survey 1 (N=999) from 3–6 April 2020.

The aim of this project is to guide decision-making on how we manage disease transmission and promote community resilience. This rapid report on the findings of Survey 2 has been prepared to inform current debate. More detailed analyses will be provided in follow-up reports and/or academic articles. We have previously reported findings from our preliminary analysis of Survey 1[1].

KEY FINDINGS

1. KEY CONCERNS, EXPERIENCES AND BEHAVIOURS IN RELATION TO COVID-19 FROM AN INDIVIDUAL PERSPECTIVE:

At Survey 2, **11.5%** of respondents had been required to self-isolate. Of these, **86.5% reported that they mostly (31.1%) or completely (55.4%)** followed the guidelines.

19.9%

At Survey 2, **19.9%** of respondents reported symptoms indicating high levels of **anxiety**, and **17.0%** reported symptoms indicating high levels of **depression**.

At Survey 2, respondents reporting **higher feelings of hope** for their future were more likely to report **lower levels of depression and anxiety.**

95%

At Survey 2, on a scale of 1-10 (where 1 = not confident at all and 10 = extremely confident), **95.4% of respondents were confident (6 – 10 on the scale) that they could manage** until the restrictions due to COVID-19 are over.

At Survey 2, a high percentage of respondents (76.6% to 95.2%) reported using **personal hygiene measures**.

Respondents level of **worry** about the pandemic **reduced** between Survey 1 and 2, however, there was still both ongoing and new issues causing concern.

Although there was a significant decrease in mean anxiety scores[2] between Survey 1 (6.9) and Survey 2 (6.4), the percentage of respondents who reported **high levels of anxiety increased** between Survey 1 (15.4%) and Survey 2 (19.4%).

[1]The term 'physical distancing' refers to the measures recommended to slow the spread of viruses (e.g. staying 1.5 metres away from others, avoiding handshakes etc.). This term has replaced 'social distancing' which was commonly used in the early response phase of the pandemic.
[2]As measured with the Hospital Anxiety and Depression Scale a score of 0-7 is classed as normal.

KEY FINDINGS

2. KEY CONCERNS, EXPERIENCES AND BEHAVIOURS IN RELATION TO COVID-19 FROM A SOCIAL PERSPECTIVE:

At Survey 2, the majority **(96%)** of respondents reported applying **physical distancing** rules – i.e. 'keeping 1.5 metres away from others, not shaking hands'.

- This result was similar in Survey 1 (97%), suggesting that respondents were maintaining behaviours they had been asked to carry out to reduce the spread of COVID-19.

At Survey 2, being able to **rely on a large number of people** for assistance or support during the pandemic was significantly associated with **lower levels of anxiety and depression**, however, 9.9% of respondents reported having no one to rely on.

At Survey 2, respondents **who had a larger number of people who relied on them** for assistance or support showed lower levels of anxiety and depression.

At Survey 2, higher levels of community connectedness were significantly associated with **lower levels of depression and anxiety**. This is consistent with the findings reported for Survey 1.

3. PERCEPTIONS AND FEELINGS RELATED TO AUSTRALIA AND THE WORLD'S MANAGEMENT OF THE COVID-19 PANDEMIC:

52.8%

At Survey 2, **52.8%** of respondents were **confident that Australia could manage** until the restrictions due to COVID-19 are over (ranging from 6-10 on the scale with 8% indicating they were extremely confident).

Survey 1

Survey 2

Considering only those who responded to both Surveys, the percentage of respondents who reported **being worried** about the COVID-19 outbreak in Australia **decreased between Survey 1 (84.0%) and Survey 2 (69.2%)**.

- In higher[3] incidence jurisdictions, this reduced from 81.2% to 68.1%
- In lower incidence jurisdictions, this reduced from 85.0% to 67.8%

Respondents who were **less worried about the COVID-19 outbreak in Australia** at Survey 2 (compared to Survey 1) had an average increase in non-household contacts (**1.37 more contacts** on average than Survey 1).

- Those in higher[3] incidence jurisdictions had an average increase of 0.35 non-household contacts.
- Those in lower incidence jurisdictions had an average increase of 2.35 non-household contacts.

[3]Higher incidence jurisdictions were those states and territories who reported >30 incident cases on at least one day as of May 6 2020, i.e. New South Wales and Victoria.

OVERVIEW OF METHODOLOGY

BACKGROUND

From 16 March 2020, national, state and territory governments in Australia progressively implemented physical distancing measures to reduce community transmission of COVID-19 in Australia. These measures directly affected the entire Australian population. By 29 March, all Australians were strongly advised to leave their homes only for limited essential activities and public gatherings were limited to two people. These measures were in addition to self-isolation advice for (mild) confirmed cases and their contacts, as well as for returned travellers. The specific measures, the intensity and timing of their implementation, and the level of government enforcement varied across states/territories. Restrictions remained in place in most states/territories on 6 May (timing of Survey 2). Western Australia and the Northern Territory commenced easing of restrictions on 27 April and 1 May, respectively.

PROJECT AIMS

This project aimed to a) gain real-time understanding of how people in Australia were thinking, feeling and behaving in relation to the COVID-19 pandemic and distancing measures; and b) explore how this changed over time.

STUDY DESIGN SUMMARY

A baseline survey **(Survey 1)** was carried out online from **3–6 April 2020.**

- The sample size of Survey 1 was **999 Australian** residents aged 18 years and over.

A second survey **(Survey 2)** was carried out online from **28 April–6 May 2020**.

- The sample size of Survey 2 was **1020** Australian residents aged 18 years and over.
- Of the 1020 respondents, 732 (71.8%) had previously completed Survey 1.

Results were weighted and are representative of the adult population in Australia.

Surveys were timed to occur in response to key changes in epidemic activity and public health policy.

DATA COLLECTION AND ANALYSIS

The two Surveys were based on one developed and conducted by Imperial College in the UK in mid-March 2020 [2]. Some questions in the Australian version were modified slightly to reflect local response measures and terminology. Additional questions were also added in the Australian version to capture social and emotional impacts. Data collection in both the UK and Australia was conducted by the online market research agency YouGov.

We used a structured questionnaire addressing four domains (listed below), with one open-ended question to allow people to express their main concern regarding the COVID-19 pandemic.

Questionnaire domains:

- Risk and consequences of COVID-19 infection.
- Measures taken by individuals to protect themselves and others from COVID-19 infection.
- Ability and willingness to self-isolate.
- Social and emotional impact.

The questionnaire was administered online to members of the YouGov Australia panel of individuals who have agreed to take part in surveys of public opinion (over 120,000 Australian adults). Panellists, selected at random from the base sample, received an email inviting them to take part in a survey, which included a generic survey link. Once a panel member clicked on the link and logged in, they were sent to the survey most relevant to them available on the platform at the time, according to the sample definition and quotas based on census data.

For the purposes of this second rapid report, a descriptive analysis of the results was conducted for all responses from Survey 2. To assess changes in responses, preliminary analyses were also conducted for those who had completed Survey 1 and Survey 2. Due to the variation in restrictions and in active cases across Australia, we have conducted some analyses which differentiated between high incidence and low incidence states and territories. Higher incidence jurisdictions were those states and territories who reported over 30 incident cases on at least one day as of May 6 2020 i.e New South Wales and Victoria.

The question requiring a free text response was: "What is your biggest concern at the moment?" All respondents answered the question as it was mandatory. Thematic coding was conducted, informed by Framework analysis [3] which was designed to code qualitative data in order to inform policy and practice. The data reported here are primarily a sub-section of the total coding frame, designed to illustrate key points in the quantitative analysis. The remainder of the data will be used in subsequent publications.

STRENGTHS

YouGov conducts its public opinion surveys online using a method called Active Sampling for all nationally representative research. Restrictions are put in place to ensure that only the people contacted are allowed to participate. This means that all the respondents who complete YouGov surveys have been identified by YouGov as meeting the criteria for inclusion in the sample.

Panel members are recruited using a range of methods: including standard advertising and strategic partnerships with a broad range of websites. Socio-demographic information is recorded when a new panel member is recruited. For nationally representative samples, YouGov draws a sub-sample of the panel that is representative of Australian adults in terms of age, gender, region and education.

LIMITATIONS

The study sampling strategy did not allow for surveying individuals without internet access, low literacy or limited English language skills, or communication or cognitive difficulties.

Sub-group analyses may be limited by small numbers of participants from those groups. Additionally, data quality checks showed that a small number of respondents provided different responses across Surveys for questions where we would expect the response to remain consistent (e.g. Having tested positive for COVID-19). Sensitivity analyses demonstrated that removing these respondents did not impact the results.

It is acknowledged that people who register to do YouGov surveys may be different from the general population in ways that we cannot identify, and this may influence the findings.

There are also limitations in the qualitative data. There is only one free text response, so it is impossible to conduct fine-grained coding to align with quantitative variables. The question asked about "your biggest concern". This could be interpreted as requiring only one response, which many respondents provided. However, many respondents also provided up to four or five responses. We therefore do not know if there would have been more extensive responses had the question asked about concerns in the plural. However, the number and range of responses provide useful insights to illustrate and illuminate the quantitative findings and potentially stimulate more general hypotheses by reference to appropriate theory.

RESULTS

The results have been structured to show the three levels of focus for the questions which asked respondents to report on their personal circumstances, their social context and their perspective of what is happening in Australia and internationally. We have reported on the results from all Survey 2 respondents and longitudinal results from those who completed Survey 1 and Survey 2.

Based on international consensus, there are five elements considered essential to supporting people confronted with large scale-disaster and loss in the immediate and mid-term [4]. These elements are to promote: a sense of safety; calm; a sense of self- and community efficacy; connectedness; and hope. The results presented provide insight into how these elements interacted with respondents' mental health and wellbeing.

1. INDIVIDUAL LEVEL

WHAT WERE PEOPLE'S WORRIES AND CONCERNS?

SURVEY 2

Of those who had **not tested positive** for COVID-19, 29.7% of respondents believed it was likely they would be infected at some point in the future. Perceived severity of COVID-19 infection:

- **8.4%** believed that COVID-19 infection would be **life-threatening.**
- **14.6%** believed that it would be **very severe** (requiring hospitalisation).
- **41.2%** believed that it would be **moderate** (requiring self-care and rest in bed).
- **25.1%** believed they would have **no symptoms or mild symptoms** (i.e. capable of continuing with daily tasks).

The remainder responded 'don't know/not sure' or 'prefer not to answer'.

Older adults were more likely than younger adults to believe that COVID-19 infection would be life-threatening or very severe (Figure 1).

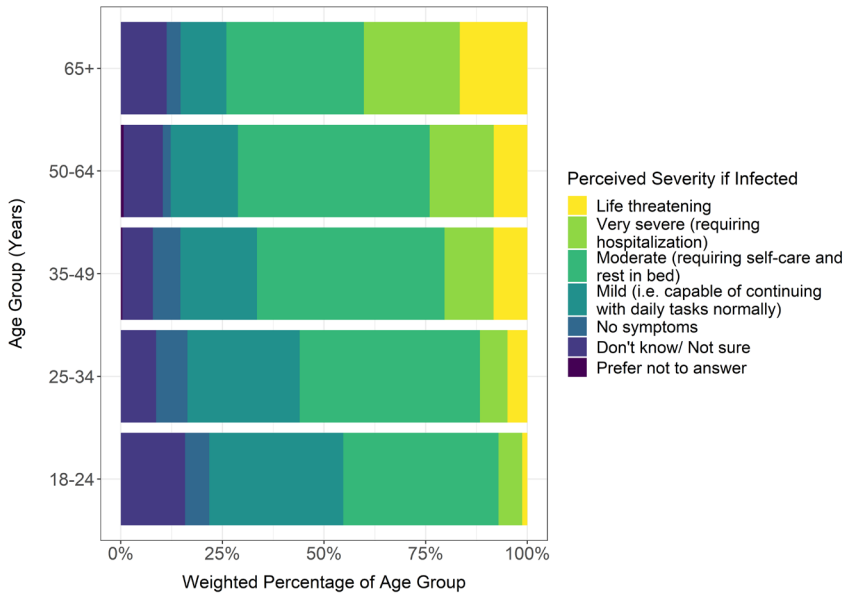


Figure 1: Perceived severity of COVID-19 infection by age group in Survey 2.

LONGITUDINAL SUBSAMPLE

Fewer respondents believed it was likely they would be infected with COVID-19 at some point in the future at Survey 2 (29.6%) compared to Survey 1 (38.2%) (Figure 2). This change was similar across lower and higher[4] incidence jurisdictions. There was little difference in respondents' perceived severity of COVID-19 infection between Surveys (Figure 3).

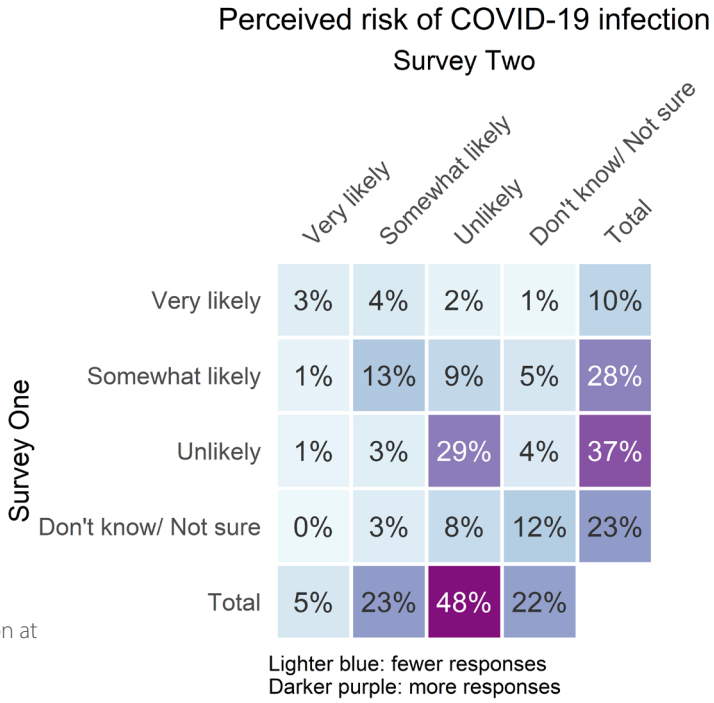


Figure 2. Perceived risk of COVID-19 infection at Survey 1 compared to Survey 2.

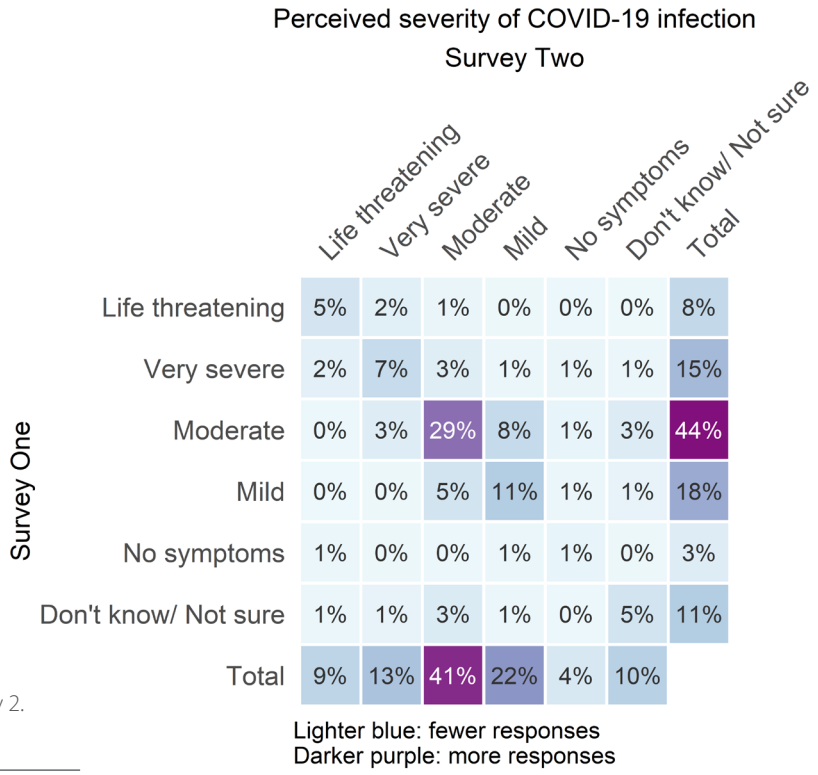
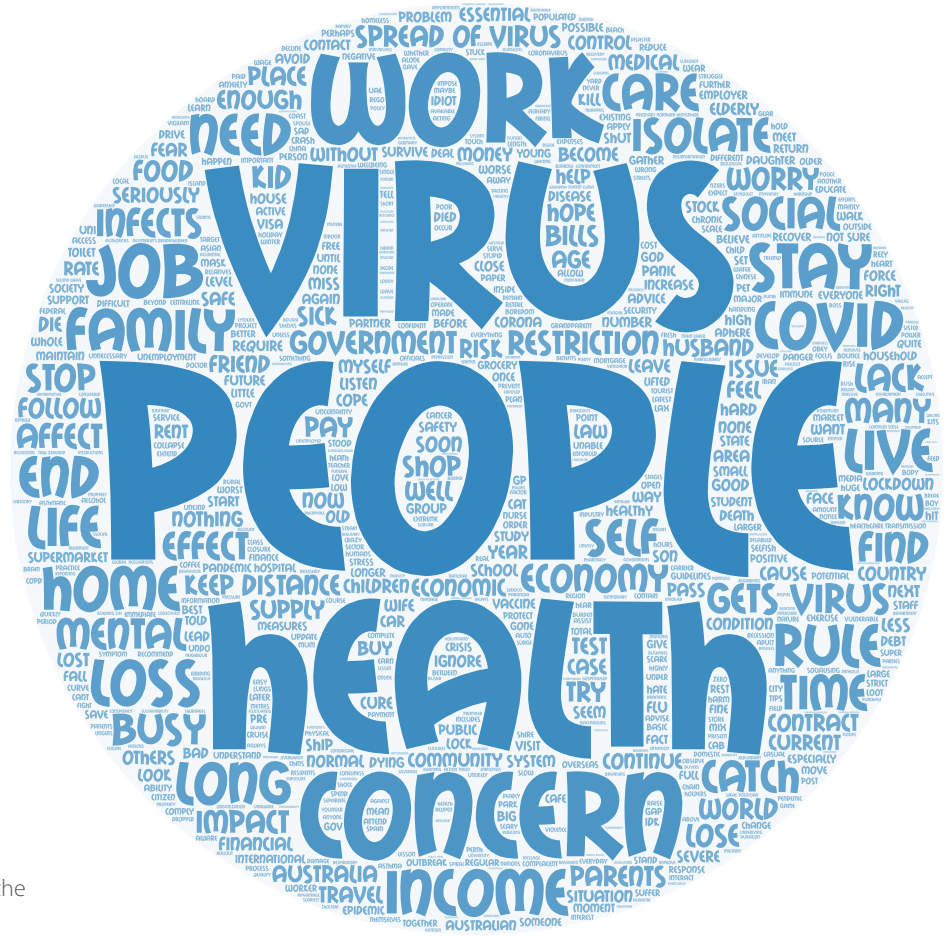


Figure 3. Perceived severity of COVID-19 infection at Survey 1 compared to Survey 2.

[4]Higher incidence jurisdictions were those states and territories who reported >30 incident cases on at least one day as of May 6 2020, i.e. New South Wales and Victoria.

A global qualitative analysis of the entire data set revealed differences in the words used to describe worries between Surveys. These are displayed on Wordclouds which pictorially display the frequencies with which respondents used particular words – words used more frequently are proportionally larger than words used infrequently in responses. Wordcloud 1 shows words used at Survey 1. The dominant themes are people, virus and health. There are also many different words expressing concern about economy, income and family and social factors.



Wordcloud 1. Words respondents used to describe their biggest worry in relation to the COVID-19 pandemic at Survey 1.

Wordcloud 2 shows that at Survey 2, people remained the dominant concern. However, the themes of virus and health had decreased in number. There was a large increase in the word restriction, and more mentions of economy. These differences, considered along with data reported later about consideration of a second wave of virus, suggest a shift from short to longer term concerns.

Wordcloud 2. Words respondents used to describe their biggest worry in relation to the COVID-19 pandemic at Survey 2.

In Survey 1 a code relevant to risk and severity is the virus's characteristics. Respondents referred to it by emotive names such as *"this rotten thing; this disgusting disease."* Some were scared by particular features like "*Not having any symptoms but still having the virus"* and *"The virus is invisible."* Others were scared that doctors and scientists did not *"understand the implications of the virus"* and… *"the basic biological processes involved with the disease"*, affecting their capacity to make recommendations:

> *"This is a new disease. Since the start of the pandemic, the uncertainty with the changing boundaries as to how to avoid this disease. I doubt our medical professionals and government are confident on recommendations and action taken."*

There was extensive concern about the potential for the virus to spread, resulting in more deaths in Australia and internationally. There was particular concern about *"plenty of undetected cases roaming around outside and could potentially spread it to others."*

By the time of Survey 2, the words used to describe the virus were very different. There were fewer emotive statements about the scary or unknown characteristics of the virus. There were similar comments about spread in the virus, but with the addition of comments about *"lack of herd immunity"* and *"winter coming"*. There was also a significant new theme about the possibility of *"a new spike"*, *"a second wave"*, *"the virus coming back"*. Some thought the health system would not be able to cope. Other had very serious personal concerns:

> *"The fact I am due to have my first child any day and we are unsure if there will be a second wave or if we have this fully under control. Especially as we are assuming that babies are not as affected but there's not enough research on it."*

This shows that even though there were reduced levels of worry about the pandemic from Survey 1 to Survey 2 there were still both ongoing and new issues causing concern.

HOW WILLING AND ABLE WERE PEOPLE TO SELF-ISOLATE?

SURVEY 2

Self-isolation was defined as 'staying at home if you have COVID-19 or have been in close contact with a confirmed case of COVID-19 or meet travel quarantine requirements.'

Of respondents who had been required to self-isolate (11.5%), 86.5% reported at Survey 2 that they mostly (31.1%) or completely (55.4%) followed guidelines.

The following difficulties were reported with following guidelines during self-isolation[5]:

Accessing instructions (36.9%)

"No clear information, how long will this continue"

Separating from others in my household (42.1%)

"My 37yo islander wife of 6 years went to her home island (Pohnpei) for her brother's funeral in January (I couldn't go due to having a triple heart bypass last October). She had to stay for her mother's funeral in February and is now unable to return to Australia because of COVID-19. I have multiple morbidities and am 63yo so I fear I will never see my wife or step-children again. I have no avenues of getting assistance so I appear to be slipping through the cracks and no one cares. Beyond Blue and Lifeline also say they cannot help. Anyway, it doesn't matter."

Getting supplies (45.9%)

"Getting supplies and equipment to maintain my business."

Negative mental health effects (48.2%)

"My mental health. Not being able to do my regular things that keep me happy."

Negative social life effects (58.7%)

"Working from home during the long winter ahead, not getting enough exercise and social interactions."

Income loss (52.6%)

"No jobs available, and we are not eligible for any government handouts so we are living off our savings, which we think will last us 2 years so if we don't get jobs then we will be forced to sell our house."

Caring responsibilities (36.6%)

"If I were to get it there would be no one to take care of my children during the day while my husband works. He is our only income."

Maintaining studies (40.7%)

"My university degree being somewhat on hold as I'm supposed to be on placements which have been cancelled. This means a delayed graduation (financial, emotional strain) and will impact my employability in the eyes of my employers (not enough practical experience)".

[5]Quotes provided are examples of all responses to the question 'What is your biggest concern at the moment?', not only those required to self-isolate.

Attending medical visits (37.3%)

"Not being able to attend the doctor for non COVID-19 related medical issues"

The 88.5% of respondents who had **not** been required to self-isolate reported high levels of **willingness (91.7%) and ability (95.4%)** to self-isolate for 14 days if advised to do so by a health professional:

- The most frequently perceived difficulties to self-isolate were 'separating from others in my household' (52.4%) and 'getting supplies' (41.9%).
- Older adults were more likely than younger adults to report 'medical visits' as a perceived difficulty.
- Younger adults were more likely than older adults to report potential 'income loss' and 'negative effects on their mental health' as perceived difficulties.

HOW WERE PEOPLE'S CONCERNS AND PERCEPTIONS RELATED TO THEIR ADHERENCE TO INDIVIDUAL PREVENTION MEASURES?

This section examines how the change in reported perception of risk of infection and level of worry regarding the COVID-19 pandemic is associated with the changes in numbers of non-household contacts made and adherence to certain preventative measures. Associations are not necessarily causal as there are many factors impacting these changes on which information was not collected, and so we cannot establish a clear causal link.

Non-household contacts and perceived likelihood of infections

LONGITUDINAL SUBSAMPLE

For repeat respondents, the mean change in reported non-household contacts[6] in the previous 24 hours showed an increase of 0.7 additional contacts at Survey 2 compared to Survey 1. This varied by change in perceived likelihood of being infected.

At Survey 2, those who believed they were less likely to be infected had a mean reduction in non-household contacts (1.83 fewer contacts on average than Survey 1). This varied slightly between lower incidence (0.75 fewer contacts) and higher[7] incidence (1.10 fewer contacts) jurisdictions.

Those who showed no change or an increase in perceived likelihood of infection at Survey 2, showed a slight increase in non-household contacts (0.15 additional contacts on average).

[6]Contact was considered either a face to face conversation of at least three words or any form of physical contact, such as a handshake."

[7]Higher incidence jurisdictions were those states and territories who reported >30 incident cases on at least one day as of May 6 2020, i.e. New South Wales and Victoria.

Multinomial logistic regression showed that those who perceived themselves to be less likely to be infected by COVID-19 at Survey 2 had a 1.1-fold [95% CI: 0.65, 1.86] increase in odds of reporting fewer non-household contacts at Survey 2 than those who reported no change in perceived likelihood of being infected.

While these results may seem counter-intuitive, it is possible that rather than perceived likelihood of being infected influencing prevention behaviours, behaviours may be influencing respondents' perceived likelihood of being infected. Respondents may be perceiving themselves as less likely to be infected because they are able to adhere to prevention guidelines and have fewer non-household contacts.

Adherence to prevention measures

SURVEY 2

In Survey 2, a high proportion of respondents reported applying personal hygiene measures (ranging from 76.6% to 95.2%, Figure 4).

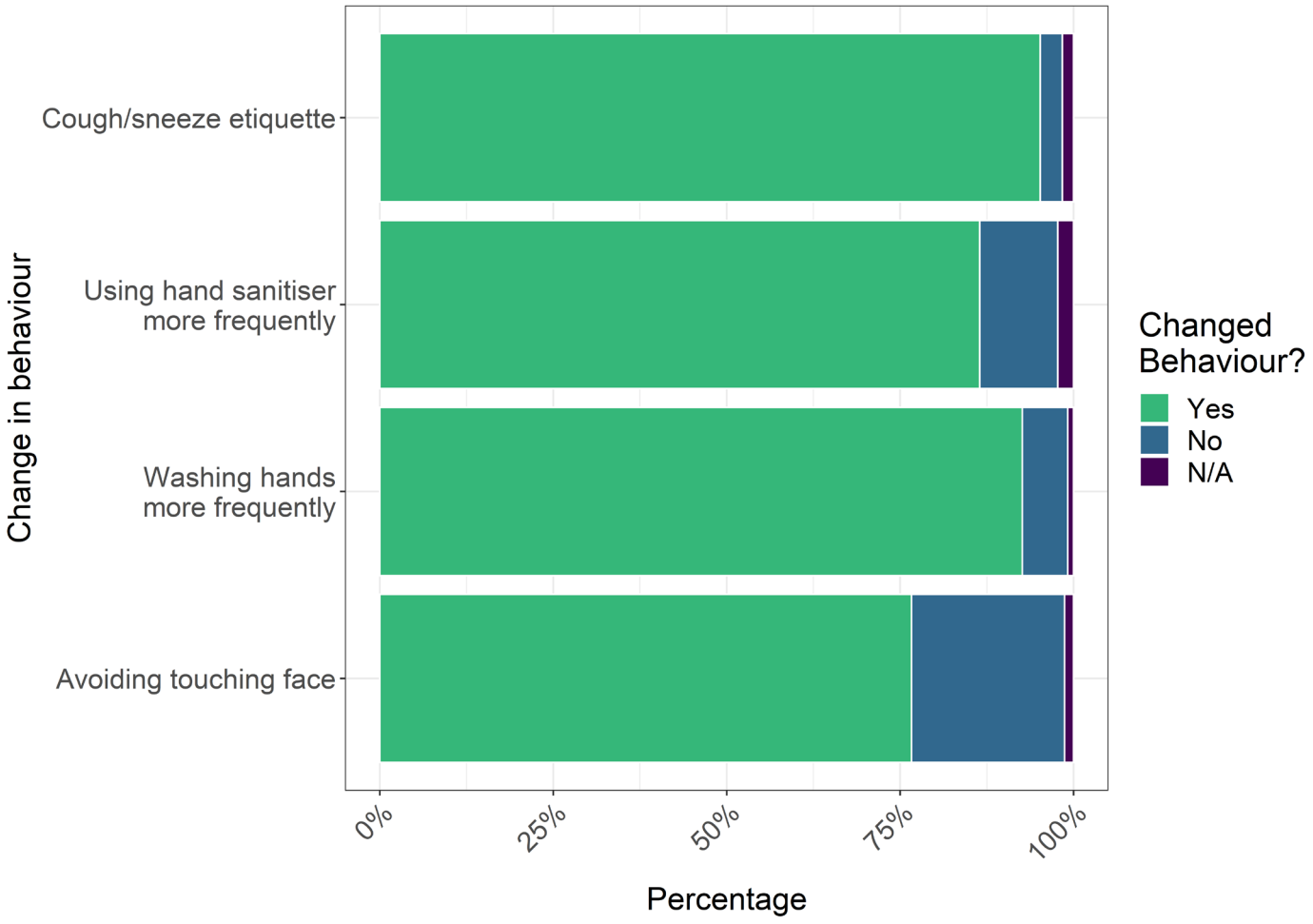


Figure 4. Percentage of respondents reporting applying personal measures to protect themselves and others from COVID-19 infection. N/A = Not applicable to me.

LONGITUDINAL SUBSAMPLE

There was a small decrease in the percentage of respondents washing their hands more frequently at Survey 2 (92.1%) compared to Survey 1 (94.6%). This change was due to decreases in higher incidence jurisdictions[8] (Survey 1: 94.3%, Survey 2: 89.3%) rather than lower incidence jurisdictions (Survey 1: 95.9%, Survey 2: 95.3%).

Given the small numbers of individuals who reported a change (Table 1), there was insufficient data to make any meaningful conclusions for how the change in adherence is associated with level of worry and/or perception of risk. It does, however, indicate that behaviours had not waned between the two surveys, and people were still complying with the public health measures in place at the time.

Table 1 Number of participants reporting a change in adherence to increased hand washing habits, against the change in number of contacts, between Survey 1 and Survey 2.

CONTACTS

	HAND WASHING			
	Less adherent	No change	More adherent	
Fewer contacts	11	179	3	**193**
No change	8	250	5	**263**
More contacts	13	249	7	**269**
	32	**678**	**15**	

Using Cramer's V measure of correlation, there was no evidence of correlation (0.037 [95% CI: 0.018, 0.101]) between a change in contacts and change in adherence to hand washing.

[8]Higher incidence jurisdictions were those states and territories who reported >30 incident cases on at least one day as of May 6 2020, i.e. New South Wales and Victoria.

WHAT WAS THE SOCIAL AND EMOTIONAL IMPACT OF COVID-19?

SURVEY 2

At Survey 2, 19.9% of respondents reported symptoms indicating high levels of anxiety, and 17% of respondents reported symptoms indicating high levels of depression.

Among the Survey 2 respondents, 65.1% were either somewhat or very optimistic about their future. People experiencing higher feelings of hope for their future were more likely to report lower levels of depression and anxiety. Feelings of hope also emerged in the answers to the survey's open question on people's biggest concern: *"I don't want to imagine anything negative right now, hope for the best"* and *"That we all stay positive"*.

On a scale of 1-10 (where 1 = not confident at all and 10 = extremely confident), 95.4% of survey respondents were confident (6 – 10 on the scale) that they could manage until the restrictions due to COVID-19 are over.

LONGITUDINAL SUBSAMPLE

At Survey 2, 70.6% of respondents said they 'definitely' or 'usually' could sit at ease and feel relaxed, compared to 66.1% at Survey 1.

In our longitudinal subsample, there was an increase in people's mean scores (from 8.0 to 8.5) in relation to feeling confident that can they manage until the restrictions due to COVID-19 are over. On a scale of 1 – 10 (where 1 = not confident at all and 10 = extremely confident), 68.1% of respondents scored between 6 and 10 on the scale, compared to 67.9% at Survey 1.

In our longitudinal subsample, there was a significant **decrease in mean anxiety scores** between Survey 1 (6.9) and Survey 2 (6.4). However, the percentage of respondents who **reported high levels of anxiety** at Survey 2 (19.4%) increased in comparison to Survey 1 (15.4%).

2. SOCIAL LEVEL

HOW DID PEOPLE PRACTICE PHYSICAL DISTANCING BEHAVIOUR TO PREVENT THE SPREAD OF COVID-19 INFECTION?

SURVEY 2

Noting that some questions didn't apply to all respondents, a high proportion of respondents reported applying physical distancing measures (ranging from 28.6% to 96.0%). In particular, 96.0% reported applying distancing rules, 'keeping 1.5 metres away from others, not shaking hands', and 91.0% reported avoiding gatherings of greater than two people who were not members of their household (Figure 5).

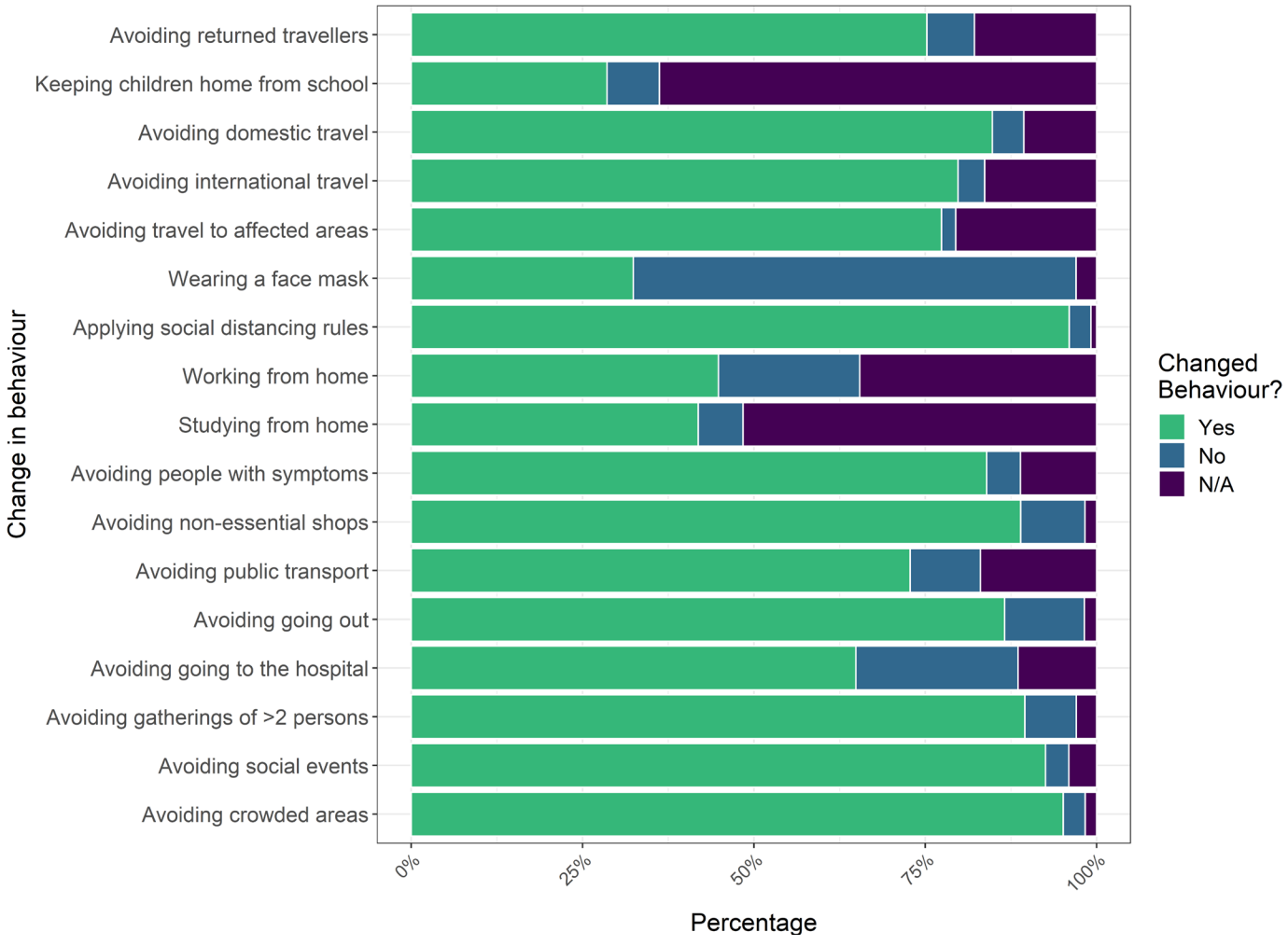


Figure 5. Percentage of respondents taking measures to protect themselves and others from COVID-19 infection. Note that Keeping children home from school = "Keeping your children home from school when the school was open". N/A = Not applicable to me.

At Survey 2, 52.1% of respondents reported having contact with fewer than two people outside of their household unit in the previous 24 hours. Younger adults were more likely than older adults to report having a high number of contacts (Figure 6). However, the number of contacts was also linked to profession, with respondents working in health and medical services, air travel, restaurant services and retail more likely to report a high number of contacts outside of their household unit.

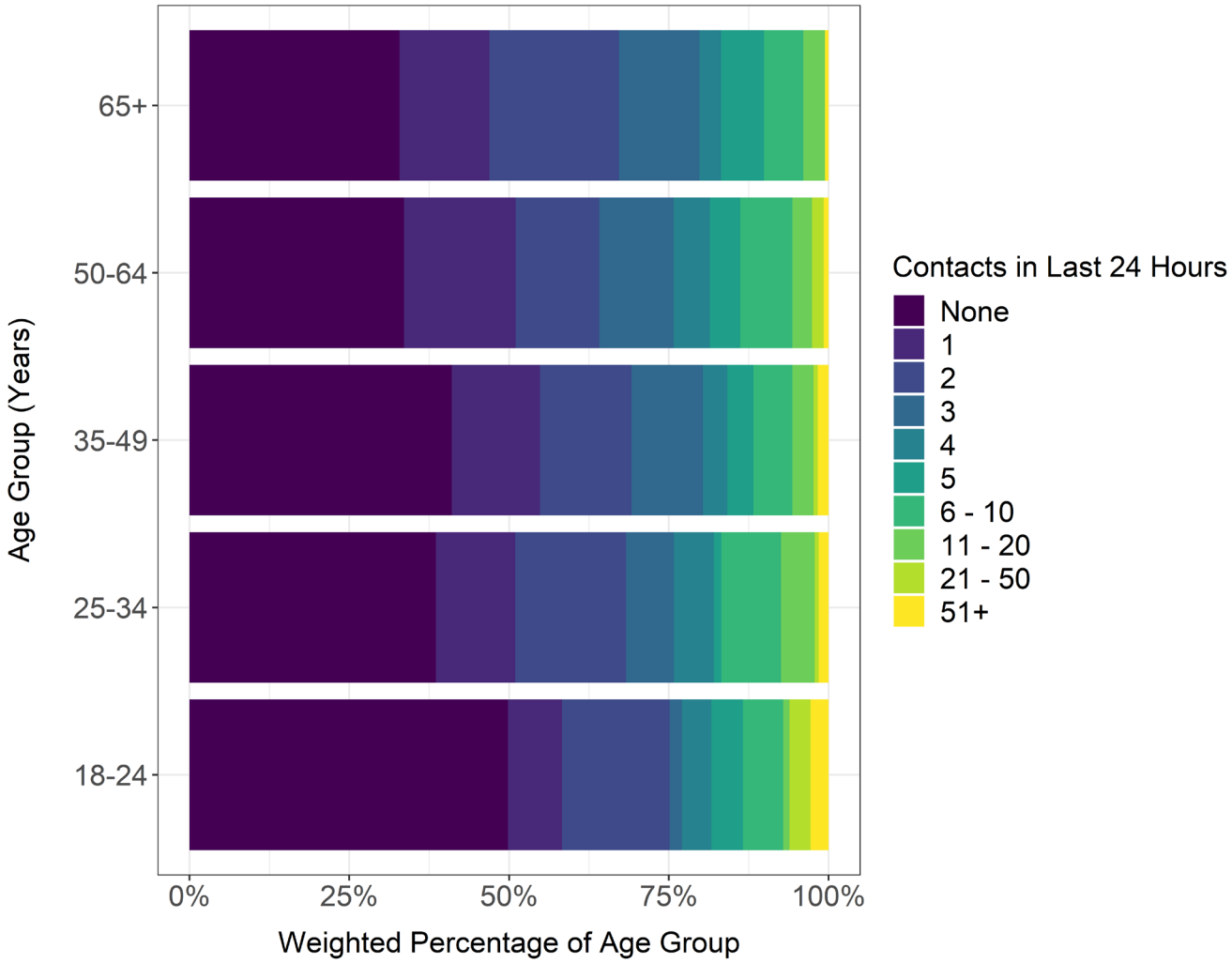


Figure 6. Number of reported non-household contacts in previous 24 hours by age group.
Note that contact was 'considered either a face to face conversation of a least three words or any form of physical contact, such as a handshake'.

LONGITUDINAL SUBSAMPLE

In the longitudinal subsample, there was little difference in specific 'micro-distancing'[9] measures (keeping 1.5 metres away from others, not shaking hands) between Survey 1 (97.0%) and Survey 2 (96.5%). This suggests people are maintaining the behaviours they have been asked to carry out to reduce the spread of COVID-19. There was a slight increase in adherence in lower incidence jurisdictions (Survey 1: 97.3%, Survey 2: 98.6%) whereas there was a very small decrease in higher[10] incidence jurisdictions (Survey 1: 96.9%, Survey 2: 96.5%).

Additionally, in the longitudinal subsample, there was an increase in the number of people reporting 2-3 non-household contacts and a decrease in the number of people reporting 0 non-household contacts (Figure 7).

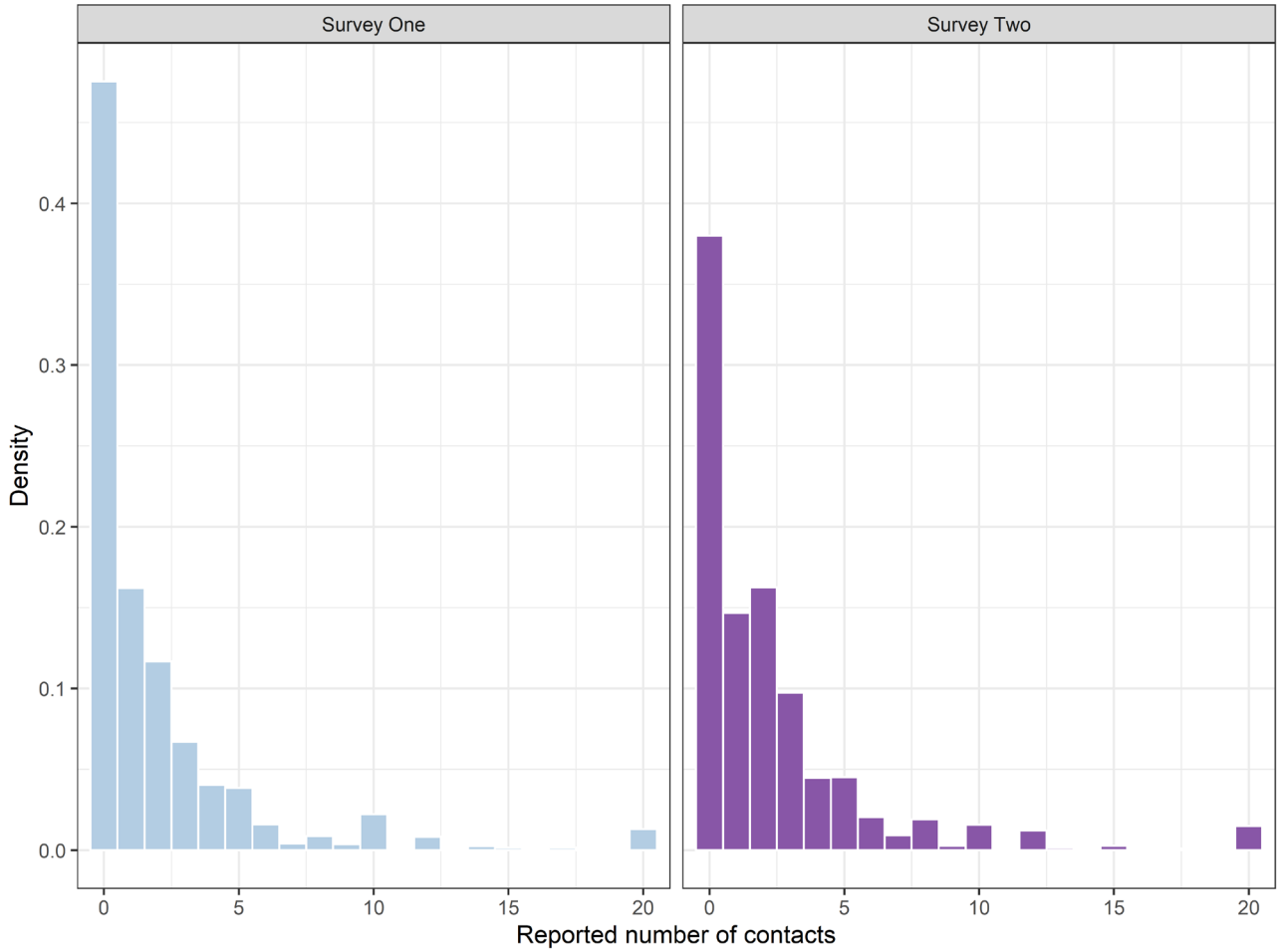


Figure 7. Reported number of non-household contacts at each Survey (Note: histogram truncated at max 20 contacts, to better visualise spread values >20 which comprises of only 3% of respondents).

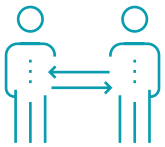
[9]Micro-distancing measures are those that reduce the likelihood of infection, given contact.
[10]Higher incidence jurisdictions were those states and territories who reported >30 incident cases on at least one day as of May 6 2020, i.e. New South Wales and Victoria

How were people's concerns and perceptions related to their adherence to specific physical distancing measures?

LONGITUDINAL SUBSAMPLE

There was a high level of adherence to specific 'micro-distancing'[11] [5] measures (keeping 1.5 metres away from others, not shaking hands) in Survey 1 and Survey 2. As a result, there were few participants reporting a change in adherence to these specific measures (Table 2). Given the small numbers of individuals who reported a change, there was insufficient data to make any meaningful conclusions for how the change in adherence is associated with level of worry and perception of risk.

Table 2 Count of participants reporting a change in adherence to "micro-distancing" measures (keeping 1.5 metres away from others, not shaking hands) between Survey 1 and Survey 2.



CONTACTS

	PHYSICAL DISTANCING			
	Less adherent	No change	More adherent	
Fewer contacts	13	189	2	**204**
No change	4	252	4	**260**
More contacts	4	261	4	**269**
	21	**702**	**10**	

Using Cramer's V measure of correlation, there was no evidence of correlation (0.019 [95% CI: 0.017, 0.087]) between a change in contacts ("macro-distancing") and change in adherence to micro-distancing measures (keeping 1.5 metres away from others, not shaking hands). Micro-distancing measures reduce the likelihood of infection, given contact [5].

[11] Micro-distancing measures are those that reduce the likelihood of infection, given contact.

How did COVID-19 affect people's connection to others?

SURVEY 2

At Survey 2, higher levels of community connectedness were significantly associated with lower levels of depression and anxiety. This is consistent with the findings reported for Survey 1.

Among respondents, 68.7% said they could rely on two people or more for assistance or support during the pandemic if they needed it. Meanwhile, 9.9% reported that they had no one to rely on. Being able to rely on a larger number of people for assistance or support during the pandemic was significantly associated with lower levels of anxiety and depression.

Additionally, 68.4% of respondents said that two or more people relied on them for assistance or support during they pandemic. People who had a larger number of people who relied on them for assistance or support showed lower levels of anxiety and depression.

Free text responses in both Surveys revealed evidence of altruism expressed in concerns for other groups of people, society in general and social justice.

Respondents were concerned about *"the loss of jobs of many vulnerable groups in the society, leading to unemployment and homelessness:" "temporary residents"* and *"survival of the less privileged in the society"*

Some said that while they were *"financially OK,"* they were *"concerned for the world in general and the impact on those who have lost more"* leading to *"an even larger gap between the rich and the poor."* A small number of respondents were concerned for their employers:

> *"If I had to self-isolate, would have a dramatic impact on my employer; I would find that hard to deal with."*

There were more responses about altruism and social justice in Survey 2 than in Survey 1, for example:

> *"I am fine. My biggest concern is for those who are not or will not be. That I will catch it without knowing and pass it on to the more vulnerable."*

Some also spoke of concerns about domestic violence, aggressive behavior and crime:

> *"People spit at each other and hurl hurtful comments. I'm really scared it might happen when I travel to work and at work."*

Survey 2 revealed a new and dominant theme of the link between community complacency, distancing and a second wave of virus. Respondents in this category were not so much blaming people, but suggesting that as time goes by there is a natural tendency to become complacent, contributing to a second wave, for example:

> *"Life getting back to normal as quickly as possible but decreasing a second wave, I believe people are becoming very complacent at the moment with a lot more people out and about and not at home"*

> *"Australians will become complacent, and the second wave of outbreaks will not be able to be controlled effectively."*

High numbers of respondents in both Surveys provided free text responses criticizing the behaviour of other people, suggesting some sort of moral, character or behavioural flaw. In Survey 1 there were more concerns about such behaviour: 113 people spoke of 'Not adhering to rules' and 20 about 'Hoarding and panic buying'. Concerns about behaviour were linked to the invisibility of the virus and young people's actions:

> *"Having to go to work and care and interact with young people and I don't know where they have been or with whom."*

Some respondents were blunter:

> *"People ignoring good advice and being dickheads and going to parties and travelling interstate. Maybe the worst once are people over 65 travelling as "grey nomads" and young people who think they will only get a mild virus."*

> *"When I have to shop people are not social distancing so I am using my walking stick, by putting it in front of me when people are within 1.5 m. People don't seem to understand what 1.5m looks like."*

Many invoked the *"She'll be right mate good old Aussie attitude and naysay the dangers."* This sometimes went further: making moral judgements about the deserving and the non-deserving:

> *"Dole recipients getting more money for nothing. They have not been adversely affected by this. Many have not worked for a long time. My hard earned tax dollars are going to people who do not deserve it. Give it to people who have lost their jobs through no fault of their own."*

High profile groups were also mentioned, such as *"National Rugby League players setting a poor example for the rest of the country thinking…they are above the rest of the country"* and *"Backpackers coming into our rural areas."*

More extreme accounts were that *"Tradesmen seem particularly bad, had one openly cough on me, others hold out their hands for handshakes and get grumpy when you decline. Most mock you for taking precautions."*

Respondents expressed fear of a second wave of the virus as an outcome of these descriptions of "*bad behavior"* and some advocated for police and military enforcement of government rules about distancing.

3. PERCEPTIONS AND FEELINGS ABOUT AUSTRALIA AND THE WORLD

LEVEL OF WORRY REGARDING THE COVID-19 PANDEMIC

SURVEY 2

In Survey 2, 67.8% of respondents reported being worried about the COVID-19 outbreak in Australia. Respondents aged 65+ years were most likely to report being worried compared to other age groups.

LONGITUDINAL

Considering only those who responded to both Surveys, the percentage of respondents who reported being worried about the pandemic decreased from 84.0% at Survey 1 to 69.2% at Survey 2 (Figure 8).

- In higher[12] incidence jurisdictions, this reduced from 81.2% to 68.1%
- In lower incidence jurisdictions, this reduced from 85.0% to 67.8%

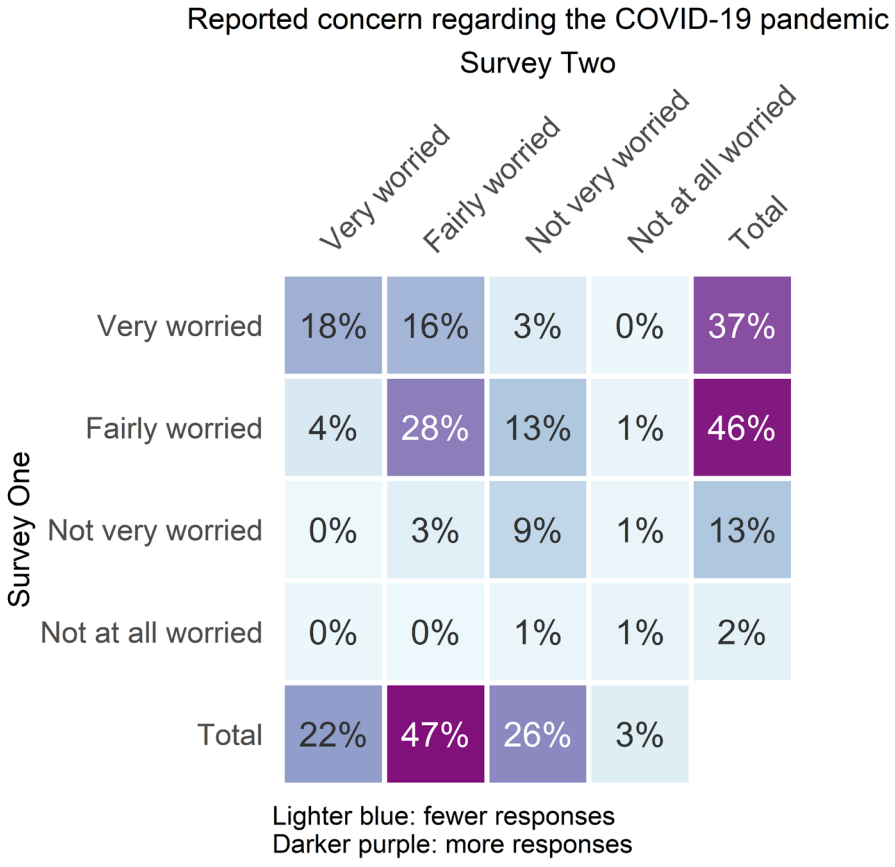


Figure 8. Reported concern regarding the COVID-19 pandemic at Survey 1 compared to Survey 2.

[12] Higher incidence jurisdictions were those states and territories who reported >30 incident cases on at least one day as of May 6 2020, i.e. New South Wales and Victoria.

Associations between a change in the level of worry and change in "macro-distancing" behaviour (i.e. change in reported number of non-household contacts) were also investigated, As previously stated, associations are not necessarily causal as there are likely to be unmeasured factors influencing the

Those who were less worried about the COVID-19 outbreak in Australia at Survey 2 (compared to Survey 1) had a mean increase in non-household contacts (1.37 more contacts than Survey 1).

- Respondents in higher[13] incidence jurisdictions had a mean 0.35 more contacts.
- Respondents in lower incidence jurisdictions had a mean 2.35 more contacts.

Those who were more worried about the COVID-19 outbreak in Australia at Survey 2 (compared to Survey 1) had a mean decrease in contacts (1.11 fewer non-household contacts on average than Survey 1).

- Respondents in higher[13] incidence jurisdictions had a mean 0.36 fewer contacts.
- Respondents in lower incidence jurisdictions had a mean 1.75 more contacts.

Many respondents reported no change in their level of worry about the COVID-19 outbreak in Australia between Survey 1 and Survey 2. However, some respondents reported an increase or decrease in their level of worry between Surveys (Table 3). Compared to respondents whose level of worry did not change between Survey 1 and Survey 2:

- Respondents whose level of worry increased were
  - » more likely to report fewer non-household contacts at Survey 2 (OR: 1.32 [95% CI: 0.66, 2.61])
  - » more likely to report more non-household contacts at Survey 2 (OR: 1.28 [95% CI: 0.67, 2.47])

This increase in both directions would be consistent with two separate groups of individuals: one group that has reduced their number of contacts as a result of their increased worry, and one group that is more worried as a result of being unable to reduce their number of contacts (e.g. frontline workers).

- Respondents whose level of worry decreased
  - » were less likely to report fewer non-household contacts at Survey 2 (OR: 0.82 [95% CI: 0.55, 1.23])
  - » had a similar likelihood of reporting more non-household contacts at Survey 2 (OR: 1.03 [95% CI: 0.72, 1.49])

Table 3. Weighted number of respondents reporting changes in their levels of worry (columns) and number of non-household contacts (rows).

CHANGE IN CONTACTS AT SURVEY 2

	CHANGE IN LEVEL OF WORRY			
	Less adherent	No change	More adherent	
Less contacts	62	116	19	**197**
No change	95	147	18	**260**
More contacts	97	145	23	**265**
	254	**408**	**60**	

[13] Higher incidence jurisdictions were those states and territories who reported >30 incident cases on at least one day as of May 6 2020, i.e. New South Wales and Victoria.

PERCEPTIONS OF THE FUTURE FOR AUSTRALIA AND THE WORLD

SURVEY 2

At the time of data collection for Survey 2, 52.8% of respondents were confident that Australia could manage until the restrictions due to COVID-19 are over (ranging from 6 – 10 on the scale with 8% indicating extremely confident).

Feelings of confidence were also reflected in some of the answers to the survey's open question: *"I am feeling very confident that Australia has beaten this virus so am just looking forward to going out again."*

At Survey 2 there were close to 100 comments about the role of governments in relation to lock downs, distancing and border control. Only a handful sought to ease restrictions early, such as "*Open the border."* The most common worries about easing of restrictions (as opposed to complacency or people's behaviour) were about *"Cancelling restrictions too early"* because:

> *"…the restrictions are starting to be removed due to there being very little cases in Australia, but that doing so might just be the very thing that leads to a boom in COVID-19 cases."*

In Survey 2, 60.4% of respondents were either somewhat or very optimistic about the future of Australia, and 47% felt the same way about the future of the world. Also, higher feelings of hope for the future of Australia and the world were significantly associated with lower levels of depression and anxiety.

LONGITUDINAL SUBSAMPLE

There was an increase in people's mean scores in relation to their confidence that Australia can manage until the restrictions due to COVID-19 are over: on a scale of 1-10 (where 1 = not confident at all and 10 = extremely confident), 66.9% of respondents scored between 6 and 10 on the scale, compared to 62% at Survey 1.

In both Surveys, respondents expressed worries about communication. Some wanted more information, others felt overwhelmed by constant media coverage. Several people were concerned about misinformation and conspiracy theories, sometimes naming conservative commentators known for doubting science.

A new theme to emerge from Survey 2 was balancing concerns about public health and the economy, hoping that *"…the virus can be effectively controlled and the economy can be recovered"* because:

> *"Pitting the economy against health, not realising that the reason why we don't have a COVID-19 crises came at the price of the economy and not the other way around. And that this is the way it should be, you can always recover financially, but that is a bit hard to do if you are dead."*

> *"Continued restrictions are killing the economy & sending many into debt & poverty. The existing balance has been struck by a pessimistic outlook when a more optimistic outlook may have given a similar outcome health wise but a much better outcome for the economy."*

Many respondents to both Surveys used colourful and colloquial language to disparage the capacity, motivation and honesty of governments in general terms. More specific concerns about democracy and a "totalitarian state" included:

> *"The government cancelling parliament. No scrutiny of government measures during COVID-19 outbreak. "*

"Mainly how many of these restrictions will still be in place long after it is over. I fear government taking advantage of this crisis to further oppress the population" (Survey 1).

Some mentioned environment, sustainability and *"That the whole world is collapsing. Our way of life now needs to change."* (Survey 1). A more detailed worry about the relationship between people and planet was:

"I really believe that the virus should have run its course worldwide and killed however many it did. This I feel is nature trying to help the planet and reduce population. Each year there is a new virus and each we have to develop more and more medicines for it. This time I think we've gone a little overboard and the mental, social and economic effects of COVID-19 will leave a lasting legacy of debt and disaster in the world that may never be able to be reversed. I also believe that as soon as restrictions are lifted and the world returns to "Normal" that another such virus??? will develop and we'll be back to square one. Maybe it is needed maybe not but I think many people feel the way I do but are afraid to say so". (Survey 1)

Survey 1 revealed concerns about the behaviours of specific groups such as travellers:

"… people (especially those coming back from overseas) seem to think it's okay to ignore self-quarantine laws and risk other lives…. I think all tourists and non-permanent residents of Australia should be deported immediately."

Although there were relatively few free text comments about race, these are important because qualitative researchers pay attention to so called outliers: smaller numbers of people with striking views. Some respondents made statements about individuals or racial groups which are not socially desirable and even frowned upon. However, they were often linked to statements doubting the motives of Australian and overseas governments and exploring views about totalitarianism. Such statements warrant follow-up research. In both Surveys a few people were concerned about the experience of racism and racial slurs.

Finally, many free text responses to the question about concerns did not have any, or expressed feelings of hope. Roughly half of these respondents wrote *"nothing, I'm not sure, don't know."* The remaining participants qualified their statements with either what they did to stay positive, or some aspect they wished to avoid. In Survey 1, for example, people spoke of having no concerns because *"…I just use common sense";* or *"…I am socially isolated, but I need to go out and do some Church, and painting group, but I am keeping myself busy";* and *"God is driving this bus, leave it up to God. That is why I believe in God, so I don't have to worry about anything."*

In Survey 2 responses included *"nothing as I prefer staying home and not seeing people";* and *"I have plenty of things I can do to be occupied: reading history, gardening, even housework!"*

Numerous expressions of hope included:

"I don't want to imagine anything negative right now, hope for the best."

"That we all stay positive."

CONCLUSION

This online survey aimed to gain an understanding of how people (N=1020) in Australia are thinking, feeling and behaving in relation to the COVID-19 pandemic, and the physical distancing measures[14] in place at the time (28 April – 6 May 2020).

Additionally, we aimed to explore if and how these thoughts, feelings and behaviours may have changed for the 732 respondents who completed the same survey between 3-6 April 2020. This information will help to guide decision-making on how we manage COVID-19 transmission and promote community resilience.

This survey shows the level of worry about the pandemic in Australia decreased between Survey 1 and Survey 2, but there were still ongoing issues and new issues causing concern. The majority (95.4%) of respondents were confident they could manage until the restrictions due to COVID-19 were over, however only 52.8% were confident Australia could manage until the restrictions were over. Respondents who were less worried about the COVID-19 outbreak in Australia had an average increase in non-household contacts (1.37), however respondents residing in higher incidence jurisdictions[15] had a lower average increase (0.35) compared to lower incidence jurisdictions (2.35).

The majority (96%) of respondents reported applying physical distancing rules (i.e. keeping 1.5 metres away from others, not shaking hands), and this was similar to Survey 1 (97%), suggesting that respondents are maintaining the behaviours they have been asked to carry out to reduce the spread of COVID-19. A high percentage of respondents (76.6% to 95.2%) reported applying personal hygiene measures (frequent handwashing, using hand sanitiser, covering face when coughing/sneezing, avoiding touching face) at Survey 2.

Anxiety and depression symptoms were reported by 19.9% and 17.0% of respondents, respectively at Survey 2, and although mean anxiety scores decreased between Surveys, the percentage of respondents reporting high levels of anxiety increased (15.4% to 19.4%). The importance of connections for supporting mental health was highlighted. Having a larger number of people to rely on for assistance or support or being the source of assistance or support for other people was associated with lower levels of anxiety and depression. Higher levels of community connectedness were also associated with lower levels of depression and anxiety.

The results presented need to be interpreted in the context of the limitations of the research design. The sampling strategy did not allow for surveying individuals without internet access, low literacy or limited English language skills, or communication or cognitive difficulties. Additionally, people who register to complete YouGov surveys may also be different from the general population in ways that we cannot identify, which may influence the findings. Subgroup analyses may be limited by smaller participants numbers; and qualitative data was from one free text response, limiting potential analyses.

This rapid report has been produced to disseminate the key findings from Survey 2 and changes observed between Survey 1 and Survey 2. Further data analysis is planned to explore further changes over time and additional subgroup analyses which can be used to inform community recovery from the COVID-19 pandemic. We anticipate that these results will be published through reports and/or academic journals. At the time of this report's publication, all metropolitan and one regional local government areas in the state of Victoria had moved back to stage three restrictions, after an increase in reported cases and community transmission of COVID-19. A third survey is currently planned for Victorian residents to help inform the State's response.

[14]The term 'physical distancing' refers to the measures recommended to slow the spread of viruses (e.g. staying 1.5 metres away from others, avoiding handshakes etc.). This term has replaced 'social distancing' which was commonly used in the early response phase of the pandemic.
[15]Higher incidence jurisdictions were those states and territories who reported >30 incident cases on at least one day as of May 6 2020, i.e. New South Wales and Victoria.

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