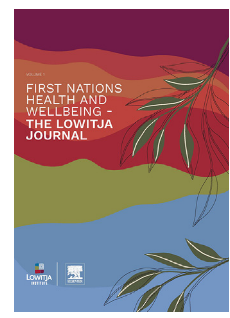

Original Research

A First Nations-led community survey of early COVID-19 pandemic experiences in Victoria, Australia

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Abstract

Purpose During 2020, state and federal government-mandated restrictions and extended lockdowns were implemented in Australia because of the increasing presence of coronavirus disease 2019 (COVID-19). In response to COVID-19 and restrictions, First Nations communities and organisations across Australia developed resources and strategies for support. The state of Victoria experienced the lengthiest lockdowns in Australia. This study aimed to describe the health and sociocultural experiences of First Nations peoples in the Australian state of Victoria during these restrictions.

Methods The Measuring Indigenous Communities' Response, Resilience and Recovery online survey was developed and implemented by an Indigenous leadership group. This cross-sectional study focused on First Nations communities' experiences of the pandemic. Descriptive and thematic qualitative analyses were conducted to explore outcomes related to health and social experiences, and cultural and community connectedness.

Main findings A total of 67 people responded between November 2020 and January 2021; 49 (73.1%) were female, with a median age of 47 years, and 54 (81.8%) resided in metropolitan Melbourne. Many respondents (47.5%) reported difficulty accessing general healthcare, mental health and education. First Nations

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organisations and family members were the primary source of additional support during 2020. Changes in health behaviours – such as alcohol consumption, tobacco use and physical activity – after restrictions were variable. For community connection, respondents reported decreases in seeing family and attending cultural events; however, they reported an increase in the use of technology to connect with community.

Principal conclusions This study provides insights into the experiences of First Nations peoples in Victoria during the 2020 COVID-19 pandemic response, and the types of support and resources accessed. The importance of community connectedness during the COVID-19 pandemic and First Nations-led responses to support community to promote better health outcomes was highlighted in this study.

Keywords: COVID-19; First Nations; Australia; Pandemic; Experiences; Survey

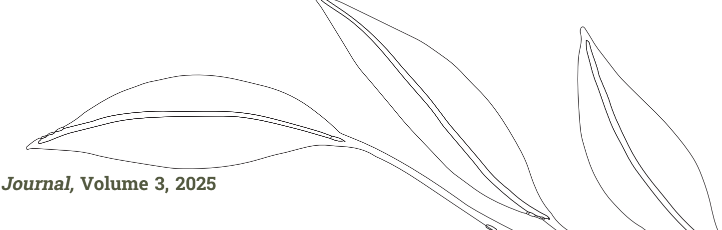
Highlights

- Over half of the survey participants had a diagnosed medical condition, yet many had trouble accessing key health services during the COVID-19 pandemic.
- Preventative healthcare opportunities may have been missed.
- Many maintained community connections through digital technology.
- Aboriginal services played an important role for those requiring additional support.
- There are opportunities for strengthening and adapting methods of access to services.

Introduction

Aboriginal and Torres Strait Islander (respectfully hereafter First Nations[1]) peoples are the First Nations peoples of Australia. During the 19th century in the south-east of Australia in territory now known as Victoria, the colonial frontier was rapid and brutal, having devastating impacts on people and Country. The Victorian Traditional Owner Land Justice Group (2019), defining colonisation, talk of the mass 'dispossession, genocide and Clanocide, dispersal and deculturation', where whole clans did not survive and all but a few of the languages remain. The First Nations population of Victoria went from 60,000 people from 40 language groups, with their own customs, histories and cultures, to 600 people by the beginning of the 20th century (McCalman et al. 2021). In Australia this has been facilitated by official state sanctioned legislation and policies (Ellinghaus 2001). However, against this, there is a deep and proud history in this place of individual and collective resistance against colonial injustices. In 2021, 66,000 people residing in Victoria reported being of Aboriginal and/or Torres Strait origin (Australian Bureau of Statistics 2021d). They include Traditional Owners with connection to language groups within Victoria, as well as people from the 250+ language groups across Australia (Australian Bureau of Statistics 2021a). As such they represent people of many diverse and intertwined cultures, whose histories and socialised experiences are rich and varied. Many First Nations community social and rights-based organisations who have led the national fight against colonial injustices have their origins in Victoria, including: the Australian Aborigines League,

[1] A survey asked respondents whether they identified as Aboriginal or Torres Strait Islander, which largely reflects the terminology that is used within an organisational context and by many services in Victoria. For this reason, this study retained the terminology Aboriginal and Torres Strait Islander peoples where relevant.



Aborigines Advancement League and the National Aboriginal and Islander Health Organisation (now the National Aboriginal Community Controlled Health Organisation). Aboriginal community-controlled health organisations (ACCHOs) deliver holistic, comprehensive and culturally appropriate primary healthcare to and promote the health and wellbeing of First Nations people and communities (Campbell et al. 2017; NACCHO n.d.; Panaretto et al. 2014). First Nations peoples in Victoria continue to exercise their sovereignty and unceded connection to Country and have recently entered into treaty negotiations with the Victorian government (First Peoples - State Relations 2023).

The first person to be infected with coronavirus disease 2019 (COVID-19) in Australia was detected on 25 January 2020 (Storen and Corrigan 2020), bringing with it a threat to physical health as well as to livelihoods, social and emotional wellbeing (Yashadhana et al. 2020). State and federal governments took unprecedented action to control the spread of COVID-19, including social restrictions, lockdowns, mask mandates and curfews (Andrews 2020). Non-essential workplaces and schools were closed, resulting in a shift to remote work and learning (Australian Institute of Health and Welfare 2021). In 2020, the state of Victoria experienced two lockdowns: beginning in March, the first extended for 43 days and a second from July 2020, one of the longest in the world, lasted for 111 days (Cole, 2021).

First Nations communities and organisations across Australia and Victoria promptly responded to the pandemic threat, developing resources, communication and support strategies for First Nations communities (Crooks et al. 2020; Eades et al. 2020; Mohamed, 2020). By 31 December 2020, there were 20,376 confirmed people who were infected with COVID-19 in Victoria. However, measures taken by the Victorian state government and the Victorian First Nations community are thought to have contributed to the relatively low number of people infected with COVID-19 within First Nations communities in Victoria (n=153 as of 25 April 2021) and no deaths reported (Australian Institute of Health and Welfare 2021). During this first year of the pandemic, there was limited published evidence documenting the impact of COVID-19 restrictions on First Nations peoples in Victoria or elsewhere in Australia. Several studies have since described the experiences of First Nations peoples. Nationally, First Nations adults experienced significant reductions in wellbeing between 2019 and 2020, as measured by a pre and post survey (Gall et al. 2022). In the state of New South Wales, a series of discussions in 2020 with First Nations community members highlighted the critical role that Aboriginal organisations played in supporting the community to be safe and provided understanding of the adverse impacts of the pandemic on food security and accessing healthcare (Follent et al. 2021).

Given the extended lockdowns in Victoria and limited knowledge in 2020 about the impact of COVID-19 restrictions, an online survey was conducted that sought to specifically explore the health and social cultural experiences of First Nations peoples living in Victoria during the 2020 COVID-19 pandemic response.

Methods

Ethics and governance

Approval for the study was obtained through the University of Melbourne Faculty of Medicine, Dentistry and Health Science Human Research Ethics Committee (Ref #2021-14291-15707-4). All researchers adhered to the National Health and Medical Research Council guidelines for ethical conduct in research with Aboriginal and Torres Strait Islander peoples during survey development, recruitment, data collection,

analysis and reporting (National Health and Medical Research Council 2018).

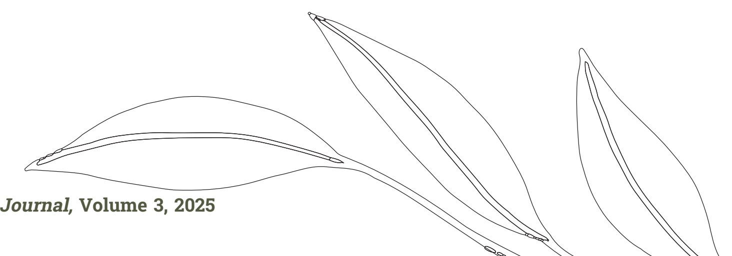
An Indigenous leadership group (ILG) comprising senior representatives of First Nations community organisations in Victoria was convened for the project. The ILG was convened by Mr Alister Thorpe, a Gunai, Yorta Yorta, Gunditjmara and Wurrundjeri-Woiwurrung researcher from the University of Melbourne's School of Population and Global Health. The ILG representatives included First Nations researchers and community leaders from various organisations including the University of Melbourne, Bubup Wilam for Early Learning, Murdoch Children's Research Institute and The Lowitja Institute.

The ILG provided overarching governance over the research and contributed to the project as co-researchers. They provided guidance on priority setting, survey design, variable and outcome selection, cultural validation and sensemaking of findings, and advised on dissemination processes, thereby ensuring that the research methodology engaged with the CONSolIDated critERia for strengthening the reporting of health research involving Indigenous peoples (CONSIDER) statement (Huria et al. 2019). Plain language community reports and presentations were given to forums attended by state government, academic and community organisations. The preliminary findings contributed to a workshop that developed a trauma-informed emergency response framework (Kamitsis et al. 2022). Funding was received to support this study through a Centre for Health Equity seed grant at the Melbourne School of Population and Global Health, the University of Melbourne.

Survey development

An online First Nations-led survey was developed and conducted via Qualtrics software (Qualtrics, Provo, UT, USA 2020) to explore the experiences of First Nations peoples in Victoria during the 2020 COVID-19 pandemic response. The survey comprised multiple levels of inquiry, including about respondents' health and social experiences, and cultural and community connectedness since COVID-19 restrictions began in March 2020. The survey, entitled Measuring Indigenous Communities' Response, Resilience and Recovery to COVID-19 (MICRRR), was developed by a team of First Nations and non-First Nations researchers at the University of Melbourne in collaboration with the ILG. The ILG had an initiation meeting in April 2020. The ILG and research group met three additional times to discuss survey items, to agree on the final survey and following survey implementation. Between these key meetings, Mr Alister Thorpe maintained ongoing communications with individual members. This survey represented one of the first First Nations-led research inquiries into the impacts of the COVID-19 pandemic.

Appendix 1 provides a summary of the survey questions. The survey asked participants to reflect on their experiences since March 2020, a date that marked increasing restrictions and the beginning of the first COVID-19 lockdown in Victoria (Wright 2021). To establish a baseline for comparison with experiences since March 2020, participants were also asked about their usual activities before COVID-19. The survey primarily comprised multiple-choice questions across five domains to explore experiences of living through COVID-19 restrictions in Victoria. The survey domains were i) health and wellbeing (encompassing physical health, mental health, distress and other feelings); ii) community connectedness (encompassing safety, social support and community connection, usual activities, and changes since restrictions); iii) health behaviours (tobacco use, alcohol consumption, diet and physical activity before and after restrictions); iv) relationship



with family and community (perceptions of risks and guidelines, quality of relationships); and v) access to First Nations services. These domains were discussed and agreed on by the ILG and research group. Cultural specificity of the social survey items was informed by several earlier First Nations-led and co-designed surveys (Gee 2016; Rowley 2008; Holmes 2002). Given the rapidly emerging COVID-19 pandemic and response, new questions were also developed to capture experiences and impacts such as changes in health behaviours, connection to community and access to services. Questions from the Kessler Psychological Distress Scale 5 (K-5) (Appendix, Q23, a–e) (Kessler et al. 2002) were incorporated to provide a measure of psychological distress. Questions from three subscales of the Aboriginal Resilience and Recovery Questionnaire (ARRQ) were incorporated to assess social support, community connection and safety using a strengths-based approach (Appendix, Q22) (Gee 2016; Gee et al. 2023). Several free text questions asked respondents to further reflect on their experiences of living through COVID-19 restrictions.

Participants and recruitment

Individuals aged ≥16 years who identified as being of Aboriginal and/or Torres Strait Islander origin and resided in the state of Victoria during 2020 were eligible for the survey. The survey was promoted through First Nations organisations in Victoria, including health and early education services, and through community and social networks of the research team and the ILG, on social media and on the community radio station 3CR. The survey was open between 8 November 2020 and 24 January 2021, a period when restrictions were easing in Victoria. Participants who provided contact information were entered into a draw to receive one of 10 $100 vouchers.

Data management, outcomes and analysis

A total of 67 valid responses were received that included 20 free text responses. Quantitative data were managed and analysed in Stata SE V.15.0 (StataCorp. College Station, TX, USA). Categorical variables were created for demographic information based on frequency of response, for example age group (20–39 years, 20–59 years, 60–79 years), gender, residential location (regional, metropolitan), and household occupancy (single- vs. multi-person households). Responses to the K-5 items were scaled from 1 'None of the time' to 5 'All of the time' and summed to generate a total. The summed score was used to categorise responses 'low/medium distress' (scores between 5–11) or 'high/very high distress' (scores between 12–25) (Kessler et al. 2002) to provide a measure of distress at the time of survey completion. Responses to question 22 (Appendix) were applied to three ARRQ subscales, community connection (Q22, j–m), social support (Q22, a–d) and safety (Q22, e–i) and used to provide a measure of connection, safety and social support at the time of survey completion. Two broad outcome areas were established to explore experiences during COVID-19 restrictions: i) health and social experiences, and ii) community connectedness. A breakdown of the measures and survey items for each outcome area is provided in Table 1.

A descriptive analysis of quantitative data of frequencies and proportions was conducted for each outcome area to explore the outcomes, with the choice of a descriptive analysis influenced by the small sample size. For the survey items (Appendix, Q24) related to change in engagement with usual activities, it was examined whether there were differences in those who had decreased their usual activities by gender, age group and for single- vs. multi-person households using univariable logistic regression. Qualitative data from the free text responses were subject to a thematic analysis

Outcome area	Included measures	Survey items
Health and social experiences	• Changes in health and social circumstances since COVID-19 restrictions began (e.g. health, housing, employment)	Q21
	• Experiences related to changed circumstances	Q17, Q24
	• Perception of risk of COVID-19	Q31
	• Access to services and support	Q29–30, Q32–33
	• Health behaviours (tobacco use, alcohol consumption, diet and physical activity before and after restrictions)	Q12–16, Q18–19
Cultural and community connectedness	• Usual activities and changes since restrictions, including attendance at funerals.	Q25–28

Table 1: Outcome areas and included items

guided by the study outcomes (Table 1). Quotations are provided with detail of the respondent's age group and gender. All analyses were undertaken by University of Melbourne researchers and findings were presented to the ILG for interpretation.

Results

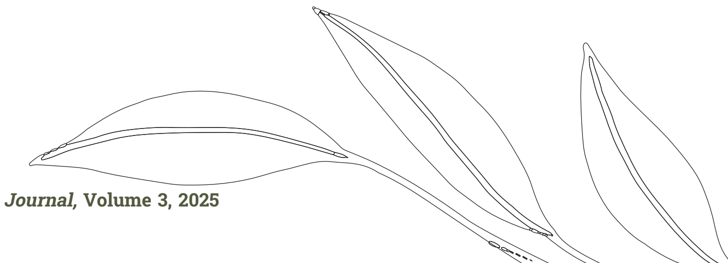
A total of 73 individuals responded to the survey, of whom 67 (91.8%) were included in the analysis. Six responses were excluded due to respondents residing outside of Victoria (n=2) and not completing the survey beyond demographic questions (n=4). The characteristics of survey respondents are provided in Table 2. In total, 49 (73.1%) were female, the median age was 47 years (range 22–73), 54 (81.8%) resided in metropolitan areas, 51 (76.1%) lived in a multi-person household and 16 (23.9%) lived alone. Thirty-six (54.5%) respondents reported that they had a diagnosed chronic medical condition. The most reported conditions were depression and/or anxiety (n=23), high blood pressure (n=14) and high cholesterol (n=9).

For the three ARRQ subscales, respondents reported that they felt at least somewhat connected to community, supported socially and safe (Figure 1). There were no data to measure whether connection, support and safety levels as measured by the ARRQ had changed since before the pandemic. Thirty of 63 respondents (47.6%) were categorised via the K5 as experiencing high/very high levels of psychological distress in the past 4 weeks. The proportion of female respondents experiencing high levels of stress was (52.2%, 95% confidence interval [95% CI] 37.6–66.4) compared with 35.3% (95% CI 15.7–61.5) for males; the overlapping 95% CI indicating that there was no difference in the proportion by gender. There were no baseline data to measure whether distress levels as measured by the K5 had changed since before the pandemic.

Health and social experiences

Respondents experienced a range of changes in their social and health circumstances that they attributed to the COVID-19 pandemic and restrictions. Social changes included a loss of income (30.4%, n=14/46), job loss (15.2%, n=7/46), withdrawal from education (21.7%, n=10/46) or change of living arrangements (15.2%, n=7/46). Reasons for a change in living arrangements included a move to regional Victoria, to live with a partner, household friction during restrictions, eviction from rental property and for reasons related to Sorry Business.

For healthcare, 40 of 61 respondents (65.6%) continued to access healthcare since restrictions, although a decrease in frequency of healthcare use was reported by 16 (26.2%). Nine (14.8%) reported that they stopped using healthcare services. For those with a chronic health condition and responding to the question about service access, 15 of 18 (83.3%) reported difficulty accessing healthcare. Nine of 11 respondents



Characteristics	n (%)
Gender (n=67)	
Male	18 (26.9)
Female	49 (73.1)
Age groups – years (n=67)	
20–39	24 (35.8)
40–59	29 (43.3)
60–79	14 (20.9)
Aboriginal and/or Torres Strait Islander (n=67)	
Aboriginal	66 (98.5)
Torres Strait Islander	1 (1.5)
Language group/nation[1] (n=64)	
Yorta Yorta	19 (29.7)
Gunditjmara	11 (17.2)
Wemba Wemba	7 (10.9)
Other	36 (56.2)
Location (n=66)	
Regional	12 (18.2)
Metropolitan	54 (81.8)
Relationship status (n=66)	
Single/divorced/separated	20 (30.3)
Married/engaged/de-facto	38 (57.6)
Partner living apart	7 (10.6)
Rather not say	1 (1.5)
Highest education (n=66)	
High school	11 (16.7)
TAFE qualification/s	8 (12.1)
Certificate or diploma	18 (27.3)
University qualification/s	29 (43.9)
Responsibilities prior to COVID-19 restrictions[2] (n=61)	
Employed or self-employed[3]	52 (87.4)
Unemployed and looking for work	2 (3.3)
Student (full-time or part-time)	11 (18.0)
Parent or carer	32 (52.5)
Volunteer	10 (16.4)
Retired/semi-retired	6 (9.8)
Household occupants (n=67)	
Single occupant	16 (23.9)
Two or three occupants	27 (40.3)
Four or more occupants	24 (35.8)
Health conditions and health behaviours (prior to COVID-19 pandemic) (n=66)	
Diagnosed medical condition	36 (54.5)
Smoker	24 (36.4)
Regular alcohol consumption	46 (69.7)

[1]Language group was a free text question, with multiple responses possible so % does not add to 100%. [2]Multiple responses possible, so % does not add to 100%. [3]Includes full-time employment (n=38), part-time or casual (n=12), self-employed (n=2).

Table 2: Participant characteristics

without a chronic health condition (81.8%) also reported difficulty accessing healthcare. Nineteen of 46 (41.3%) respondents reported that they had experienced cancellations in healthcare appointments or surgery. One respondent commented on their difficulty engaging with their local Aboriginal health service:

> *I unfortunately was diagnosed with COVID-19 in March 2020. Although (First Nations health service) was aware of my diagnosis as my primary medical provider, I did not receive any support whatsoever during my illness. Not even a phone call from the medical service to see how I was travelling* (Female, age 40–59 years).

For mental health and counselling, 10 of 60 (16.7%) reported an increase in their use of these services and others reported difficulty accessing counselling/mental health services (n=8), education services (including tutoring and study support) (n=6) and early years education (n=5).

Survey respondents appeared to be generally well informed about the risks of COVID-19 and the pandemic response. Over 85% reported that they felt well informed and did everything they could to reduce the spread of COVID-19 (88.5%, n=54/61), including keeping a physical distance from others (86.9%, n=53/61). However, 43 of 61 (71.5%) responded that keeping physically distanced from others often or sometimes came with a high personal cost to themselves. As the following respondents noted when providing qualitative information in the survey, not being able to visit family had impacts on their health: ‘Unable to visit family impacted mostly on my overall health and wellbeing’ (Female, age 60+ years); ‘Not seeing family had effects on mental health of myself and my kids and wellbeing’ (Female, age 18–39 years).

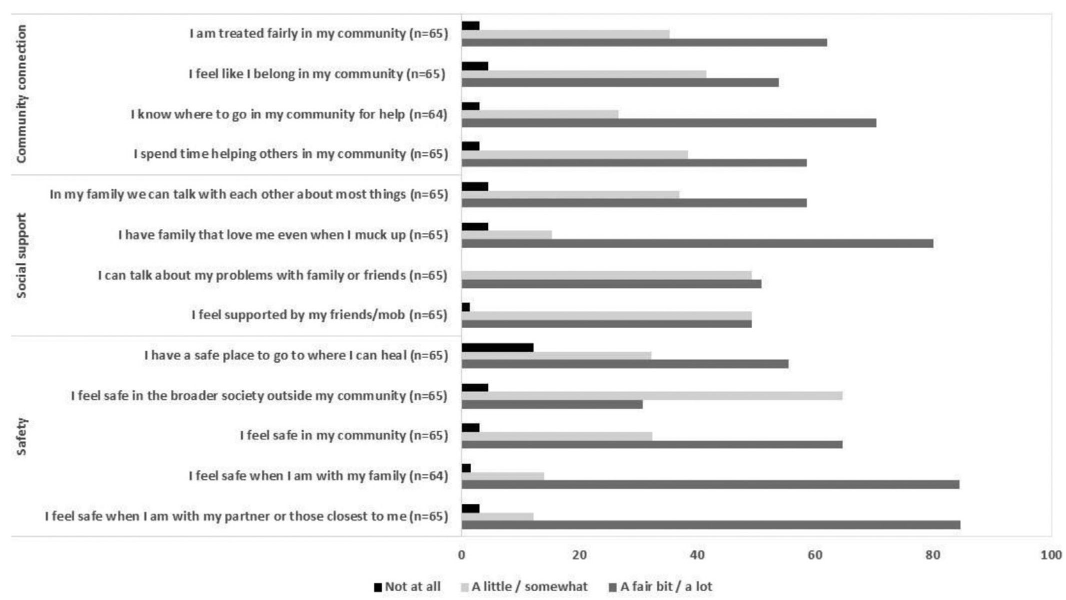
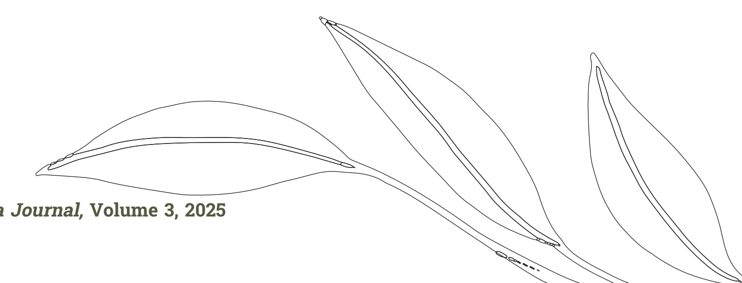


Figure 1: Community connection, social support and safety subscales of the Aboriginal Resilience and Recovery Questionnaire

Both positive and negative experiences since COVID-19 restrictions were reported (Figure 2). Thirty-six respondents (57.1%) reported that they were often busier, 30 experienced more stress about work (50.9%) and three-quarters or more reported experiencing more stress at home (84.1%, n=53) or family conflict (74.8%, n=47). Conversely, 39 respondents (62.9%) reported that people were looking out for each other, 34 (55.7%) reported that the environment was less polluted and 25 (41.0%) reported an increase in quality family time, including for family activities. In terms of food availability, 46 respondents (70.8%) were usually able to access healthy food, 42 (64.6%) regularly used ingredients and 43 (70.5%) reported that they had bought extra grocery items since COVID-19 restrictions began.

Forty-one respondents (68.3%) reported that they accessed additional support. The most frequently reported types of additional support were preventative measures to stop the spread of COVID-19, such as masks (n=28) and sanitiser and hygiene packs (n=14). Other support included education about risk (n=14) and testing (n=10) as well as tangible support such as food hampers (n=12) and support with caring responsibilities (n=7). Additional support was mostly received from Aboriginal organisations (63.4%, n=26). Further detail of sources of support can be found in Table 3.

Respondents reported on changes in lifestyle behaviours, including smoking and or/vaping, alcohol consumption, dietary consumption and exercise, with varied responses as shown in Figures 3 and 4. For smoking, most respondents (68.2%) did not change their smoking habits, noting that 39 (60.9%) did not smoke before or after the pandemic began (66% of female and 47% of male respondents were non-smokers before and after the pandemic began). Of the 24 smokers pre-pandemic (the median age was 49 years and 67% were female), nine increased (50% of all female smokers) how much they smoked and 10 decreased or ceased smoking (75% of all male smokers). For alcohol, most respondents (72.7%) consumed alcohol pre-pandemic,



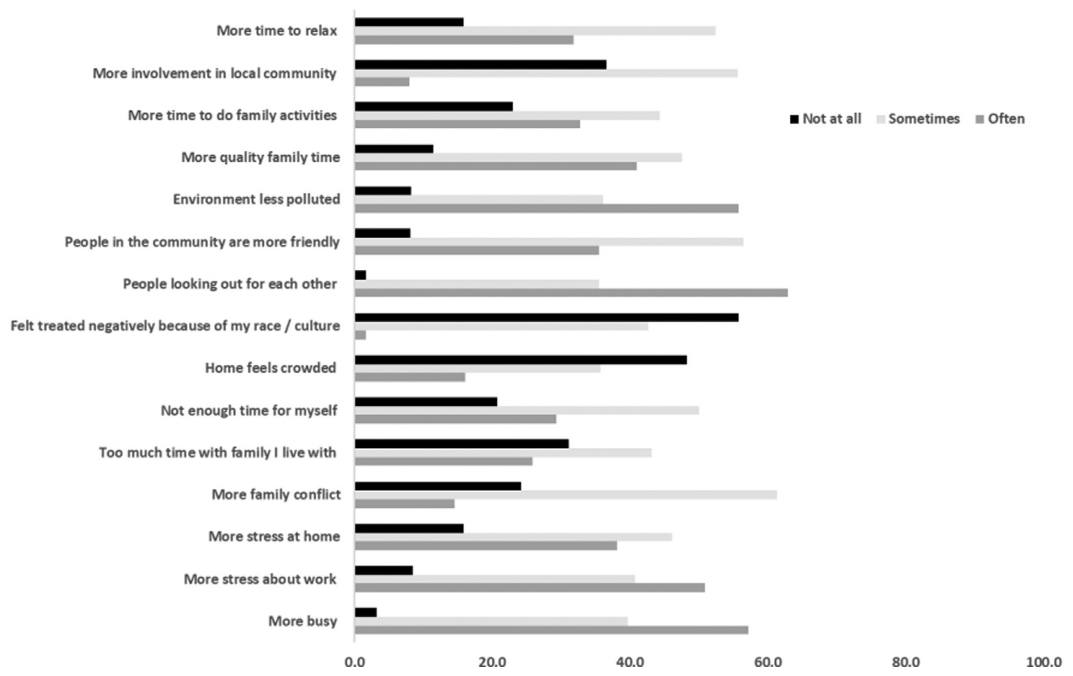


Figure 2: Experiences since COVID-19 restrictions

of whom 74% were female and the median age was 43 years. Post-pandemic, 15 (22.4%) reported that they increased drinking and 22 (32.9%) reported that they decreased or ceased drinking. The proportions for the gender breakdown of those reporting that they decreased or increased drinking were similar to the overall gender breakdown of the respondents. Many respondents reported an increase in exercise frequency (13.4%) or started exercising (16.4%) and reported their frequency of exercise as ranging from 1–2 days per week (40.3%) to daily (14.9%). Take-away, snacks and home-cooked meal consumption increased (Figure 4).

Where additional support came from[1] (n=41)	n (%)
Aboriginal organisations	26 (63.4)
Family members	12 (29.3)
Victorian Government COVID-19 response (Department of Health and Human Services)	11 (26.8)
Aboriginal community members	9 (22.0)
Other[2]	5 (12.2)
Traditional Owner groups	2 (4.9)

[1]Multiple responses possible. [2]Local organisations, employer, council, local Aboriginal workers, Aboriginal gathering place.

Table 3: Sources of additional support since COVID-19

Community connectedness

Respondents were asked about the frequency they engaged in activities connecting them to family, community or Country before COVID-19 restrictions. Fifty-seven respondents (93.4%) reported that they sometimes or often saw or spoke with their family or community or engaged with services for First Nations people, 48 (78.7%) visited Country and 49 (80.3%) used technology to connect with family. Following restrictions, respondents reported decreased frequency in many activities that connected them to community (Table 4), including a decrease in attendance of First Nations cultural events for 55 (90.2%) of respondents and how often they would visit their ancestral Country for 44 (72.1%) respondents. One respondent noted that although they understood the necessity of restrictions, not visiting Country was

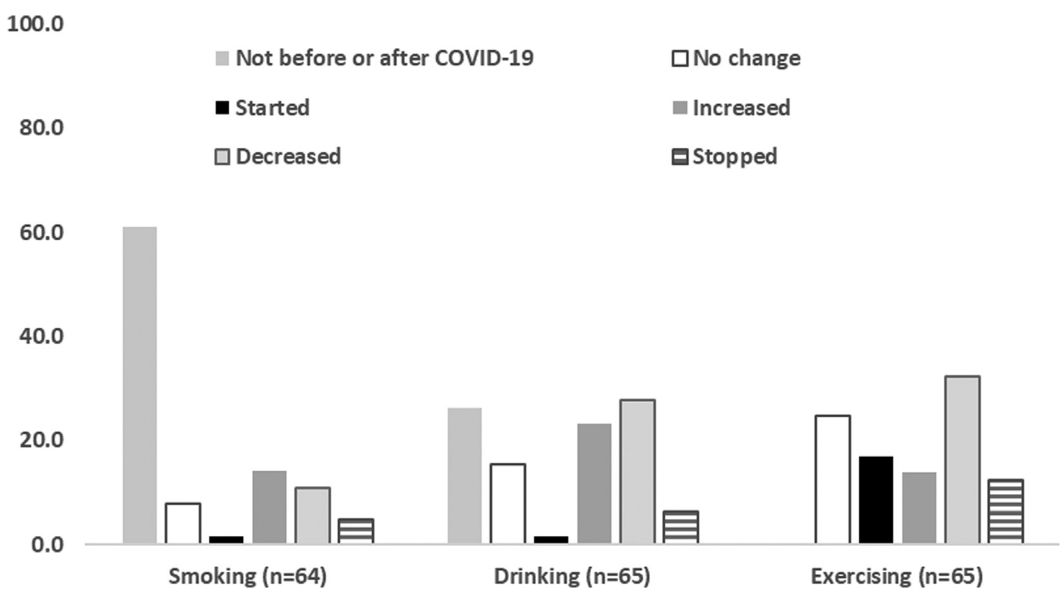


Figure 3: Reported changes in health behaviours since COVID-19 restrictions began in March 2020. Smoking: two responses excluded for selecting 'quit smoking' as non-smokers before the pandemic. Drinking: one response excluded for selecting 'decreased' as non-drinkers before the pandemic. Exercising: survey did not ask if respondents exercised before the pandemic.

difficult: 'I think ability to travel around the state to take my family to our traditional Country has been difficult. I understand it has been necessary but at the same time, hard' (Male, age 18–39 years).

Conversely, the use of technology to communicate with family increased for 40 of 61 (65.5%) respondents. When examined by gender, age group and for single-person versus multi-person households, the

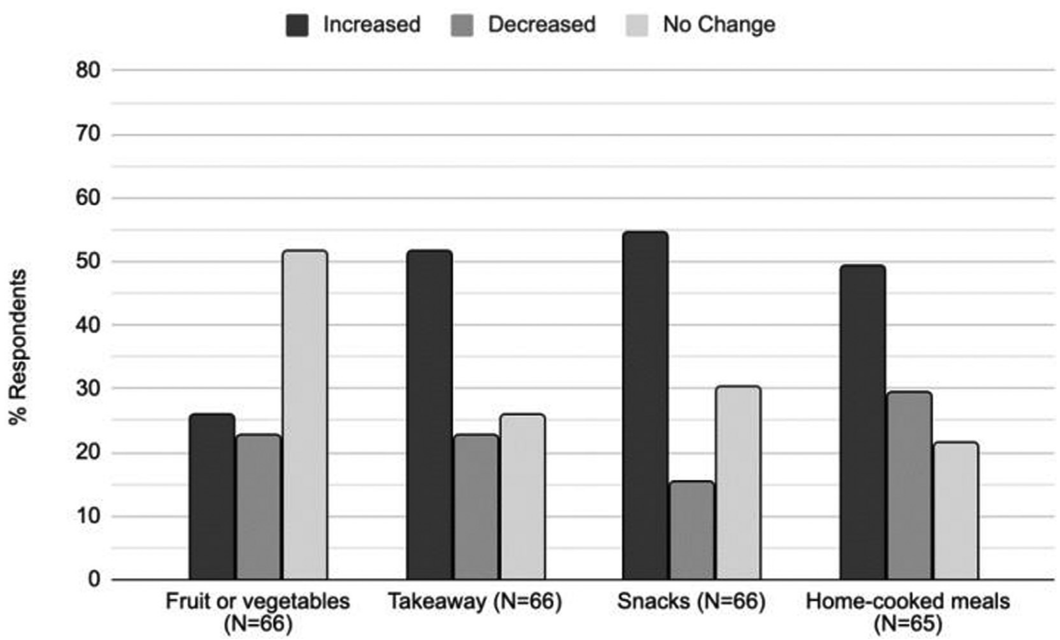


Figure 4: Reported changes in dietary consumption since COVID-19 restrictions began in March 2020

Activities (n=61)	Decreased n (%)	Stayed the same n (%)	Increased n (%)	Not applicable n (%)
See extended family members (e.g. parents/grandparents/aunts/uncles/cousins)	52 (85.3)	4 (6.6)	1 (1.4)	4 (6.6)
Talk with extended family members (e.g. parents/grandparents/aunts/uncles/cousins)	28 (45.9)	16 (26.2)	16 (26.2)	1 (1.6)
See other members of your Aboriginal community (other than for work-related meetings)	53 (86.9)	5 (8.2)	3 (4.9)	0 (0.0)
Talk with other members of your Aboriginal community (other than for work-related reasons)	47 (77.1)	9 (14.8)	5 (8.2)	0 (0.0)
Visit your homelands or traditional Country	44 (72.1)	9 (14.8)	3 (4.9)	5 (8.2)
Attend or participate in Aboriginal events, ceremonies, cultural activities (e.g. hunting and fishing, arts and crafts, sharing stories)	55 (90.2)	5 (8.2)	1 (1.6)	0 (0.0)
Attend a program or use a service provided by an Aboriginal community-controlled organisation	48 (78.7)	6 (9.8)	4 (6.6)	3 (4.9)
Use technology to communicate with family (e.g. Zoom)	9 (14.8)	10 (16.4)	40 (65.6)	2 (3.3)

Table 4: Reported changes in frequency of activities since COVID-19 restrictions began in March 2020

proportions were similar to the characteristics of the overall study population and there was no difference in the proportion reporting a decline in their engagement with their usual activities or in an increase in use of technology to communicate with family.

Forty-three (70.5%) respondents reported that they were unable to attend funerals in person. Of those who were not able to attend, 35 (81.4%) reported that they were able to attend a funeral in an online format. One respondent wrote that not being able to give their mother ‘the funeral she deserved is very distressing’ (Female, age 40–59 years) and another wrote that ‘so much Sorry Business and funerals during COVID will have long lasting effect on our mental health’ (Female, age 40–59 years).

One respondent commented on the effect of disconnection on their ability to gather with family and community members to mourn appropriately:

> *Hardest thing has been not being able to spend time with family to help in the mourning process after losing our mother we went straight into lock down we still all have not come together to properly grieve* (female, age 40–59 years)

One respondent reflected on the positive impact of the pandemic usual activities:

> *There have been some positives come out of the COVID-19 pandemic & that’s given us time to reflect about what’s really important & identifying things that are not so important. Reflecting on our quality of lives and family life–work balance. Caring for our rivers, our Country & the environments & communities we live in. For me, Aboriginality, cultural knowledge & Ancestral connections to Country are at the heart of all of these things. This is what COVID-19 has reinforced for me more than ever. It’s time for our Country & people to heal!* (female, age 60–79 years)

Discussion

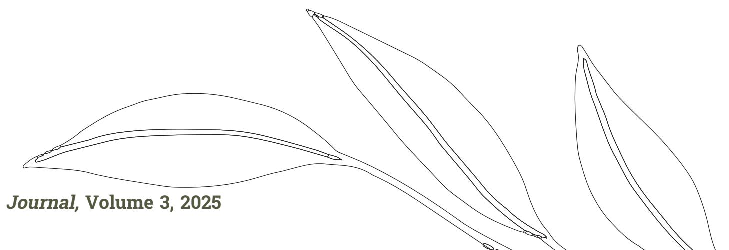
This First Nations-led study explored the health and wellbeing experiences of First Nations peoples in Victoria during the early stages of the COVID-19 pandemic. The survey generated a small number of responses and the characteristics of the sample differed to that of the First Nations community in Victoria. Forty-nine respondents of the sample (73.1%) were female (compared with just under 50% in Victoria), the median age of this sample was 47 years (versus 24 years in Victoria), and 54 of this

sample (81.8%) resided in metropolitan-areas (versus ~50% in Victoria) (Australian Bureau of Statistics 2021b,d). The sample was well engaged with community and family and many had a pre-existing health condition. Additionally, the sample had education (98% completed year 12 or equivalent) and employment (85%) rates greater than the First Nations community in Victoria (year 12 or equivalent 44%; employment 58%) (Australian Bureau of Statistics 2021c; Australian Institute of Health and Welfare 2023). The current study population demonstrated far-reaching impacts of COVID-19 restrictions. Whilst most people appeared to engage in measures to reduce their risk of COVID-19, this seemed to come at a personal cost for many. Adverse impacts appeared to be strongly intertwined and included difficulty accessing healthcare, loss of income, mental health effects and reduced direct engagement with family, community and Country. The experience of being unable to attend funerals in person was deeply upsetting for some who experienced bereavements. Despite this, it was also found that some benefits were reported, including increased quality family time and personal reflection on what is important. Technology was used by many respondents to maintain connections. Aboriginal services were an important source of support.

For the health and social experiences outcome, there was potential for negative health impacts. Over half of respondents reported one or more chronic medical conditions, which is similar to the 46% of First Nations Australians with chronic disease reported in the National Aboriginal and Torres Strait Islander Health Survey (Australian Bureau of Statistics 2019). Many of the survey respondents experienced cancellations in health appointments or surgery, and while the exact nature of services cancelled is unknown, this is concerning as it is possible that those impacted experienced negative health impacts. Nationally, decreased service use for people with chronic conditions was reported by the Australian Institute of Health and Welfare (AIHW 2021) early in the pandemic. However, following the introduction of Telehealth and other government subsidies, service use (including mental health services) was maintained at similar levels to pre-2020. Whilst the uptake by the survey respondents is unknown, it is hoped that initiatives such as Telehealth supported their ongoing healthcare engagement. Continued strengthening and adapting methods for healthcare delivery could ensure ongoing access and that those who need it most do not fall through the cracks.

First Nations services were a vital source of support for some of the survey respondents during the early stages of the pandemic, providing tangible support such as masks and food hampers, providing education about COVID-19 risk and testing, and further direct support for some with caring responsibilities. Other sources of support included the Victorian Government, family and community. The survey respondents also appeared to be well informed about the risks of COVID-19. In the early pandemic response, ACCHOs and First Nations communities were important sources of advocacy and advice that was considered to have supported First Nations communities to successfully mitigate the risk of COVID-19 during 2020 (Crooks et al. 2020). This further highlights the crucial role of Aboriginal services in providing trusted, safe and culturally appropriate support for communities.

Findings for the cultural and community connection outcome highlighted the importance of family, community and Country for the respondents and the impacts of having these connections altered. Prior to the pandemic, most respondents regularly engaged with their family or community. The experience of being unable to maintain these usual connections (e.g.



through seeing people or travel) was a source of distress for some, particularly for those experiencing bereavements and being unable to mourn in a manner they were accustomed to. While the use of technology for communication was embraced by many, the findings suggest that it could not replace usual connections. However, many respondents also found that during the pandemic restrictions they had positive experiences, such as more quality family time and people looking out for each other. For one respondent, time to reflect reinforced to them that connection to Country was 'at the heart' of Aboriginality and cultural knowledge. There is growing evidence demonstrating the importance of First Nations peoples' connection to, and caring for, Country in relation to health and wellbeing (Burgess et al. 2005; Butler et al. 2019; Thorpe et al. 2023). During the pandemic many respondents were restricted from accessing their Country, which potentially negatively impacted their health and wellbeing.

Strengths and limitations

A key strength of this First Nations-led study is that it was developed, designed, implemented, analysed and interpreted by First Nations researchers and the ILG who have in-depth knowledge and connections to the Victorian Aboriginal community and key Aboriginal organisations. This ensured that the survey was culturally appropriate and relevant to the experiences of First Nations Victorians, and that the findings are both internally and externally valid. However, there are some important limitations to consider. Firstly, the survey only received a small number of responses, limiting it to a descriptive analysis of frequencies complemented by qualitative analysis of a small number of free text responses. Despite the small sample, the quantitative and qualitative analysis together enabled exploration of a wide range of health, social and community connection experiences for the Victorian First Nations community during the early stages of the COVID-19 pandemic. Given that the city of Melbourne in Victoria experienced the world's longest lockdown in 2020, this experience is a unique one to capture. Secondly, the study sample is different in demographic details to the Victorian First Nations community. This sample was older, largely female, resided in metropolitan areas, and had higher education and employment rates compared with the First Nations community in Victoria. Therefore, the findings are unlikely to reflect the experiences of the broader First Nations community in Victoria and should be considered in the context of this sample. Thirdly, recruitment largely occurred through health and early education services due to the connections of these organisations with the research team and ILG, which may have contributed to the difference in demographic characteristics and therefore to the findings – including the high levels of chronic conditions reported. Finally, validated and previously used tools (namely, the K-5 and ARRQ) were included to provide measures of psychological distress, community connections and safety. However, no baseline data were available for these measures so it is unknown whether these findings were influenced by the COVID-19 restrictions. However, it is valuable to understand the distress levels and connections with community for these individuals.

Conclusion

This study provides brief insight into how First Nations peoples experienced the early phases of the COVID-19 pandemic in Victoria during 2020. It also provides key insights into the health of First Nations people in Victoria during the pandemic. Further research about the long-term impact, including social and emotional wellbeing and mental health effects, of COVID-19 restrictions on First Nations peoples in Victoria might provide further insights into resources and strategies needed by First Nations communities for recovery.

While individual experiences of the pandemic varied within this study, this project has highlighted the importance of First Nations-led responses to the COVID-19 pandemic during 2020. Increased investment and resourcing for First Nations communities and services may promote health during recovery from the pandemic.

Author contributions

K. Wojcik: Formal analysis, Writing – original draft, Reviewing and editing, Visualisation; J. Goller: Conceptualisation, Methodology, Formal analysis, Supervision, Writing – original draft, Review and editing, Visualisation; J. Luke: Conceptualisation, Methodology, Validation, Writing – review and editing; L. Gubhaju: Conceptualisation, Methodology, Supervision, Writing – review and editing; R. Chenhall: Conceptualisation, Methodology, Formal analysis, Writing – original draft; G. Gee: Conceptualisation, Methodology, Validation; N. Blow: Conceptualisation, Methodology, Validation; L. Thorpe: Conceptualisation, Methodology; P. Stewart: Conceptualisation, Methodology; A. Thorpe: Conceptualisation, Methodology, Validation, Investigation, Supervision, Funding acquisition, Writing – review and editing.

Declaration of interests

Paul Stewart is employed by The Lowitja Institute, the owners of First Nations Health and Wellbeing - The Lowitja Journal. All other authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Author biography

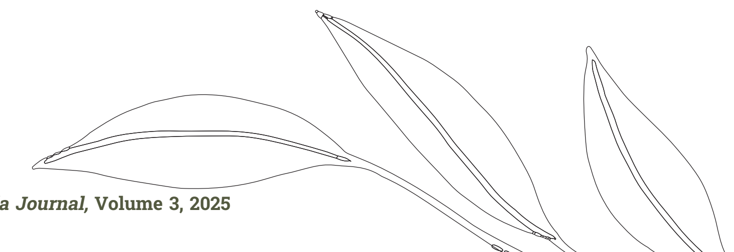
Katarzyna Wojcik attained a Master of Public Health at the University of Melbourne in 2021, during which she completed a research project in Indigenous epidemiology. She previously completed a Bachelor of Science. Katarzyna is currently working as a project officer at an addiction and mental health service.

Jane Goller is an experienced non-Indigenous researcher whose work focuses on the epidemiology and health service interventions for sexually transmissible infections. She is currently working on an NMHRC partnership project towards strengthening chlamydia management in general practice. She has previously collaborated with Aboriginal community-controlled organisations to contribute to STI surveillance systems and master's level teaching about Aboriginal health.

Joanne Luke is an Aboriginal woman (Stolen Gens-Alyawarre), researcher and PhD candidate with the Centre for Health Policy at the University of Melbourne. She has worked as an Aboriginal health epidemiologist and public health researcher for 15 years in both the university and Aboriginal community-controlled health sector.

Lina Gubhaju has a background in biomedical science and public health. Following her PhD she attained post-doctoral training in Indigenous maternal, child and adolescent health. Her research has been on Indigenous public health and epidemiology focusing on health and wellbeing over the life course.

Richard Chenhall is Professor in Medical Anthropology at the Melbourne School of Population and Global Health at the University of Melbourne. He is currently working on several projects focusing on the health of Aboriginal and Torres Strait Islander peoples, including substance misuse and treatment, sexual health, youth



experiences, digital storytelling and the social determinants of health. Richard teaches courses at the postgraduate level including Medical Anthropology, Qualitative Research in Public Health and Community Based Participatory Research.

Graham Gee is an Aboriginal-Chinese man, also with Celtic heritage, originally from Darwin. His Aboriginal-Chinese grandfather was born near Belyuen on Larrakia Country. Graham is a clinical psychologist and worked at the Victorian Aboriginal Health Service for 11 years before taking up a research position at the Murdoch Children's Research Institute. His early career research focused on Aboriginal and Torres Strait Islander mental health and social and emotional wellbeing, including developing and validating the Aboriginal Resilience and Recovery Questionnaire (Gee, 2016; 2022; 2023). In 2022, Graham was awarded a National Health and Medical Research Council Emerging Leadership grant to commence working in partnership with a coalition of Victorian Aboriginal services dedicated to healing child sexual abuse.

Ngaree Blow is a Quandamooka (Noonuccal Nation) and Yorta Yorta woman currently completing her advanced training as a Public Health Physician. She works as the Director of First Nations Health for medical education at the University of Melbourne as well as dedicating part of her time to various public health projects. Dr Blow is a previous board member of the Australian Indigenous Doctors Association (AIDA) and has been involved in many First Nations health, research and education roles.

Lisa Thorpe is a Gunditjmara/Gunnai woman from Victoria. Lisa is currently the CEO of Bubup Wilam Aboriginal Child and Family Centre. She has been integral to the inception and development of Bubup Wilam and ensuring the right to self-determination for Aboriginal families. For most of her working life Lisa has been employed in Aboriginal community-based and community-controlled organisations. She has managed and worked on many programs that have directly contributed to the provision of services for Aboriginal people. Lisa has a master's in public health from Deakin, where she worked as an Associate Professor with the Institute of Koorie Education for 7 years.

Paul Stewart is a proud Taungurung man from central Victoria. He has 20 years' experience working in Aboriginal and Torres Strait Islander health research, Aboriginal employment, sport and education, and has extensive experience in community engagement. Paul holds a Master of Public Health and has been a Research Fellow at the University of Melbourne. More recently, Paul held leadership roles with Cricket Australia, Victorian Government and is currently the CEO of the Lowitja Institute.

Alister Thorpe is from the Gunai (East Gippsland), Yorta Yorta (Goulburn Valley), Gunditjmara (Western Districts) and Wurrundjeri-woiwurrung (Melbourne) nations in south-eastern Australia, with many family and connections throughout Victoria. His research incorporates decolonising Indigenous methodological approaches to examine structural disparities from an Indigenous standpoint. His main research interests include research ethics, social and cultural determinants of health, research governance, data sovereignty, Indigenous cultural governance and Indigenous nation building. Alister has contributed to communities both in Victoria and nationally, as an academic, lecturer and, most importantly, as a community advocate.

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Appendix 1. Survey questions

Demographics

1. What is your year of birth?
2. What gender do you identify with?
   a. Male
   b. Female
   c. In another way (please specify)
3. Are you an Aboriginal and/or Torres Strait Islander person?
   a. Aboriginal
   b. Torres Strait Islander
   c. Aboriginal and Torres Strait Islander
   d. None of these
4. Can you tell us your language group/s and/or nation/s?
   a. No
   b. Yes (please specify)
5. What is your postcode of residence?
6. What is your highest level of education?
   a. Primary school
   b. High school
   c. TAFE qualification/s
   d. Certificate or diploma
   e. University degree/s (including undergraduate and postgraduate degrees)
   f. Other (please specify)
7. What is your current relationship status? (select all that apply)
   a. Single
   b. Partner living together
   c. Partner not living together
   d. Married or engaged
   e. Divorced or separated
   f. Rather not say
   g. Other (please specify)
8. What is your current housing situation? (Select which best applies)
   a. Renting
   b. Living with relatives
   c. Mortgage or own home
   d. Living with parents/carer
   e. Homeless
   f. Temporary accommodation (e.g. Aboriginal hostels, hotel, boarding or living with friends)
   g. Other (please specify)
9. Which of the following best describes your responsibilities during 2019? (Select all that apply)
   a. Volunteer
   b. Parent or carer
   c. Parental leave
   d. Disability Support Pension
   e. Student full-time
   f. Student part-time
   g. Employed full-time
   h. Employed part-time
   i. Casual employment
   j. Self-employed
   k. Unemployed and looking for work
   l. Unemployed but not looking for work
   m. Retired/semi-retired
   n. Other (please specify in the box below)

Your health, usually and during COVID

10. Do you currently have a medical condition that has been diagnosed by a doctor? (e.g. a condition that needs on-going care such as diabetes, high blood pressure, heart disease, a mental health condition)
11. Please select if you have been diagnosed with any of the conditions listed below?
    a. Diabetes
    b. High blood pressure
    c. High blood cholesterol
    d. Heart disease (e.g. heart attack/angina)
    e. Stroke
    f. Asthma
    g. Rheumatoid arthritis
    h. Thyroid problems

i. Cancer
j. Depression/Anxiety
k. Other? (Please specify)

12. Before COVID-19 restrictions did you smoke or use nicotine products (cigarettes, vaping)?
13. Since COVID-19 restrictions began in March 2020 how (if at all) have your smoking/vaping habits changed? (select which best applies)
    a. I am a non-smoker
    b. I have started smoking/vaping
    c. I increased the amount I smoke/vape
    d. I smoke/vape the same amount
    e. I have decreased the amount I smoke/vape
    f. I have tried to quit
    g. I have quit
14. Before COVID-19 restrictions did you drink alcohol?
15. Since COVID-19 restrictions began in March 2020 how (if at all) have your drinking habits changed? (select which best applies)
    a. I am a non-drinker
    b. I have started drinking
    c. I increased the amount I drink
    d. I drink the same amount
    e. I have decreased the amount I drink
    f. I have tried to quit drinking
    g. I have quit drinking
16. Could you tell us if your diet has changed during COVID-19 restrictions? (Select: increased, stayed the same, decreased)
    a. The amount of fruit or vegetables that I eat has
    b. The amount of takeaway food that I eat has
    c. The amount of snacks and sweets that I eat has
    d. The amount of home cooked meals that I eat has
17. Since COVID-19 restrictions began in March 2020 have you been able to access the food that you need? (Select: mostly, sometimes, never)
    a. Fruit or vegetables that I want are available
    b. Ingredients for healthy meals I want to cook are available
    c. Regular ingredients I want to use are available
18. Since COVID-19 restrictions began in March 2020, in a regular week how often did you exercise for at least 30 minutes?
19. Since COVID-19 restrictions began in March 2020 how (if at all) have your exercise activities changed? (Select which best applies)
    a. I started exercising
    b. I have increased exercising
    c. Stayed the same
    d. I have decreased exercising
    e. I have stopped exercising

Health and wellbeing

20. Are you or others that you are close to in a high-risk group for COVID-19? (e.g. pregnant, elderly or due to a pre-existing physical, social or wellbeing condition)? (Select: yes, no, not sure)
    a. I consider that I am in a high-risk group for COVID-19
    b. I consider that some of my household members are in a high-risk group for COVID-19
    c. I consider that some of my close relations or friends are in a high-risk group for COVID-19
21. Have any of the following happened to you because of COVID-19? (Check all that apply)
    a. Fallen ill
    b. Attended a doctor or emergency department
    c. Hospitalised
    d. Put into self-isolation with symptoms
    e. Put into self-isolation without symptoms (e.g. due to possible exposure)
    f. Loss of income (e.g. pay cut, reduced hours)
    g. Loss of job or stood down
    h. Withdrawn from education
    i. Cancelled healthcare appointments or surgery
    j. Change of living arrangements (e.g. moved out of home)

k. None of the above

22. Since the COVID-19 restrictions began in March 2020, how would you describe yourself, and the way you are with your family, community and culture. (Select: not at all, a little, somewhat, a fair bit, a lot)
    a. I feel supported by my friends/mob
    b. I can talk about my problems with family or friends
    c. I have family that love me even when I muck up
    d. In my family we can talk with each other about most things
    e. I feel safe when I am with my partner or those closest to me
    f. I feel safe when I am with my family
    g. I feel safe in my community
    h. I feel safe in the broader society outside my community
    i. I have a safe place to go to where I can heal
    j. I spend time helping others in my community
    k. I know where to go in my community for help
    l. I feel like I belong in my community
    m. I am treated fairly in my community
23. During the past 4 weeks, how often have you felt: (Select: none of the time, a little of the time, some of the time, most of the time, all of the time). (note: items a–e are from the K5)
    a. So sad that nothing could cheer you up?
    b. Nervous?
    c. Restless or fidgety?
    d. Hopeless?
    e. That everything was an effort?
    f. That you lacked companionship?
    g. Left out?
    h. Isolated from others?
    i. Unsafe at home?
    j. Worried that you or someone in your family would get COVID-19?
24. Have you experienced any of the following since the COVID-19 restrictions began in March 2020? (Select: not at all, a little bit, sometimes, often, not applicable)
    a. People looking out for each other
    b. People in the community are more friendly
    c. Environment less polluted
    d. More quality family time
    e. More time to do family activities
    f. More involvement in local community
    g. More stress at home
    h. More time to relax
    i. More busy
    j. More conflict between family members
    k. More stress about work
    l. Too much time/contact with family I live with
    m. Not enough time for myself
    n. Home feels crowded
    o. Felt that I was treated negatively or unfairly because of my race or cultural background

Community connectedness

25. Thinking about before COVID-19 restrictions, in 2019, how often would you usually do the following activities? (Select: often, sometimes, rarely, never)
    a. See extended family members (e.g. parents/grandparents/aunts/uncles/cousins)?
    b. Talk with extended family members (e.g. parents/grandparents/aunts/uncles/cousins)?
    c. See other members of your Aboriginal community (other than for work related meetings)?
    d. Talk with other members of your Aboriginal community (other than for work related reasons)?
    e. Visit your Homelands or traditional Country?
    f. Attend or participate in Aboriginal events, ceremonies, cultural activities (e.g. hunting and fishing, arts and crafts, sharing stories)?

g. Attend a program or use a service provided by an Aboriginal community controlled organisation?
h. Attend or participate in Aboriginal sporting team or sporting carnivals?
i. Use technology to communicate with family (e.g. Zoom)?

26. Since COVID-19 restrictions began in March 2020, how (if at all) has how much you do the following activities changed?
   a. See extended family members (e.g. parents/grandparents/aunts/uncles/cousins)?
   b. Talk with extended family members (e.g. parents/grandparents/aunts/uncles/cousins)?
   c. See other members of your Aboriginal community (other than for work related meetings)?
   d. Talk with other members of your Aboriginal community (other than for work related reasons)?
   e. Visit your Homelands or traditional Country?
   f. Attend or participate in Aboriginal events, ceremonies, cultural activities (e.g. hunting and fishing, arts and crafts, sharing stories)?
   g. Attend a program or use a service provided by an Aboriginal community controlled organisation?
   h. Attend or participate in Aboriginal sporting team or sporting carnivals?
   i. Use technology to communicate with family (e.g. Zoom)?
27. Have COVID-19 restrictions since March 2020 stopped you from attending any funerals in person?
28. If yes, were you able to attend online?

Aboriginal community services

29. Since COVID-19 restrictions began in March 2020, how (if at all) has your use of Aboriginal services changed? (Select: increased, stayed the same, decreased, stopped using these services, not applicable to me)
   a. Health care services
   b. Early years education services
   c. Youth services
   d. Aboriginal legal services
   e. Aged care services
   f. Housing services
   g. Counselling/mental health
   h. Drug and alcohol (e.g. counselling, rehabilitation)
   i. Education (e.g. school, tutoring, study support)
   j. Employment and welfare
   k. Financial counselling
   l. Other (please specify)
30. Have you experienced any difficulty in access to any important services since COVID-19 restrictions began in March 2020?
   a. Health care services
   b. Early years education services
   c. Youth services
   d. Aboriginal legal services
   e. Aged care services
   f. Housing services
   g. Counselling/mental health
   h. Drug and alcohol (e.g. counselling, rehabilitation)
   i. Education (e.g. school, tutoring, study support)
   j. Employment and welfare
   k. Financial counselling
   l. Other (please specify)
31. We know that COVID-19 restrictions have been very difficult. For each statement please specify how well it fits for you. (Select: not at all, sometimes, often)
   a. I feel well informed about steps I can take, to help reduce the spread of COVID-19
   b. I have done everything I could possibly do as an individual to reduce the spread of COVID-19

c. I have done everything I could possibly do to keep physical distance to others
d. I feel that keeping a physical distance from others would have a high personal cost to me
e. I trust others around me to follow guidelines to stop the spread of COVID-19
f. I have bought extra supplies of food or grocery items

32. Have you received any of the following additional supports since the COVID-19 restrictions began in March 2020. Please select all that apply.
    a. Food hampers
    b. Masks
    c. Financial support
    d. Support with caring responsibilities
    e. Education about how to reduce my risk of COVID-19
    f. Personal protective equipment
    g. Accommodation (e.g. hotel quarantine)
    h. Sanitiser and hygiene packages
    i. Support with getting tested for COVID-19
    j. Other (please specify)
    k. I did not receive extra support
33. Where did you receive additional support from? Please select all that apply.
    a. Aboriginal organisations
    b. Family members
    c. Victorian Government COVID-19 response (Department of Health and Human Services)
    d. Aboriginal community members
    e. Traditional Owner Group
    f. Other (Please specify)

Last question

34. Have we missed anything? Is there anything else you would like to tell us about your overall health and wellbeing since COVID-19 restrictions began in March 2020?