Rosemary Bryant AO Research Centre

COVID-19 and workforce wellbeing: A survey of the Australian nursing, midwifery, and care worker workforce

May 2021

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The Rosemary Bryant AO Research Centre (the Centre) is a partnership between the University of South Australia, the Australian Nursing and Midwifery Federation (SA Branch) and the Rosemary Bryant Foundation. The Centre aims to strengthen the role of the nursing and midwifery professions across the health system through the development of a research-driven, evidence-based platform of healthcare. To achieve this, the Centre has developed a comprehensive research program focused on advancing the nursing and midwifery disciplines, and patient care in the domains of population and public health, workforce reform, safety and quality, clinical practice, patient outcomes, and integration into education.

COVID-19 and workforce wellbeing: A survey of the Australian nursing, midwifery, and care worker workforce

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Acknowledgement of country

We acknowledge the Traditional Custodians of the lands on which we work and live, and recognise their continuing connection to land, water, and community. We pay our respects to Elders past, present, and emerging. We acknowledge the stories, traditions, and living cultures of Aboriginal and Torres Strait Islander peoples on this land and commit to building a brighter future together.

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Abbreviations

Below is a list of abbreviations used throughout the report.

Abbreviation	Full name
ACT	Australian Capital Territory
AHPRA	Australian Health Practitioner Regulation Agency
ANMF	Australian Nursing and Midwifery Federation
BRS	Brief Resilience Scale
CEO	Chief Executive Officer
COPSOQ-III	Copenhagen Psychosocial Questionnaire Version 3
COVID-19	Coronavirus disease 2019
DASS-21	Depression Anxiety Stress Scale
EN	Enrolled Nurse
GP	General Practice
HREC	Human Research Ethics Committee
ICN	International Council of Nurses
ICU	Intensive Care Unit
MBI-HSS	Maslach Burnout Inventory – Human Services Survey
MERS	Middle East Respiratory Syndrome
MMSS	McCloskey/Mueller Satisfaction Scale
NT	Northern Territory
NSW	New South Wales
OLBI	Oldenburg Burnout Inventory
PCW	Personal Care Worker
PES-NWI	Practice Environment Scale – Nursing Work Index
PPE	Personal Protective Equipment
QLD	Queensland
REDCap	Research Electronic Data Capture
RBRC	Rosemary Bryant AO Research Centre
RN	Registered Nurse
RM	Registered Midwife
SA	South Australia
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2
TAS	Tasmania
VIC	Victoria
WA	Western Australia
WHO	World Health Organization

Executive summary

Background

In 2020, the Rosemary Bryant AO Research Centre (RBRC) was contracted by the state and territory Australian Nursing and Midwifery Federation (ANMF) branches and Federal Office to conduct a national survey through their membership of nurses, midwives, and personal care workers. The ANMF is Australia's largest national union and professional nursing and midwifery organisation. The ANMF represents the professional, industrial, and political interests of over 300,000 nurses, midwives, and carers across the country. The purpose of the survey was to describe and assess what effects the Australian outbreak of COVID-19 pandemic has had on the workforce.

The objectives of the research were to:

i) assess indices of occupational wellbeing, including stress, anxiety, and burnout in nurses, midwives, and personal care workers across different work settings;

ii) determine contributory (upstream) or performance (downstream) factors that are impacting occupational wellbeing; and

iii) identify opportunities to improve Australia's workforce preparedness for significant health crises such as COVID-19 in the future, and how union branches/the ANMF can lead or support here.

Method

An online, anonymous, cross-sectional national survey ran over 12 weeks in Australia from 12 August to 21 October 2020. There were approximately 250 questions in the survey. The survey was developed by RBRC with input from the ANMF state and territory branches to ensure relevance and applicability to their local contexts. Promotion of the survey was primarily through ANMF engagement at the state/territory and national level. The progression of the research was through the following path:

Survey Part I focused on demographic and COVID-19 factors, including: workplace preparedness, personal and family concerns, workplace care for COVID-19 patients, workplace changes due to COVID-19, testing and missed work, PPE issues, and community support. Questions included adaptations of international health workforce COVID-19 questions for benchmarking.

Survey Part II assessed indices and domains of the workplace climate, including: the nursing practice environment, psychosocial workplace conditions, job satisfaction, resilience, burnout, and mental health. Original and modified versions of validated instruments were used, including: the Practice Environment Scale – Nursing Work Index (PES-NWI), Copenhagen Psychosocial Questionnaire Version 3 (COPSOQ-III), McCloskey/Mueller Satisfaction Scale (MMSS), Brief Resilience Scale (BRS),

Depression Anxiety Stress Scales (DASS-21), Oldenburg Burnout Inventory (OLBI), and Maslach Burnout Inventory - Human Services Survey (MBI-HSS).

Data analyses in this report are descriptive and reported for the overall sample, as well as by four major workplace categories: hospitals, residential aged care facilities, primary/community health, and "other" workplaces. Data are not reported at the state/territory level.

Results

Part I: Demographic and COVID-19 factors

Respondents

Across Australia, 13,410 nurses, midwives, personal care workers, and other healthcare providers logged into the survey, with 11,902 answering at least one question.

- The majority of respondents (98.16%) were ANMF members.
- The largest proportion of responses were from registered nurses (71.15%), followed by enrolled nurses (14.65%), registered midwives (7.12%), personal care workers (6.66%), and students (0.42%).
- The majority of responses were from Victoria (45.33%) and New South Wales (25.53%).
- Most respondents were female (91.45%), with a median age of 50 years.

Employment and work setting

- Most respondents (86.67%) worked entirely or partly in patient or client care and most (66.51%) worked part-time. Respondents worked across a variety of facilities/organisations; the largest proportion (57.97%) being public or private hospitals.
- For comparative purposes work setting was reduced to four groups: hospitals (58.02%), residential aged care facilities (18.02%), primary/community healthcare (17.80%), and other organisations (6.16%; i.e., university, health departments, NGOs).
- Most personal care workers (79.31%) worked in residential aged care facilities.

COVID-19 preparedness and workplace plans

- Across the states and territories approximately half of the respondents (50-57%) reported their workplace had a plan or protocol in place when the pandemic was declared to respond to those with known or suspected COVID-19 cases.
- General Practitioner Practices (60.00%) and hospitals (56.56%) were more likely to have a COVID-19 plan than residential aged care facilities (48.73%) or community healthcare settings (49.97%).
- Most respondents (84.05%) reported that their workplace plan/protocols regarding COVID-19 had been reviewed or updated since the start of the pandemic. Overall, 85.56% of respondents reported receiving COVID-19 infection control and prevention training.

Care for patients/clients with COVID-19 in the workplace

- Approximately one third of respondents (33.93%) indicated that they were assigned or asked if they would care for COVID-19 patients.
- Most respondents (69.29%) reported their workplace had provided care to one or more patients/clients with *suspected* COVID-19.
- Forty per cent reported their workplace had cared for someone with *confirmed* COVID-19.
- Close to half (45.74%) of workplaces had only cared for 1-10 suspected or confirmed cases of COVID-19.

- For those who worked in a setting where care was provided to COVID-19 patients/clients, only 21.01% had provided direct care to those with confirmed COVID-19.
- The settings most frequently cited in which care was provided to suspected or confirmed COVID-19 cases were: hospital designated COVID wards (21.18%), emergency departments (17.36%), residential aged care facilities (17.57%), hospital speciality units (10.16%), and "other" settings (33.54%).

COVID-19 information

- More than 65% of respondents rated the COVID-19 information provided by their workplace as good to excellent in regard to being timely, trustworthy, clearly written, consistent with other sources, and comprehensive.
- Respondents gathered information from multiple sources outside of their workplace, most commonly state/territory health departments (83.31%) and ANMF state/territory branches (50.50%).

Organisational preparedness

- When rating organisational preparedness for COVID-19 with respect to policies and procedures, most (70.57%) respondents rated screening of staff for risk factors/symptoms as good to excellent. Protocols for general cleaning and cleaning of isolation rooms were also viewed as being good to excellent by the majority of respondents.
- Areas that were rated poor to very poor by at least 20% of staff were managing staff abuse, access to workplace mental health support, and access to alternative accommodation. Areas that were rated poor to very poor by at least 30% of staff were being able to deploy more staff if required and debriefing processes.

COVID-19 health concerns around work, staff testing, and missed work

- One quarter (24.46%) of respondents reported that at the beginning of the pandemic they were not at all or only slightly concerned about risks to personal health due to their work role and 29.38% reported they were extremely concerned.
- At the time of the survey, 36.10% were not concerned or only slightly concerned about workplace risks. This varied by workplace sector, with those working in residential aged care facilities more concerned than those working in hospitals.
- At the time of the survey, most respondents (61.03%) had been tested for COVID-19. The mean number of times tested was 2.1 (*SD* = 1.77). Approximately 3% (*n* = 168) of respondents to this question had tested positive for COVID-19 and 1.20% (*n* = 68) were awaiting results.
- Of those that tested positive for COVID-19, the workplace with the highest proportion of positive results was residential aged care facilities (4.45%). For all who tested positive, most (85.80%) thought they had contracted COVID-19 through workplace exposure.
- Less than half (46.06%) of respondents answered that they had not missed work due to reasons associated with COVID-19. For those that had missed work, the most common type of leave taken was personal/sick leave (64.12%) or special COVID-19 paid leave (22.45%).

Personal concerns about homelife because of COVID-19

- Nearly one third of nurses, midwives, and personal care workers (31.73%) were extremely concerned with keeping their family or the people they lived with safe, with a further 25.83% moderately concerned. Other personal concerns were risk to vulnerable family members, managing family needs, experiencing financial hardship, and partners losing work or hours.

- Similar proportions of respondents indicated that they were moderately or extremely concerned for their own psychological wellbeing (42.66%) or personal health and safety (44.11%). The proportion that had sought mental health or wellbeing support from external providers was 16.63%.

Personal concerns about the workplace because of COVID-19

- Around half of respondents were moderately or extremely concerned about having adequate staff (53.18%), the welfare of their colleagues (52.15%) and having the right skills mix in the workplace (51.43%).
- Respondents were generally not concerned or only slightly concerned about having access to hand sanitiser at work (70.67%) or having supplies to disinfect themselves before going home (59.97%).
- One quarter of respondents were moderate or extremely concerned about job security. This concern was most prevalent among those who worked in residential aged care facilities (35.75%).

Self-isolation and related behaviours

- Since the pandemic, most nurses, midwives, and personal care workers (84.38%) did not choose to isolate from those they lived with. When asked what other behaviours respondents felt were necessary to keep their family, friends, and community safe, over 5000 respondents described strict self-imposed routines, including limited social contact with their family, not going into the community, and a 'decontamination process' when leaving work or arriving home.

Community support and harassment

- Most respondents (59.24%) had experienced or felt community support for the work they do. Out of the four main workplaces, those working in residential aged care facilities were the least likely to have experienced or felt support (43.37%).
- One-third of respondents (33.22%) had experienced abuse or been threatened by members of the pubic/patients at work, and 15.91% had also experienced this by members of the public in settings outside of work. Those who were of Chinese ethnicity were the most likely to experience abuse or feel threatened outside of work (25.55%).

Workplace changes; workload, multiple jobs, and work roster

- Almost half (46.74%) of all respondents felt their workload had significantly or moderately increased since the pandemic. Out of the four main workplaces, those working in residential aged care facilities were most likely to report their workload had significantly or moderately increased (56.71%). In contrast, 12.18% of respondents reported that their work had moderately or significantly decreased.
- Half of all respondents reported their employment roster had been unaffected.
- Twenty per cent of respondents reported an increase in paid or unpaid hours, with those in residential aged care facilities most likely to report an increase in paid and unpaid hours (24.48%).
- Those working in the 'other' workplace category were most likely to report their hours had been reduced with no reimbursement or that they had taken unpaid leave (12.33%).
- For respondents whose roster had been affected (hours either increased or decreased), the most frequently cited reasons were lack of staff, changes to elective surgery, bed occupancy reduced, and increased patient numbers.

- Twenty-seven per cent of respondents indicated they were employed at more than one workplace at the beginning of the pandemic. Of those respondents, approximately one-third (32.00%) were asked to give up working at one of the places. The workplace most affected was residential aged care facilities, with 60.55% being asked to give up work at one of their locations.

Workplace scope of practice and redeployment

- Most respondents (82.30%) reported they were not asked to work outside of their scope of practice. Of those that were asked to work outside of their scope of practice, just over one-third (34.32%) were given education or training to do so.
- Overall, 18.75% of respondents were redeployed to a different area, hospital, or speciality of work because of COVID-19. Hospital workers were the group most likely to be redeployed to another area (25.99%). Over one-quarter (26.20%) of respondents who reported being redeployed, were redeployed to COVID-19 screening clinics, or drive through testing.

Personal Protective Equipment (PPE) at primary workplace

Whilst acknowledging that PPE availability was an issue for many facilities and organisations at the beginning of the pandemic, the responses to the PPE questions in this section reflect the PPE status *at the time of the survey (August - October 2020),* when PPE availability was not as limited in Australia.

- At the time of the survey, most respondents (82.23%) reported that they often or always had the right types of PPE.
- In terms of having the right size of PPE, 71.21% reported that this was always or often the case. Similarly, 74.32% reported there was always or often a sufficient supply of PPE.
- Overall, 43.42% of respondents reported they had not had to reuse any single-use, disposable PPE. This varied somewhat by main workplace, with hospital workers more likely than other sectors to have reused single-use PPE.
- The most frequently reused single-use item reported was goggles/glasses (37.61%). Other items that were frequently reused were face shields (33.29%) and masks (28.40%).
- The majority (57.61%) of respondents agreed or strongly agreed that they were supported by their workplace regarding PPE concerns and requirements. This varied little by place of work, with those working in primary healthcare and other environments feeling slightly more supported (> 60%) than those working in hospitals and residential aged care facilities.
- Forty per cent of respondents were unsure if their workplace had a policy for breaks while working in PPE and a quarter responded that there was no policy for breaks.

Part II: Domains of the workplace climate

Tools for assessing wellbeing: workplace conditions

- On average, there was agreement that nursing and midwifery philosophy for quality care was present within the practice environment, but there was neither agreement nor disagreement that other desirable aspects (i.e., resource and staffing adequacy, praise and supervisory support, nursing and midwifery leadership) were present in the workplace.
- Respondents frequently reported working at a fast pace, indicated high levels of cognitive and emotional demand at work and role clarity, and moderate levels of quantitative demand, role conflict, and work life conflict.
- Those working in residential aged care facilities reported the highest levels of workplace demand, role conflict, and work life conflict, as well as the lowest role clarity compared to all other workplace groups. They also reported the lowest job satisfaction.

Tools for assessing wellbeing: occupational wellbeing

- Respondents expressed satisfaction with work and scheduling flexibility, extrinsic rewards, and collegial relationships, but dissatisfaction with leadership and career opportunities.
- Overall, respondents reported an average level of resilience, and symptoms of depression, anxiety, and stress were in the normal range. Respondents working in residential aged care facilities reported the highest scores on anxiety, depression, and stress of all workplace groups.
- Burnout was assessed using two instruments. The Maslach Burnout Inventory – Human Services Survey (MBI-HSS) subscale scores showed that emotional exhaustion was approaching a high level, depersonalisation was low, and personal accomplishment was moderate in the overall sample. This was supported by the Oldenburg Burnout Inventory (OLBI) instrument, in which subscale scores indicated higher levels of exhaustion than disengagement.
- Respondents working in residential aged care facilities and hospitals showed the greatest risk of burnout compared with those working in primary care and other workplaces.

Considerations for policy, practice, support and research

Based on the findings of this research, the following considerations are made to advance policy, practice, support and future research direction to address the health, wellbeing, and safety of the nursing, midwifery, and personal care worker workforce. These considerations are primarily focused on the leadership, management and coordination, safety, and support and wellbeing of frontline staff, as well as opportunities for future research.

Area	Consideration
Policy	1. **Leadership**: Empowering strong nursing and/or midwifery leadership in healthcare settings from mid-level clinicians through to the executive level to ensure nurses, midwives, and assistant staff (including personal care workers) have a strong voice regarding current challenges and suggestions for improvements to policy and practice of organisations. 2. **Risk mitigation**: Learn from the risks identified within the first few weeks of the pandemic in Australia to establish a ready supply of basic hygiene and safety equipment designed to protect the health of staff (e.g., PPE), with supply chain logistics and access processes to minimize risk during future pandemic events. 3. **Workforce coordination**: The deployment of staff across the healthcare sector should be considered within the context of minimizing multi-site placements that result in increased risk and exposure for the clinician and community. 4. **Worker safety**: Develop consistent, contemporary policy related to PPE, inclusive of clarity regarding breaks from long term use of PPE.

Practice

5. **System design**: Design effective systems for the rapid deployment of staff across the healthcare system. Key considerations are to identify and address major system or industrial barriers that may hinder movement, flexibility, and protection of workers at these pressured times.
6. **Education**: Provide standardised, consistent messaging, education and training regarding PPE use, donning, wearing, and doffing that is tailored to the working environment.
7. **Communication**: Provision of consistent, evidence-informed information through trusted communication channels and to relevant staff to ensure accuracy of information and direction is reported.
8. **Prioritise safety**: Active engagement from healthcare administration to ensure the health, wellbeing and safety of staff is prioritised as a business objective and perceived as such.

Support

9. **Evidence-based support**: Adoption of evidence-based programs designed to provide structured, tailored and meaningful support, and that actively engage staff, especially during times of significant disruption and/or significant trauma.
10. **Wellbeing monitoring systems**: Systems established to periodically monitor occupational health and wellbeing are adopted, monitored, and embedded as part of business activity reporting, and that include both predictors and performance outcomes of wellbeing. This is to be considered as a standardised approach to the health and wellbeing of staff, pre, during, and post the management of a pandemic (or significant disruption to the health care environment) to monitor long term impact and staff sustainability.

Research

11. **Longitudinal research**: Large, longitudinal research studies are undertaken (e.g., cohort studies) that focus on the inter-relationship between health system and organisational policies, the working environment, and the health, safety, and wellbeing of its workforce.
12. **Cross-sectional monitoring**: Undertake a repeat concise workforce and wellbeing survey biennially. Comparators can be considered both at a national level and with international data.

Conclusion

The *COVID-19 and Workforce Wellbeing Survey of Australian Nurses, Midwives, and Personal Care Workers* has been the largest national workforce wellbeing survey of nurses, midwives, and personal care workers during 2020. It is anticipated that this report will increase understanding of the impacts of the COVID-19 pandemic on the nursing, midwifery, and personal care worker workforce of Australia, as well as the demographics, working environments, and wellbeing of this broad community.

The survey highlighted a relatively robust, resilient, and dedicated workforce. Although, it should be noted that many respondents were still concerned about the impacts of COVID-19 on their health, wellbeing, homelife, and the work environment. Additionally, those working in residential aged care facilities reported the poorest outcomes across the range of occupational wellbeing indices. It is vital that employers continue to ensure the safety and wellbeing of the nursing and midwifery workforce by improving plans, policies, and procedures for major health crises, and continuing to provide

appropriate and adequate PPE. It was also noted that whilst the community was supportive of the professions, marginal groups had experienced greater incidence of abuse or had been threatened by members of the public. It is imperative that employers of nurses, midwives, and personal care workers actively engage with their workforces, especially during such extreme events, by seeking their feedback and concerns, and working to support and maintain their safety and wellbeing as a priority, as it has a direct relationship with the health of the Australian community and management of our national security. It is anticipated that the *COVID-19 and Workforce Wellbeing Survey* will provide the data to support individuals, practices, policy, and organisations when considering the next steps and future plans. Ensuring the safety and wellbeing of healthcare workers will increase the stability of staff who are critical during major health crises such as COVID-19.

Background

COVID-19 in Australia

COVID-19 is an infectious respiratory illness caused by the SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) virus. It is a novel coronavirus first identified in December 2019 as the cause of a cluster of pneumonia cases in the city of Wuhan, Hubei province, China.[1,2] Coronaviruses are similar to other human and animal pathogens including those that cause the common cold, as well as the closely related severe acute respiratory syndrome (SARS/ SARS-CoV-1) and Middle East Respiratory Syndrome (MERS). Currently, COVID-19 has spread to every continent in the world and it was declared a pandemic on 11 March 2020 by the World Health Organization (WHO).[3]

The first Australian COVID-19 case was confirmed on January 25 after arriving in Australia from Wuhan on January 19,[4] and on March 2 the first two cases of community transmission in Australia were recorded, including one healthcare worker and one close contact of an recent traveller.[5] By this time, there had been one confirmed death and over 30 reported cases from travellers and cruise ship passengers. Many health and aged care services began preparations to respond to the emerging COVID-19 threat prior to the announcement of pandemic status by updating or adopting new policies and practices for infection prevention and control.

By the end of March 2020, the peak of the 'first wave' of infections began to subside (Figure 1), with April beginning with a cumulative total of 4,854 cases reported.[6] This 'first wave' of the pandemic largely affected New South Wales and Victoria, with approximately two-thirds of confirmed cases (*n* = 4377/6753) and deaths (*n* = 58/91) recorded in the two states at the end of April.[6] Towards the end of June, case numbers were again on the rise, peaking on August 5 with 698 newly diagnosed cases and a cumulative total of 19,138 cases.

The 'second wave' of infections predominantly affected Victoria, with the state recording 570 deaths at the beginning of September. Since that time, the 'second wave' gradually dissipated and by mid-September, new case numbers seldom rose above 50 per day and appeared to be confined to small local outbreaks in the community, aged care, and returned travellers in quarantine. The majority of confirmed cases to date have been in Victoria, accounting for approximately 69% (*n* = 20,523/29,841) of cases in Australia. As at 3 May 2021, the status of confirmed cases in Australia was 29,841 total cases, 910 total deaths, and 246 active cases.

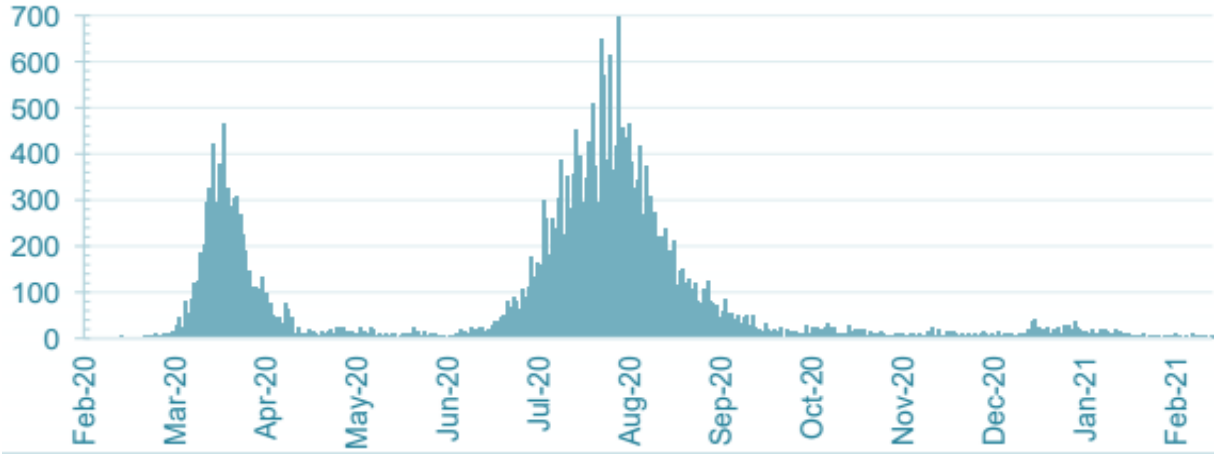

Figure 1. Daily number of reported cases in Australia, Feb 2020 to Feb 2021.[6]

Healthcare workers and COVID-19

The people who are at the greatest risk of COVID-19 infection are those in close contact with people with COVID-19. This includes workers in healthcare settings and residential aged care facilities, as well as others living and/or working in especially crowded or busy indoor environments with poor ventilation. As an indicator of how at risk workers can be, it has been reported that during the second wave of COVID-19 infections, around 70 per cent of the healthcare workers in Victoria acquired the illness at work.[7] While there is no clear, publicly available information regarding the state of health and residential aged care worker infections in Australia, it appears that they may be almost three times more at risk of infection, even during periods of relatively low rates of community-level transmission and hospitalised infections compared to other countries.[8] Failures of policies and processes, including the supply and use of personal protective equipment (PPE), may be contributing factors to this impact on the healthcare workforce.

Even in locations where few or no COVID-19 cases have arisen, workers in healthcare settings and residential aged care facilities, including nurses and midwives, have faced significant challenges, threats, and stressors that impact their physical, mental, and emotional safety, health, and wellbeing.[9-11] Long shifts, wearing PPE, risk of infection, aggression from patients and community members, concerns for personal safety and the safety of loved ones and patients, and lack of access to resources and support pose a heavy burden for even the most resilient of workers.

Understanding nursing, midwifery, and personal care worker experiences

The impact of the COVID-19 outbreak has been wide-ranging beyond dealing with immediate cases. For example, elective surgeries have been cancelled as a preparatory measure for anticipated surges in COVID-19 cases, contributing to approximately 30% hospital vacancies and surplus staff, and many staff employed through casual arrangements and agencies gaining little to no work. Consequently, there has been widespread uncertainty around the best way to retain existing staff and provide employment for those under casual working arrangements. Moreover, for nurses, midwives, and personal care workers who were already experiencing workplace burnout, the pandemic has likely contributed additional stress and impacted physical and mental wellbeing, on the job performance, the immediate working environment, and concern for the health and safety of their own family and friends when they leave work. Research is needed to gain a deeper understand of nursing, midwifery, and personal care worker experiences during the COVID-19 outbreak.

Research objectives

The Rosemary Bryant AO Research Centre (RBRC) undertook a national survey of the Australian nursing, midwifery, and care worker workforce, contracted by the ANMF state and territory branches and Federal Office. The purpose of the survey was to identify and assess what effects the Australian outbreak of COVID-19 has had on the nursing, midwifery, and personal care worker workforce in participating states and territories. The objectives of the survey were to:

i. Undertake a cross-sectional assessment of the impact of COVID-19 on the Australian nursing, midwifery and personal care worker professions across a range of areas, and across sectors and geographic areas.
ii. assess indices of occupational wellbeing, including: stress, anxiety, and burnout in nurses, midwives, and personal care workers working in different contexts (i.e., hospitals, nursing homes, the community, and primary healthcare) across participating states and territories;

iii. determine contributory (upstream) or performance (downstream) factors that are impacting occupational wellbeing; and,

iv. identify opportunities to improve Australia's workforce preparedness for significant health crises such as COVID-19 in the future, and how union branches/the ANMF can lead or support here.

Methodology

The progression of the research was through the following path:

Procedure

Ethical approval for the study was granted by the University of South Australia (UniSA) Human Research Ethics Committee (HREC; Application ID: 203244). Recruitment of respondents was coordinated through each of the ANMF participating state and territory branches, who promoted the survey to their memberships via emails, bulletins, and newsletters. Emails included a letter of introduction describing and endorsing the study, signed by the participating state/territory branch CEO/Secretary. Participation in the study was voluntary and anonymous, and respondents were informed that their decision to participate would not affect their membership or relationship with the ANMF in any way.

The survey was formatted and a link made available to branches by RBRC via the secure online platform REDCap (Research Electronic Data Capture) hosted at the University of South Australia.[12,13] It was designed to be completed on either computer or mobile devices. The survey ran over a period of 12 weeks across Australia from 12 August to 21 October 2020. The timing coincidentally corresponded to the peak and downward trend of the second wave of COVID-19, which occurred largely in Victoria.[6]

Participants

The survey was primarily targeted at the ANMF membership across all states and territories, which includes nurses, midwives, and personal care workers. It was not possible to determine an accurate denominator for those eligible to receive the survey because not all states or territories were able to provide ANMF membership numbers. Based on the proportion of ANMF membership for Australian Health Practitioner Regulation Agency (AHPRA) registered nurses (RN), registered midwives (RM), and enrolled nurses (EN), it is estimated that there were approximately 280,000 RNs, RMs, and ENs in Australia that were potentially eligible to receive the survey. It was also not possible to calculate a response rate the number of nurses and midwives who received the survey was not known. The survey intended to cover all healthcare settings and snowballing of the survey to non-ANMF members across Australia was encouraged.

Materials

Survey development

The survey tool was developed by RBRC, with input from the ANMF state and territory branches to ensure relevance and applicability to their local contexts. Specific research questions underpinning the study and survey questions included:

1) What is the current occupational wellbeing of nurses, midwives, and personal care workers across the participating states and territories with respect to experience, satisfaction, and strain?
2) What are the main contributing factors to these factors within their current workplace environment?
3) Have occupational changes such as staffing issues (e.g., low levels of staff/poor ratios) and temporary job shortages (i.e., the cancellation of elective surgery, decreased shifts/hours for casual and agency workers) contributed to additional strain in the workplace?
4) What role does the supply, availability, and training in use of PPE contribute to workplace strain?
5) What concerns do nurses, midwives, and personal care workers have regarding the health, safety, and wellbeing of their own family and friends?
6) What wellbeing resources may be useful to support nurses, midwives, and personal care workers to manage occupational strain in relation to the COVID-19 pandemic?
7) What do survey respondents suggest would improve the capacity of the health, maternity, and residential aged care sectors and their own workplaces to respond effectively to similar outbreaks in the future?
8) What do nurses, midwives, and care workers want from their union branch/the ANMF:
    a. to support them during and following the COVID-19 pandemic?
    b. to raise or campaign for on their behalf in relation to the COVID-19 pandemic and its impact upon them, their workplace, and their patients/clients?

The survey was developed and formatted in two parts, the first comprising questions about COVID-19 that were generated by the research team in consultation with the ANMF or adapted from other surveys, and the second comprising validated tools used to assess workplace climate. Most state and territory branches pilot tested the online survey with nurses and midwives within their close working networks (between 2 and 8 people per branch). The survey was refined based on feedback from pilot testing before final distribution. There were approximately 250 questions in the final survey addressing the domains depicted in Figure 2.

Figure 2. Domains assessed within the National Covid-19 and Workforce Wellbeing Survey.

Part I: Demographics and COVID-19 factors

Part I of the survey encompassed demographic questions and assessed the impacts of COVID-19 on the work environment, personal concerns, and PPE. COVID-19 questions were developed while cognisant that Australia, being an island continent, relatively isolated from the rest of the world and with tight border control policies during 2020, was experiencing relatively low numbers of cases. For purposes of international benchmarking, healthcare COVID-19 surveys circulating at the time of the

survey were reviewed and where appropriate, modified and contextualised to the Australian environment. These included questions from the following sources: the Italian healthcare survey,[14] the ICON study,[15] the PanSurg SSFAFE Wellbeing Survey,[16] American Nurses Association COVID-19 Surveys,[17] PPE Survey,[18] and National Nurses United Covid-19 Employer Preparedness Survey.[19]

Respondent demographics

Respondents were asked a range of questions that sought socio-demographic information, including: gender, age, postcode, relationship status, ethnicity, country of birth and education, caring responsibilities, as well as health conditions or risk factors. Ethnic groups were classified according to the two digit classification structure as reported in the Australian Classification of Cultural and Ethnic Groups.[20]

Respondents were also asked a range of occupational demographic questions, including: job classification, years worked as a nurse and/or midwife or care worker, peak professional association membership, primary role, employment status, primary workplace, state or territory of workplace, and work setting. Respondents with a dual nursing/midwifery registration were asked to indicate their primary position.

COVID-19 preparedness and workplace plans

Seven survey items addressed organisational preparedness for the COVID-19 pandemic. One item asked survey respondents to rate their workplace's preparedness to manage COVID-19 cases when the pandemic was declared on a scale of 1 (*Very poor*) to 6 (*Excellent*). Respondents were also asked about whether their workplace had in place: designated COVID-19 areas, plans and protocols to respond to COVID-19 at the time of the pandemic or currently, and infection control and prevention training. Response options were generally "*Yes", "No*", "*Unsure*", and "*Not applicable*". Those who had received training were further asked to rate their confidence to practice safely because of their training on a scale of 1 (*Not at all confident*) to 5 (*Extremely confident*).

Care for patients/clients with COVID-19 in the workplace

Six survey items were included to assess whether respondents and/or their workplaces had cared for clients with suspected or confirmed COVID-19, how many suspected or confirmed cases had been cared for in their workplaces, and in what settings care had been provided.

COVID-19 information

Seven survey items assessed the COVID-19 information provided within the workplace, as well as useful outside sources of COVID-19 information. Respondents were asked to rate the COVID-19 information provided within the workplace regarding being timely, trustworthy, clearly written, comprehensive, consistent with other sources, and appropriately worded. Response options ranged from 1 (*Very poor*) to 5 (*Excellent*). An additional survey item asked whether respondents had found useful workplace related information regarding COVID-19 from other various sources.

Organisational preparedness

Respondents were asked to rate the quality of their primary workplaces' COVID-19 policies and procedures in 18 different areas (e.g., staff screening for risk factors/symptoms, support for new graduates or inexperienced staff, managing staff abuse). Response options ranged from 1 (*Very poor*) to 6 (*Excellent*). Respondents were also permitted to select '*Don't know*' or '*Not applicable*'.

COVID-19 health concerns around work, staff testing, and missed work

Respondents were asked a range of questions about their COVID-19 related health concerns and experiences with COVID-19 testing. Two questions asked respondents to rate their concern about risks to their personal health due to COVID-19 at the start of the pandemic and at the time of the survey on a scale of 1 (*Not at all concerned*) to 5 (*Extremely concerned*). Respondents were also asked several questions about whether they had been tested for COVID-19 (*Yes/No*), whether they had tested positive (*Yes/No/Decision pending*), whether they believed the virus was acquired due to workplace exposure (*Yes/No/Unsure*), and whether they had experienced any work-related distress associated with a positive result (*Yes/No*). Respondents were also asked how many times they had been tested, if they had missed work for COVID-19 related reasons, and what type of leave they took to cover missed days.

Personal concerns due to COVID-19 and mental health support

Respondents were asked to what level they were concerned about seven personal factors (e.g., psychological wellbeing, risks to vulnerable family members/people I live with, experiencing financial hardship) and ten work-related factors (e.g., welfare of my colleagues, job security in general, staffing levels). Responses ranged from 1 (*Not at all concerned*) to 5 (*Extremely concerned*). Respondents were asked one binary response (*Yes/No*) question about whether they had sought mental health/wellbeing support from external providers, and one check box question about the service(s) they sought help from.

Self-isolation and related behaviours

Four items addressed self-isolation among respondents. Two binary response questions asked respondents whether they chose to isolate from those they live with (*Yes/No*), and whether that isolation was at their own residence or at an alternative accommodation. One multiple choice question addressed who paid for any alternative accommodation. Respondents were given the opportunity to describe any other self-isolating behaviours they felt they had to adopt to protect themselves, their family/friends, or the community.

Community support and harassment

Several survey items addressed community support and harassment. Respondents were asked whether they had experienced of felt community support for their work, whether they had experienced abuse or felt threatened by members of the public/clients at work, and whether they had experienced abuse or felt threatened by members of the public in settings outside of work. Response options were "*Yes*", "*No*", "*Unsure*".

Workplace changes

Respondents were asked a number of questions about workplace changes, including their experience with the Nursing and Midwifery Board of Australia's Pandemic Response Sub-register (three items), upskilling or re-entry programs (one item), workload changes (five items), working outside of or advancing scope of practice (three items), roster changes (four items), and redeployment (four items).

Personal Protective Equipment (PPE) at primary workplace

A mix of 12 multiple choice and open-ended survey questions addressed PPE at respondents' primary workplaces. Questions addressed the types, size, and amount of PPE, workplace policies and processes related to PPE, re-use of PPE, reporting of PPE concerns to employers, support received from employers regarding PPE concerns, the adequacy of resources and staff to delivery PPE

training, and confidence that the PPE training equipped respondents to practice safely during the pandemic.

Part II: Workforce climate

Part II of the survey assessed domains of workforce climate. Domains included the nursing practice environment, psychosocial workplace conditions, occupational demand and resources, job satisfaction, resilience, burnout, and mental health. Domains were measured using previously validated questionnaires and subscales.

Practice environment

A modified version of the Practice Environment Scale – Nursing Work Index (PES-NWI)[21] was included in the survey to assess the nursing practice environment. Respondents were asked the extent to which they agreed that certain desirable aspects of the practice environment were present in their current workplace, including nursing leadership (4 items; e.g., "A Director of Nursing/Midwifery which is highly visible and accessible to staff"), adequate staffing and resources (3 items; e.g., "Adequate support services allow me to spend time with my patients"), praise and supervisory support (3 items; "A supervisory staff that is supportive of the nurses/midwives"), and a nursing philosophy for quality care (3 items; e.g., "A clear philosophy of nursing/midwifery that pervades the patient care environment"). Scale response options ranged from 1 (*Strongly agree*) to 4 (*Strongly disagree*).

Response options were reverse coded prior to scoring so that higher scores indicated greater agreement that the aspect of the practice environment was present in the workplace. Following this, item scores were averaged for each subscale (score range 1 – 4). A mean score of 2.5 reflected the neutral mid-point (i.e., neither agreement nor disagreement), while scores above 2.5 showed agreement and scores below 2.5 disagreement. Respondents with only one missing item on the nursing leadership subscale were retained for subscale scoring (i.e., available item analysis). Subscale scores were not calculated for respondents with missing data on the remaining practice environment subscales because of the small number of subscale items. The adapted subscales were found to have good internal consistency (α range: .77 - .88).

Psychosocial workplace conditions

The Copenhagen Psychosocial Questionnaire Version 3 (COPSOQ-III)[22] was used in the survey to assess psychosocial workplace conditions and demands. There are short, medium, and long versions of the COPSOQ-III, with the long version containing eight domains and 45 scales. Four domains and eight scales were included in this research (Table 1). Respondents answered COPSOQ-III items on 5-point interval scales; values ranged from 0 – 100 and response options varied across survey questions (e.g., *Always* [100] to *Never/hardly ever* [0], *A very large extent* [100] to *A very small extent* [0]). Each scale was scored in the direction of the construct being measured, consequently one quantitative demand item was reverse coded prior to scoring. Mean scores were calculated for scales with more than one item (score range: 0 – 100). Scores were not calculated for respondents with missing data because of the small number of items for each scale. Internal consistency ranged from acceptable to high across subscales (α range: .67 - .89; Table 1).

Table 1. COPSOQ-III domains and scales included in the COVID and Wellbeing Survey

Domain	Scales	*N* items	α	Definition
Demands at work	Quantitative demands	3	.67	How much work is expected to be satisfactorily completed at work
	Work pace	2	.76	How fast work tasks need to be performed
	Cognitive demands	3	.81	Work tasks that require cognitive effort
	Emotional demands	3	.77	Work involves dealing with other people's feelings
Interpersonal relations and leadership	Role clarity	2	.74	Understanding of role at work
	Role conflicts	2	.79	Conflicting demands within a task or conflict when prioritising work tasks
Work-individual interface	Work life conflict	3	.89	Consequences of work for private life
Health and wellbeing	Self-rated health	1	-	Assessment of own general health over the past four weeks

Job satisfaction

A modified version of the McCloskey/Mueller Satisfaction Scale (MMSS)[23] was used to measure job satisfaction among respondents. Fourteen items assessed level of satisfaction with four job characteristics, including extrinsic rewards (3 items; e.g., satisfaction with salary/wages), collegial relationships (3 items; e.g., satisfaction with opportunities for social contact at work), work scheduling and flexibility (4 items; e.g., satisfaction with compensation for working weekends), and leadership and career opportunity (4 items; e.g., satisfaction with opportunities for career advancement). Items were measured on a 5-point Likert-type scale ranging from *Very dissatisfied* (5) to *Very satisfied* (1).

Responses to MMSS items were reverse coded prior to scoring so that higher scores indicated greater satisfaction in line with the original measure,[23] and then item scores were averaged for each subscale (score range 1 – 5). Respondents were retained for scoring if they were missing only one item for subscales with four items; scores were not calculated for respondents with missing data on the shorter three item subscales. The revised subscales showed good internal consistency (α range: .76 - .84).

Resilience

Resilience was measured using the Brief Resilience Scale (BRS)[24]. This short 6-item scale measured the ability to bounce back from stressful experiences. Respondents were asked the extent to which they agreed with items (e.g., "It is hard for me to snap back when something bad happens") on a 5-point Likert-type scale, ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). Three negatively worded items were reverse coded before calculating the mean (score range: 1 – 5). Respondents with only one missing item on the scale were retained during scoring. Scores may be interpreted using the following cut-offs: < 3 = low resilience, 3 to 4.3 = average resilience, and > 4.3 = high resilience [25]. Internal consistency for the scale was high (α = .87).

Depression, anxiety, and stress

The 21-item Depression Anxiety Stress Scale (DASS-21)[26] was used to measure self-reported depression (7 items; i.e., low or dysphoric mood), anxiety (7 items; i.e., physical arousal, panic, and fear) and stress (7 items; i.e., tension, intolerance, and overreaction to adverse experiences). Respondents were asked to indicate to what extent statements applied to them over the last week on a scale of 0 (*Did not apply to me at all*) to 3 (*Applied to me very much, or most of the time*). Subscale item scores were summed and multiplied by two (score range: 0 – 42) to enable comparison with the full 42-item DASS measure. Respondents who were missing only one item on a subscale were retained for scoring and case mean substitution was used to replace the missing value prior to calculating the total score. Higher subscale scores indicate greater symptom severity, with scores rated as normal, mild, moderate, severe, and extremely severe based on a normative sample* (see Lovibond and Lovibond[27] for score ranges). Internal consistency was high across the three subscales (α range: .85 - .92).

Burnout

Two instruments were used to measure job-related burnout. The 22-item Maslach Burnout Inventory – Human Services Survey (MBI-HSS)[28] was designed for use with professionals who interact with and help people through their work. The MBI-HSS assesses three dimensions of burnout, including emotional exhaustion (9 items; i.e., feeling emotionally exhausted and overextended by workplace demands), depersonalisation (5 items; i.e., detachment and impersonal responses towards service recipients), and personal accomplishment (8 items; feeling competent and successful in one's work with people). Respondents indicated how often statements were true for them on a Likert-type scale ranging from 0 (*Never*) to 6 (*Every day*). Subscale item scores were summed to reach a total score. Respondents who were missing only one item on a subscale were retained for subscale scoring, with case mean substitution used to replace missing values. High scores on emotional exhaustion and depersonalisation, as well as a low score on personal accomplishment, indicates a full burnout profile (see Table 2).[29] Internal consistency was good across the three subscales (α range: .76 - .92).

Table 2. Interpretation of MB-HSS subscale mean scores

Level	Emotional Exhaustion	Depersonalisation	Personal Accomplishment
Low	0 – 16	0 – 6	0 – 31
Moderate	17 – 26	7 – 12	32 – 38
High	27 – 54	13 – 30	39 – 48

The second measure of burnout was the most recent version of the Oldenburg Burnout Inventory OLBI; [30], which is job-related but not occupationally specific (e.g., items do not reference working with people). The OLBI contains two subscales: disengagement (8 items) and exhaustion (8 items). The disengagement subscale assesses negative attitudes towards and disconnection from work. The exhaustion subscale assesses emotional, physical, and cognitive strain. Respondents were asked to indicate their degree of agreement with each of the items on the scale, with response options ranging from 1 (*Strongly agree*) to 4 (*Strongly disagree*). Four items on each subscale were reverse

* Please note, severity ratings do not indicate more severe disorders.

coded before scoring so that higher subscale scores reflected greater burnout. Afterward, mean subscale scores were calculated (score range: 1 – 4). Respondents with only one missing item on each subscale were retained during scoring. Internal consistency was good for both the exhaustion subscale (α = .83) and the disengagement subscale (α = .78).

Data analysis

Quantitative data analyses were performed using STATA v16.0 [31] and Statistical Package for Social Sciences (SPSS) v24.0.[32] Descriptive analyses were performed on survey items, with valid percent reported throughout. Where applicable, the mean (*M*), standard deviation (*SD*), standard error (*SE*), and 95% confidence intervals (*CI*) were calculated and reported. All statistics were checked by an independent researcher. Qualitative data were exported from REDCap[12,13] and analysed using NVivo 20.[33] A descriptive overview of qualitative data is presented, supported by illustrative quotes.

Results

Respondents

The national COVID-19 survey ran over 12 weeks from 12 August to 31 October 2020 with 13,410 nurses, midwives, personal care workers, and other healthcare providers from across Australia logging into the survey. Of those, 11,942 consented to participate in the survey, and 11,902 answered at least one question. Most respondents (*n* = 11,192, 98.16%) were ANMF members, the largest trade union and professional organisation for nurses, midwives, and carers in Australia.

Response rates to questions varied with a downward trend as the survey progressed. Responses to the last of the COVID-19 questions were just under 8, 800, a 26% decrease in responses from the first answered question (*n* = 11,902). The number of responses to each question (or average number over a series) is reflected in the reporting of results.

Primary job classification

Respondents are reported at the aggregate level by the job classifications of: registered nurse (RN), registered midwife (RM), enrolled nurse (EN), personal care worker (PCW), and students (Table 3).

Dually registered RN/RMs were asked if they worked primarily in midwifery, nursing, or equally across both. Those who worked primarily or equally in midwifery were categorised as RM and those who worked primarily as RNs were categorised as such. Nurse practitioners were also included in the broader category of RN.

For the purposes of this report, the term personal care worker (PCW) was used to describe all those who selected one of the following job classifications; assistant in nursing, personal care worker, aged care worker, or disability care worker. Less than 7% of respondents were PCWs.

Table 3. Main job classification of respondents

Registered Nurse (RN)	***n***	**Registered Midwife (RM)**	***n***	**Enrolled Nurse (EN)**	***n***	**Personal care workers (PCW)**	***n***
Registered Nurse	7862	Registered Midwife	336	Enrolled Nurse	1679	Assistant in Nursing	297
Dual RN/RM working as RN	194	Dual RN/RM working as RM	480			Personal Care Worker	290
Nurse Practitioner	99					Aged Care Worker	157
						Disability Care Worker	19
Column totals	8155		816		1679		763
Student	48						
All total	11461						

Note. *n* = number of respondents.

Demographics

State/territory of work

The majority of survey respondents worked in Victoria (VIC; *n* = 5,158/11,348, 45.33%). This was followed in decreasing order of frequency by New South Wales (NSW), South Australia (SA), Queensland (QLD), Tasmania (TAS), Australian Capital Territory (ACT), Northern Territory (NT), and few (*n* =10) from Western Australia (WA; Figure 3).

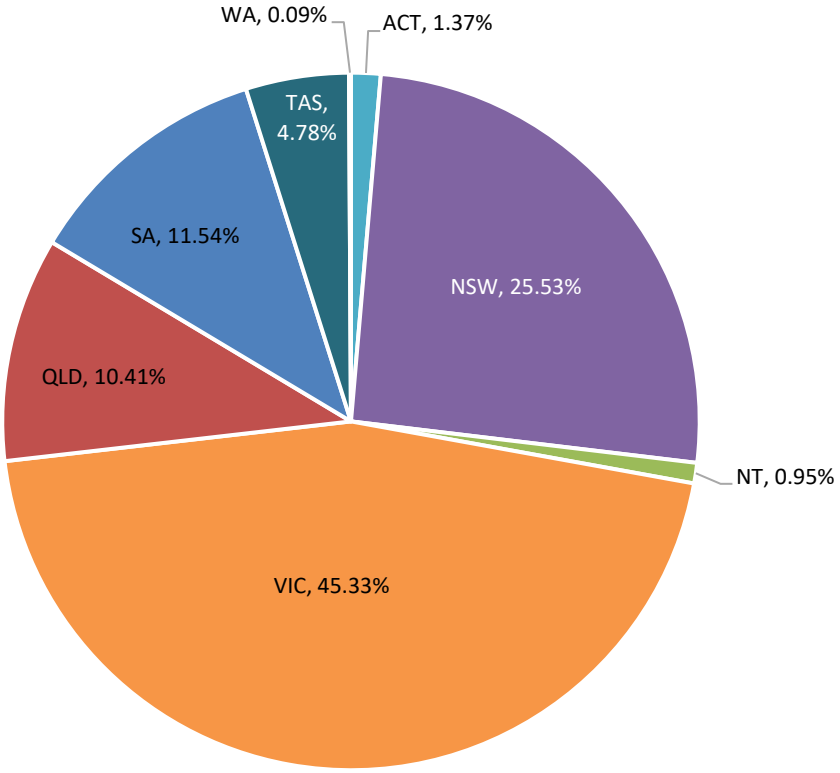

Figure 3. Respondents' state/territory of main workplace.

Age

The mean age of respondents was 48.28 years (*SD* = 12.34 years), median age was 50.00 years (Interquartile Range [*IQR*] = 38-58). This varied little by main job classification, with RNs having a median age of 50.00 years, RMs 53.00 years, ENs 53.00 years, PCW 50.00 years, and students 28.50 years.

Gender

Respondents largely identified as female (*n* = 10,884, 91.45%), with males representing 7.97% (*n* = 949), gender non-binary representing 0.18% (*n* = 22), and 0.39% (*n* = 47) of respondents preferred not to say.

Marital status

Just over two-thirds (69.30%) of respondents indicated they were in a relationship. Most respondents reported being married (*n* = 6,392, 54.04%), with the remaining respondents reporting being in a de facto relationship (*n* = 1,496, 12.65%), civil partnership (*n* = 102, 0.86%), or cohabiting (*n* = 207, 1.75%). Almost one-quarter of respondents (24.81%) reported being single (*n* = 2,714, 22.95%) or widowed (*n* = 221, 1.87%). A small proportion of respondents selected "other" (*n* = 353, 2.98%) or preferred not to say (*n* = 343, 2.90%).

Country of birth

Country of birth was recorded for 11,682 respondents (Table 4). The largest proportion were born in Australia (73.25%), followed by the UK or Republic of Ireland (8.44%). Nearly five percent (4.45%) indicated 'other'.

Table 4. Country of birth reported by respondents

Country of birth	***n***	**%**
Australia	8557	73.25
UK or Republic of Ireland	986	8.44
Philippines	366	3.13
New Zealand	303	2.59
India	302	2.59
China	103	0.88
South Africa	61	0.52
Malaysia	58	0.50
Nepal	50	0.43
USA	49	0.42
Germany	38	0.33
Canada	37	0.32
Fiji	32	0.27
Sri Lanka	28	0.24
Vietnam	24	0.21
Italy	14	0.12
Other	520	4.45
Prefer not to say	154	1.32
Total	11682	100

Note. *n* = number of respondents, % = percentage of respondents.

Ethnicity

Respondents were asked whether they were of Aboriginal and/or Torres Strait Islander origin. In total, 208 (1.81%) respondents identified as Aboriginal and/or Torres Strait Islander. The remaining respondents indicated their ethnicity according to narrow groups set out by the Australian Bureau of Statistics.[20] A majority of respondents (73.55%) reported being of Australian ethnicity (Table 5).

Table 5. Ethnicity of respondents

Ethnicity	***n***	**%**
Australian (including non-indigenous peoples)	7796	73.55
British	837	7.90
Southern Asian	357	3.37
New Zealand (including non-indigenous peoples)	271	2.56
Chinese Asian	206	1.94
Mainland South-East Asian	139	1.31
Irish	131	1.24
Western European	127	1.20
Northern European	102	0.96
Eastern European	98	0.92
Other North-East Asian	93	0.88
Maritime South-East Asian	87	0.82
Southern European	77	0.73
Central Asian	48	0.45
North American	46	0.43
South American	33	0.31
Other North African and Middle Eastern	32	0.30
Polynesian	31	0.29
South Eastern European	30	0.28
Jewish	17	0.16
Melanesian and Papuan	14	0.13
Arab	11	0.10
Central American	10	0.09
Micronesian	6	0.06
Caribbean Islander	1	0.01
Total	10600	100

Note. *n* = number of respondents, % = percentage of respondents.

Professional education

In total, 11,327 respondents reported the country in which they received their nursing, midwifery, or PCW education (Table 6). Most respondents (95.10%) received their professional education in Australia (88.63%), the UK/Ireland (4.77%), or New Zealand (1.70%).

Table 6. Country of education of respondents

Country of education	***n***	**%**
Australia	10039	88.63
UK or Republic of Ireland	540	4.77
New Zealand	193	1.70
Philippines	173	1.53
India	150	1.32
South Africa	29	0.26
China	13	0.11
Malaysia	5	0.04
Sri Lanka	1	0.01
Other	184	1.62
Total	11327	100

Note. *n* = number of respondents, % = percentage of respondents.

Personal health and carer responsibilities

Participants were asked whether they had any health conditions or risk factors prior to the pandemic that they felt put them at high risk for COVID-19. Just under one-quarter (*n* = 2,651, 22.30%) of the 11,887 respondents indicated "*yes*". Respondents who replied yes to this question were then asked to select which condition(s) they had which put them at risk.

Of the conditions reported by respondents, immunocompromised was the most frequently reported (*n* = 731, 34.34%), followed by severe asthma (*n* = 536, 25.18%), and being over 65 years of age (*n* = 382, 17.94%; Figure 4). Of those that reported a condition that put them at risk for COVID-19 infection, most respondents (88.19%) reported that they still went to work.

Approximately one-third of respondents (*n* = 4,066, 34.27%) reported having carer responsibilities for children at home and one-fifth (*n* = 2,481, 20.89%) of respondents reported having carer responsibilities other than children at home. When asked if their carer responsibilities had changed in response to COVID-19, 69.41% (*n* = 3,889) reported their responsibilities had moderately or significantly increased. One quarter (*n* = 1,384, 24.70%) reported their responsibilities had not changed, and 5.89% (*n* = 330) reported their carer responsibilities had decreased.

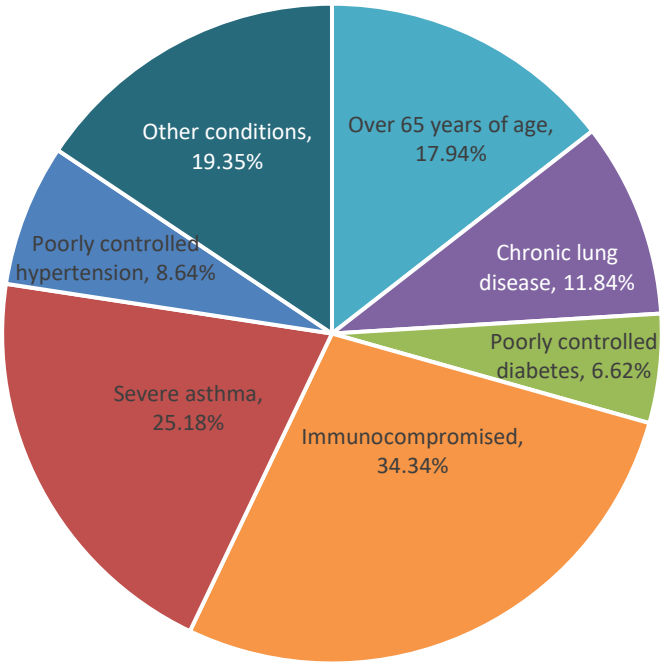

Figure 4. Respondents' conditions or risk factors for COVID-19.

Note. Multiple responses allowed; people could indicate more than one condition. Total number of respondents = 2,129. A range of other conditions were reported in the "other condition" category, such as cardiac conditions, cancer, obesity, autoimmune conditions, mental health conditions, health concerns of partner and pregnancy. More than one condition could be reported. See Appendix A, Table A1 (p. 88), for number of respondents for each category.

Occupational demographics

Primary role

Respondents were asked to indicate their role at their primary place of employment prior to the start of the pandemic (Table 7). The majority of respondents (*n* = 9,925, 86.67%) worked entirely or in part in patient or client care prior to the pandemic.

Table 7. Primary employment role of respondents

Primary role	***n***	**%**
Patient or client care	8691	75.90
Administration	94	0.82
Management	687	6.00
Teaching/education	306	2.67
Research	62	0.54
Combination client care and management or administration	927	8.10
Combination client care and education/research	307	2.68
Not working at the time	159	1.39
Other	218	1.90
Total	11451	100

Note. *n* = number of respondents, % = percentage of respondents.

Working hours

Respondents were asked to indicate their employment status before the pandemic (Table 8). Approximately two-thirds of respondents worked part-time; whether in a permanent part-time position (54.95%) or other part-time arrangement (*n* = 1,321, 11.57%). One quarter of respondents (25.84%) worked in a full-time permanent position. Casual positions accounted for approximately 10% (*n* = 1,086) of respondents.

Table 8. Employment status prior to the pandemic of respondents

Employment status	***n***	**%**
Permanent full-time	2951	25.84
Permanent part-time	6275	54.95
Full-time contract	365	3.20
Part-time contract	395	3.46
Casual full-time	234	2.05
Casual part-time	852	7.46
Agency full-time	49	0.43
Agency part-time	74	0.65
Not working	160	1.40
Other	65	0.57
Total	11420	100

Note. *n* = number of respondents, % = percentage of respondents.

Healthcare experience

Overall, respondents were highly experienced with one-third (*n* = 3,829, 33.74%) having 30 or more years of experience working in healthcare. A further 18.03% (*n* = 2,046) had 20 to 29 years of work experience. Only 12.20% (*n* = 1,385) had less than five years of experience or were a new graduate. This varied by main job classification; RMs were the most experienced with 47.64% (*n* = 384) having 30 or more years' experience, followed by RNs (*n* = 2,960, 36.69%), ENs (*n* = 427, 25.69%) and PCWs (*n* = 51, 6.76%; see Appendix A, Table A2 [p. 89]). PCWs were the least experienced of all groups, with 28.24% (*n* = 213) having less than 5 years of experience working in healthcare or no experience.

Workplace

Respondents were asked what the workplace/organisation type was for their *main* place of work. Respondents worked across a variety of facilities/organisations; the largest proportion (57.97%) being public or private hospitals. Of those who worked in general public hospitals (excluding specialist women's and children's hospitals), close to half (*n* = 2,456, 49.11%) worked in tertiary referral hospitals, 38.23% (*n* = 1,912) worked in other major hospitals and 12.66% (*n* = 633) worked in small hospitals (50 or fewer beds). Only a few respondents (*n* = 18) were not working in health.

Table 9. Main workplace/organisation type of respondents

Workplace	***n***	**%**
Public hospital (excluding outpatients)	5079	44.53
Private hospital	1431	12.55
Specialist women's and/or children's hospital	102	0.89
Community healthcare service	906	7.94
Residential aged care facility (public)	602	5.28
Residential aged care facility (private)	1453	12.74
Outpatient services	344	3.02
Mental health services	312	2.74
Disability services	45	0.39
Aboriginal health services	51	0.45
Correctional services	60	0.53
Tertiary education facility	97	0.85
General practitioner (GP) practice	269	2.36
Agency	88	0.77
Defence	12	0.11
Other government department or agency	151	1.32
Other private health service	169	1.48
Other	168	1.47
Other not-for-profit organisation	35	0.31
Unemployed/retired/not working	18	0.16
Both public and private hospitals	6	0.05
Rehabilitation	8	0.07
Total	11406	100

Note. *n* = number of respondents, % = percentage of respondents.

Workplace by main job classification

Types of workplaces and organisations were collapsed into main places of work. Table 10 reports these main places of work according to main job classification; 63.92% of RNs and 71.83% of RMs worked in hospitals, whereas only 45.44% and 9.02% of ENs and PCWs respectively worked in hospitals. The majority (79.31%) of PCWs worked in residential aged care facilities.

Table 10. Main workplace by job classification

		Job classification					
Main Workplace		**RN**	**RM**	**EN**	**PCW**	**Student**	**Total**
Hospital	*n*	5183	584	757	68	14	6606
	%	63.92	71.83	45.44	9.02	32.56	58.02
Residential Aged Care	*n*	840	3	611	598	3	2055
	%	10.36	0.37	36.67	79.31	6.98	18.05
Community	*n*	1340	157	200	58	2	1757
	%	16.52	19.31	12.00	7.69	4.65	15.43
GP Practices	*n*	222	2	44	0	0	268
	%	2.74	0.25	2.64	0.00	0.00	2.35
University / Government	*n*	184	45	8	5	5	247
	%	2.27	5.54	0.48	0.66	11.63	2.17
Other	*n*	330	22	46	24	12	434
	%	4.07	2.71	2.76	3.18	27.91	3.81
Not working	*n*	10	0	0	1	7	18
	%	0.12	0.00	0.00	0.13	16.28	0.16
Total	*n*	8109	813	1666	754	43	11385
	%	100	100	100	100	100	100

Note. First row reports frequencies and second row reports column percentages.

Main workplace was further collapsed into four categories for subsequent analyses. The collapsing of categories was undertaken for comparative purposes across selected variables and outcomes where appropriate. The four workplace categories were:

(1) Hospitals,
(2) Residential aged care facilities,
(3) Primary healthcare / community healthcare (including GP practices), and
(4) Other (those working in universities, government, not-for-profit, not working, and 'other').

Overall, most respondents worked in hospital settings (58.02%), followed by residential aged care facilities (18.02%), primary healthcare (17.80%), and other organisations (6.16%). Main job classification varied by the four workplace categories (Table 11), with RNs and RMs working primarily in hospitals (63.92%, 71.83%), or primary healthcare (19.26%, 19.56%), respectively. Under half of ENs worked in hospitals (45.44%) and PCWs worked primarily in residential aged care facilities (79.31%). See Appendix A, Tables A3 and B4 (pp. 90-91), for main job classification by primary role before the pandemic and years of work experience, respectively.

Table 11. Main workplace by broad job classification

Main Workplace		Job classification					
		RN	**RM**	**EN**	**PCW**	**Student**	**Total**
Hospital	*n*	5183	584	757	68	14	6606
	%	63.92	71.83	45.44	9.02	32.56	58.02
Residential Aged Care	*n*	840	3	611	598	3	2055
	%	10.36	0.37	36.67	79.31	6.98	18.05
Primary Care	*n*	1562	159	244	58	2	2025
	%	19.26	19.56	14.65	7.69	4.65	17.79
Other	*n*	524	67	54	30	24	699
	%	6.46	8.24	3.24	3.98	55.81	6.14
Total	*n*	8109	813	1666	754	43	11385
	%	100	100	100	100	100	100

Note. First row reports frequencies and second row reports column percentages.

Workplace by state/territory

Main workplace categories differed by state/territory, in part reflecting the demographic and health services unique to each jurisdiction (Table 12). For example, the NT had a higher proportion of respondents who worked in primary care, while SA and Tasmania with older populations, had higher proportional responses from those who worked in residential aged care facilities.

Table 12. Main workplace by state/territory

State/territory*		Main workplace				
		Hospital	**Residential Aged Care**	**Primary Care**	**Other**	**Total**
ACT	*n*	105	4	35	11	155
	%	67.74	2.58	22.58	7.10	100
NSW	*n*	1690	447	584	173	2894
	%	58.40	15.45	20.18	5.98	100
NT	*n*	51	2	42	12	107
	%	47.66	1.87	39.25	11.21	10
VIC	*n*	3061	947	800	331	5139
	%	59.56	18.43	15.57	6.44	100
QLD	*n*	720	203	194	64	1181
	%	60.97	17.19	16.43	5.42	100
SA	*n*	656	314	251	82	1303
	%	50.35	24.10	19.26	6.29	100
TAS	*n*	303	114	105	17	539
	%	56.22	21.15	19.48	3.15	100
Total	*n*	6586	2031	2011	690	11318
	%	58.19	17.94	17.77	6.10	100

Note. First row reports frequencies and second row reports row percentages. *Excludes *n* = 10 responses from WA.

Workplace by ethnicity

Workplace was also broken down according to major ethnic groups. The majority of healthcare providers who worked in residential aged care facilities were of Australian/New Zealand ethnicity (*n* = 1,265/1,754, 72.12%,), although only 16.30% of this ethnic group worked in residential aged care facilities (Table 13). Respondents who reported an ethnic origin from Asia (31.84%), Middle East/ North Africa (35.09%), and Polynesia/Micronesia (25.00%) were more likely to work in residential aged care facilities.

Table 13. Major ethnic groups by main workplace

		Major Ethnic Groups						
Main workplace		**Australia/ New Zealand**	**Polynesian/ Micronesian**	**UK/ Europe**	**Middle East/ North Africa**	**Asian**	**Americas/ Caribbean**	**Total**
Hospital	*n*	4594	22	786	30	478	48	5958
	%	59.20	45.83	58.09	52.63	54.75	54.55	58.53
Residential Aged Care	*n*	1265	12	163	20	278	16	1754
	%	16.30	25.00	12.05	35.09	31.84	18.18	17.23
Primary Care	*n*	1413	8	308	2	77	20	1828
	%	18.21	16.67	22.76	3.51	8.82	22.73	17.96
Other	*n*	488	6	96	5	40	4	639
	%	6.29	12.50	7.10	8.77	4.58	4.55	6.28
Total	*n*	7760	48	1353	57	873	88	10179
	%	100	100	100	100	100	100	100

Note. First row reports frequencies and second row reports column percentages.

Work setting

Respondents were asked the work setting of their main employer/job. Respondents worked across a range of settings with the largest proportions working in the acute care categories of surgical, medical, or mixed surgical/medical (*n* = 2,486, 22.04%), followed by aged care (Table 14). Note, there was also a small proportion of respondents who indicated an 'other' work setting (5.37%).

Table 14. Main work setting of respondents

Setting	*n*	%
Aged care	2297	20.36
Medical	921	8.16
Surgical	732	6.49
Mixed medical/surgical	833	7.38
Peri-operative	871	7.72
Mental health	518	4.59
ICU	380	3.37
Cardiac ICU	71	0.63
Paediatric ICU	20	0.18
Neonatal ICU	122	1.08
Emergency	682	6.05
Community/primary healthcare nursing	753	6.67
Practice nursing	274	2.43
Rehabilitation and disability	314	2.78
Palliative care	128	1.13
Paediatrics	166	1.47
Child and family health	209	1.85
Maternity care (antenatal, birth, postnatal)	510	4.52
Midwifery continuity of care	39	0.35
Drug and alcohol	66	0.59
Management	160	1.42
Education	172	1.52
Research	56	0.50
Health promotion	26	0.23
Policy	16	0.14
Other	606	5.37
Oncology	77	0.68
Infection prevention/control	31	0.27
Outpatients	31	0.27
COVID	34	0.30
Imaging	39	0.35
Renal	67	0.59
No fixed setting/everywhere/pool	38	0.34
Unemployed/not working in health	23	0.20
Total	11282	100

Note. *n* = number of respondents, % = percentage of respondents.

COVID-19 and workplace preparedness

COVID-19 workplace plan

Respondents were asked if their workplace had a plan or protocol in place when the pandemic was declared (March 2020) to respond to known or suspected COVID-19 cases. Just over half of all respondents (53.21%) stated their workplace had a COVID-19 plan when the pandemic was declared (Table 15). The remaining respondents were unsure (23.43%) or replied that there was no plan (22.26%). There was little variability across states/territories, with 50.24% (VIC) to 57.42% (SA; excluding WA) of respondents indicating their workplace had a plan.

More variability was evident when examined by type of workplace. As reported by respondents, hospitals (56.56%) were more likely to have a COVID-19 plan than were residential aged care facilities (48.73%) or community health settings (49.97%). Of note, those working in GP practices (*n* = 265) reported the highest rates of having a workplace plan in place (*n* = 159, 60.00%). These respondents are included as part of the Primary Care/Community Care category. Those who worked at tertiary hospitals were also more likely to report a COVID-19 plan or protocol was in place (*n* = 1,445, 61.00%) as compared to those who worked at a small hospital with 50 or fewer beds (*n* = 318, 51.79%; see Appendix A, Table A5 [p. 92]).

Table 15. Workplace plan at announcement of the pandemic by main workplace

		Main Workplace				
Workplace plan		**Hospital**	**Residential Aged Care**	**Primary Care**	**Other**	**Total**
Yes	*n*	3618	958	985	294	5855
	%	56.56	48.73	49.97	43.88	53.21
No	*n*	1183	528	533	205	2449
	%	18.49	26.86	27.04	30.60	22.26
Unsure	*n*	1563	457	431	127	2578
	%	24.43	23.25	21.87	18.96	23.43
N/A	*n*	33	23	22	44	122
	%	0.52	1.17	1.12	6.57	1.11
Total	*n*	6397	1966	1971	670	11004
	%	100	100	100	100	100

Note. First row reports frequencies and second row reports column percentages.

Respondents were also asked whether their workplace COVID-19 plan or protocol had been reviewed or updated since the start of the pandemic. Most respondents (*n* = 9,261, 84.05%) reported that their workplace plan or protocol regarding COVID-19 had been reviewed or updated, 13.00% (*n* = 1,432) were unsure, and 2.95% (*n* = 325) reported the protocols or plans had not been reviewed or updated.

When respondents were asked if their workplace had a plan in place currently (at the time of the survey), 94.33% (*n* = 10,399) responded "*yes*", 4.63% (*n* = 510) were unsure and 1.04% (*n* = 115) replied "*no*". Those working in residential aged care facilities most frequently reported "*unsure*"

(*n* = 160, 8.14%) or "*no*" (*n* = 38, 1.93%) compared with those working in hospitals and primary care settings.

COVID-19 infection control training

Respondents were asked to indicate whether they had received COVID-19 infection control and prevention training. Overall, 85.56% of respondents reported receiving training (Table 16). This varied by workplace, with people working in hospitals (88.20%) and residential aged care facilities (89.67%) more likely to have received training than those working in primary healthcare or other organisations

Table 16. COVID-19 training by main workplace

		Received training		
Main workplace		**Yes**	**No**	**Total**
Hospital	*n*	5620	752	6372
	%	88.20	11.80	100
Residential Aged Care	*n*	1762	203	1965
	%	89.67	10.33	100
Primary Care	*n*	1544	415	1959
	%	78.82	21.18	100
Other	*n*	449	212	661
	%	67.93	32.07	100
Total	*n*	9375	1582	10957
	%	85.56	14.44	100

Note. First row reports frequencies and second row reports row percentages.

For those who received COVID-19 infection control training, just over three-quarters (*n* = 7,146, 76.89%) of respondents were moderately to extremely confident in the training they received (Table 17). This pattern was similar across all four workplace categories (see Appendix A, Table A6 [p. 92]).

Table 17. Confidence to practice safely after COVID-19 training among respondents

Level of confidence	***n***	**%**
Not at all confident	458	4.93
Somewhat confident	1690	18.18
Moderately confident	3047	32.78
Very confident	3087	33.21
Extremely confident	1012	10.89
Total	9294	100

Note. *n* = number of respondents, % = percentage of respondents.

Care for cases of COVID-19 in the workplace

Respondents were asked questions related to caring for suspected or known COVID-19 cases. Most respondents (*n* = 7,466, 69.29%) reported their workplace had provided care to one or more patients/clients with *suspected* COVID-19 (Table 18). When asked if their workplace had provided care to one or more patients/clients with *confirmed* COVID-19, 40.04% (*n* = 4,312) replied they had with a further 9.58% (*n* = 1,032) unsure.

Just over one-third of respondents (*n* = 3,646, 33.93%) replied that their workplace had assigned or asked for dedicated staff to care for COVID-19 patients. Sixteen per cent (*n* = 1,745) were unsure if their workplace had assigned or asked for dedicated staff to look after COVID-19 patients and for 7.60% (n = 817) this was not applicable.

Table 18. Workplaces that provided care to patients/clients with known or suspected COVID-19

Suspected or known cases	***n***	**%**
Suspected		
Yes	7466	69.29
No	2004	18.60
Unsure	889	8.25
Not applicable	416	3.86
Total	10775	100.00
Known		
Yes	4312	40.04
No	4926	45.74
Unsure	1032	9.58
Not applicable	499	4.63
Total	10769	100

Note. *n* = number of respondents, % = percentage of respondents. Totals for the number of respondents vary slightly because these were two separate questions.

For those whose workplace had cared for one or more patients/clients with suspected or confirmed cases of COVID-19, close to half (*n* = 3,241, 45.74%) of workplaces had only cared for 1-10 cases since the start of the pandemic (Figure 5). A further quarter (*n* = 1,937, 27.34%) of workplaces had cared for between 11-50 confirmed or suspected cases. Very few respondents (< 5%) indicated that their workplace had cared for more than 500 confirmed or suspected cases.

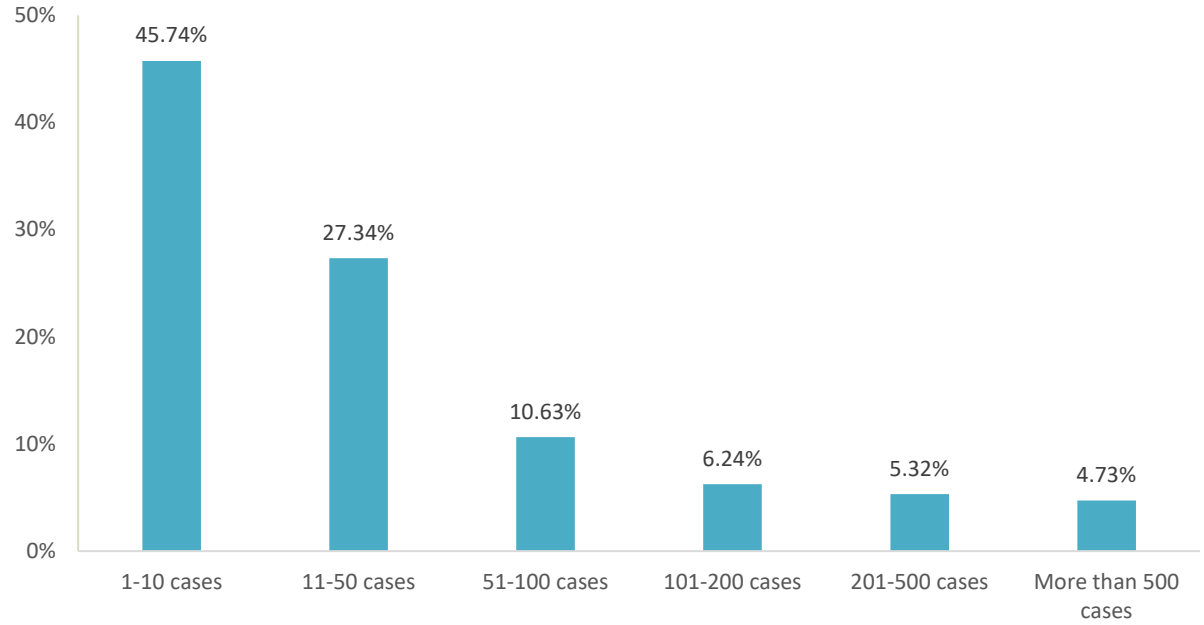

Figure 5. Number of confirmed or suspected COVID-19 cases cared for at workplaces since the start of the pandemic.

Those respondents who worked in a place where care was provided to one or more patients with confirmed or suspected COVID-19 (*n* = 7,547) were asked if they had provided direct care to a patient/client with confirmed or suspected COVID-19 (Table 19). Twenty-one percent (*n* = 1,551) of respondents indicated they had provided direct care to patients/clients with confirmed COVID-19 and about one-third (*n* = 2,538, 34.39%) indicated they had not or that this was not applicable to them.

Table 19. Direct care provided to a confirmed or suspected COVID-19 case

Direct care provided	***n***	**%**
Yes, confirmed case(s)	677	9.17
Yes, suspected case(s)	3292	44.60
Yes, both confirmed and suspected cases	874	11.84
No	2419	32.77
Not applicable	119	1.61
Total	7381	100

Note. *n* = number of respondents, % = percentage of respondents. Number of missing respondents = 166.

The respondents who provided care to confirmed and/or suspected COVID-19 cases (*n* = 4,843) were asked in what care setting they provided this care (Table 20). Of the options provided, the most frequently reported sites were designated COVID-19 wards, residential aged care facilities, and emergency departments. Of note, one-third of respondents indicated they had cared for patients/clients in other care settings**.**

Table 20. Care setting for confirmed or suspected COVID-19 cases

Setting	***n***	**%**
Emergency Department	829	17.36
Hospital ICU	351	7.35
Hospital CCU	95	1.99
Hospital NICU	41	0.86
Hospital PICU	24	0.50
Hospital Specialty Unit (e.g., respiratory)	485	10.16
Hospital designated COVID-19 ward	1011	21.18
Residential aged care facility	839	17.57
Disability	31	0.65
Community/home care	258	5.40
Designated COVID hotel	53	1.11
Other	1601	33.54

Note. *n* = number of respondents, % = percentage of respondents. Multiple responses permitted; hence percent sum greater than 100. Total number of respondents = 4,774.

COVID-19 Information at your workplace

Approximately 10,220 people provided responses to questions related to COVID-19 information provision at their workplace. Respondents were asked to rate COVID-19 information provided at their workplace at a time when information was constantly evolving and changing. Across all categories, respondents rated the information as good to excellent at least 65% of the time (Figure 6).

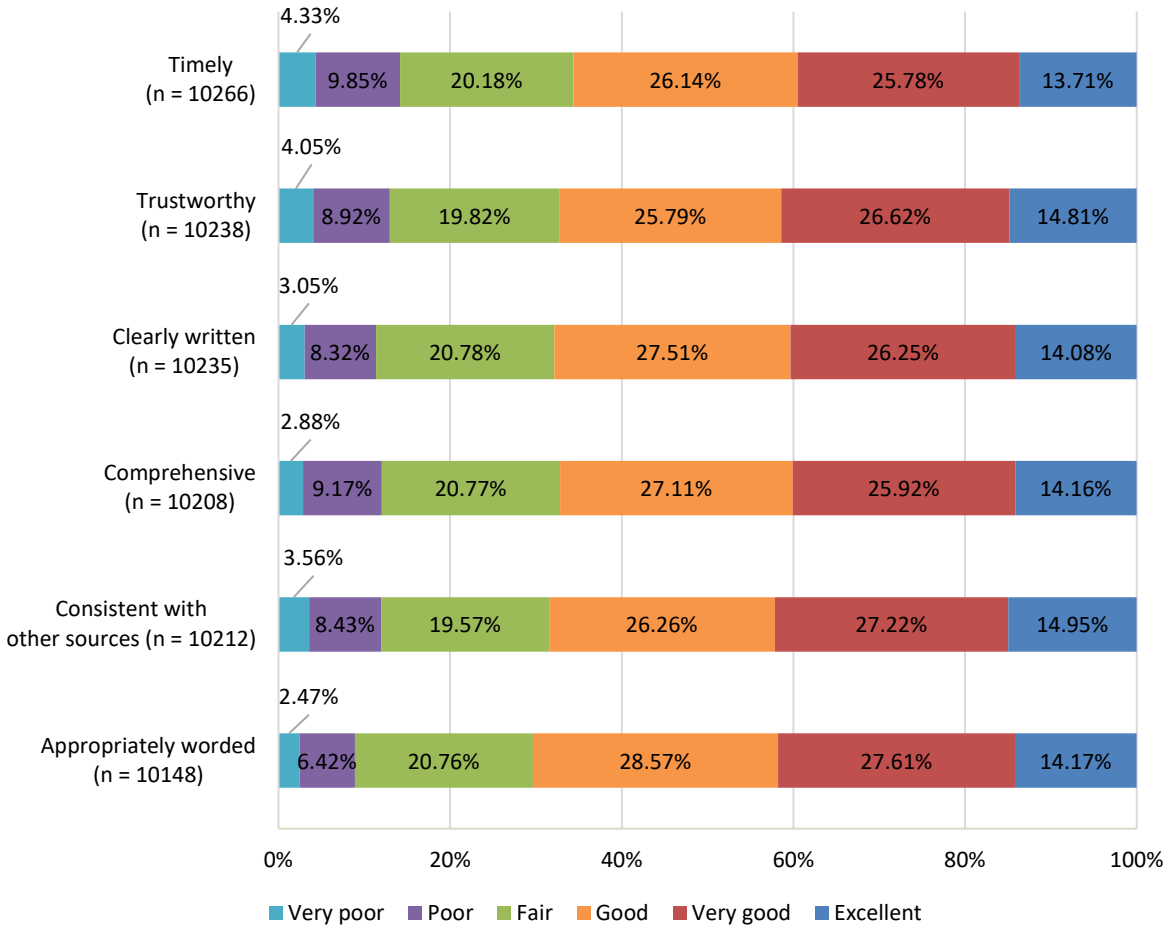

Figure 6. Rating of COVID-19 information provision at workplaces.

Respondents were also asked if they found other COVID-19 information from sources outside of work to be useful to them. The most commonly selected sources were state/territory health departments (83.31%) and ANMF state/territory branches (50.50%). Comparatively fewer respondents indicated accessing federal resources (e.g., Federal health department or ANMF Federal Office; Table 21).

Table 21. Useful workplace-related information sources about COVID-19

Information Source	***n***	**%**
State/territory health department	8135	83.31
ANMF State/Territory branch	4931	50.50
World Health Organisation	3617	37.04
Federal health department	3520	36.05
Other nursing/midwifery peak body	3496	35.80
ANMF Federal office	816	8.36
Other industry sources (e.g., medical)	1851	18.96
Media sources	3206	32.83

Note. *n* = number of respondents, % = percentage of respondents. Multiple responses permitted; hence percent sum greater than 100. Total number of respondents = 9765.

Organisational preparedness

Approximately 9,800 people provided responses to questions related to their organisation's preparedness for the COVID-19 pandemic. Survey respondents were asked to rate their organisation's preparedness with respect to policies and procedures across a range of areas on a 6-point scale ranging from very poor to excellent (Table 22).

Staff screening for risk factors or symptoms of COVID-19 was rated as good to excellent by approximately 70.57% (*n* = 6,943) of respondents. Just under half (*n* = 4,339, 44.33%) of respondents rated managing staff abuse as fair to very poor. Staff access to workplace psychological or mental health support was also rated poor to very poor by 38.63% (*n* = 3,788) of respondents. Access to alternative accommodation between shifts was rated as fair to very poor by 34.67% (*n* = 3,373) of respondents, but of note, a further 28.46% indicated that accessing alternative accommodation was not applicable. Protocols such as general cleaning and cleaning of isolation rooms were viewed as being good to excellent by the majority of respondents (63.60% and 55.03% respectively). Workforce policies rated less favourably included being able to deploy more staff if required and debriefing processes, which were both rated as poor to very poor by approximately 32% of respondents.

Table 22. Ratings of primary workplace COVID-19 policies and procedures

		Very poor	Poor	Fair	Good	Very good	Excellent	Don't know	N/A	Total
Staff screening for risk factors/symptoms	*n*	403	719	1420	1966	2611	2366	180	174	9839
	%	4.10	7.31	14.43	19.98	26.54	24.05	1.83	1.77	100
Staff testing for suspected cases	*n*	284	595	1135	1771	2329	2693	543	456	9806
	%	2.90	6.07	11.57	18.06	23.75	27.46	5.54	4.65	100
Support for new graduates or inexperienced staff	*n*	625	1090	1621	1754	1694	1010	1180	812	9786
	%	6.39	11.14	16.56	17.92	17.31	10.32	12.06	8.30	100
Access to workplace psychological/mental health support	*n*	771	1170	1847	1941	1781	1526	603	168	9807
	%	7.86	11.93	18.83	19.79	18.16	15.56	6.15	1.71	100
Managing staff abuse	*n*	1062	1410	1867	1738	1407	887	941	475	9787
	%	10.85	14.41	19.08	17.76	14.38	9.06	9.61	4.85	100
Changes to work environment to reduce exposure to potentially infected patients	*n*	719	1110	1806	2006	2062	1648	212	228	9791
	%	7.34	11.34	18.45	20.49	21.06	16.83	2.17	2.33	100
Use of other methods to reduce face-to-face contact with patients	*n*	426	680	1235	1803	1893	1989	595	1147	9768
	%	4.36	6.96	12.64	18.46	19.38	20.36	6.09	11.74	100
Access to alternative accommodation between shifts	*n*	1608	1073	692	675	554	460	1899	2769	9730
	%	16.53	11.03	7.11	6.94	5.69	4.73	19.52	28.46	100
Responding to an outbreak	*n*	378	607	1402	1785	1712	1412	891	1561	9748
	%	3.88	6.23	14.38	18.31	17.56	14.49	9.14	16.01	100

		Very poor	Poor	Fair	Good	Very good	Excellent	Don't know	N/A	Total
Able to deploy more staff if required	*n*	1444	1668	1675	1456	1174	805	1005	545	9772
	%	14.78	17.07	17.14	14.90	12.01	8.24	10.28	5.58	100
Isolation of vulnerable populations	*n*	590	1013	1654	1840	1592	1219	990	838	9736
	%	6.06	10.40	16.99	18.90	16.35	12.52	10.17	8.61	100
Communication of policies and procedures	*n*	447	868	1812	2367	2288	1802	113	70	9767
	%	4.58	8.89	18.55	24.23	23.43	18.45	1.16	0.72	100
Cleaning protocols of isolation rooms	*n*	483	717	1274	1837	1864	1675	811	1108	9769
	%	4.94	7.34	13.04	18.80	19.08	17.15	8.30	11.34	100
Cleaning protocols in general	*n*	562	842	1660	2218	2223	1778	354	142	9779
	%	5.75	8.61	16.98	22.68	22.73	18.18	3.62	1.45	100
Access to other equipment (e.g., linen)	*n*	425	742	1577	2354	1944	1505	507	681	9735
	%	4.37	7.62	16.20	24.18	19.97	15.46	5.21	7.00	100
Debriefing processes	*n*	1497	1635	1650	1514	1072	836	960	599	9763
	%	15.33	16.75	16.90	15.51	10.98	8.56	9.83	6.14	100
Social distancing	*n*	945	1294	2059	2116	1782	1393	104	105	9798
	%	9.64	13.21	21.01	21.60	18.19	14.22	1.06	1.07	100
Visitor policies	*n*	400	587	1359	2074	2237	2391	219	502	9769
	%	4.09	6.01	13.91	21.23	22.90	24.48	2.24	5.14	100

Note. First row reports frequencies and second row reports row percentages.

COVID-19 health concerns, staff testing, and missed work

Health concerns

Participants were asked how concerned they were about risks to their personal health both at the beginning of the pandemic and currently (i.e., at the time of completing the survey). At the beginning of the pandemic approximately one-quarter (*n* = 2,350, 24.46%) of respondents were not at all or only slightly concerned about risks to personal health due to their work role and 29.38% (*n* = 2,823) were extremely concerned (Figure 7).

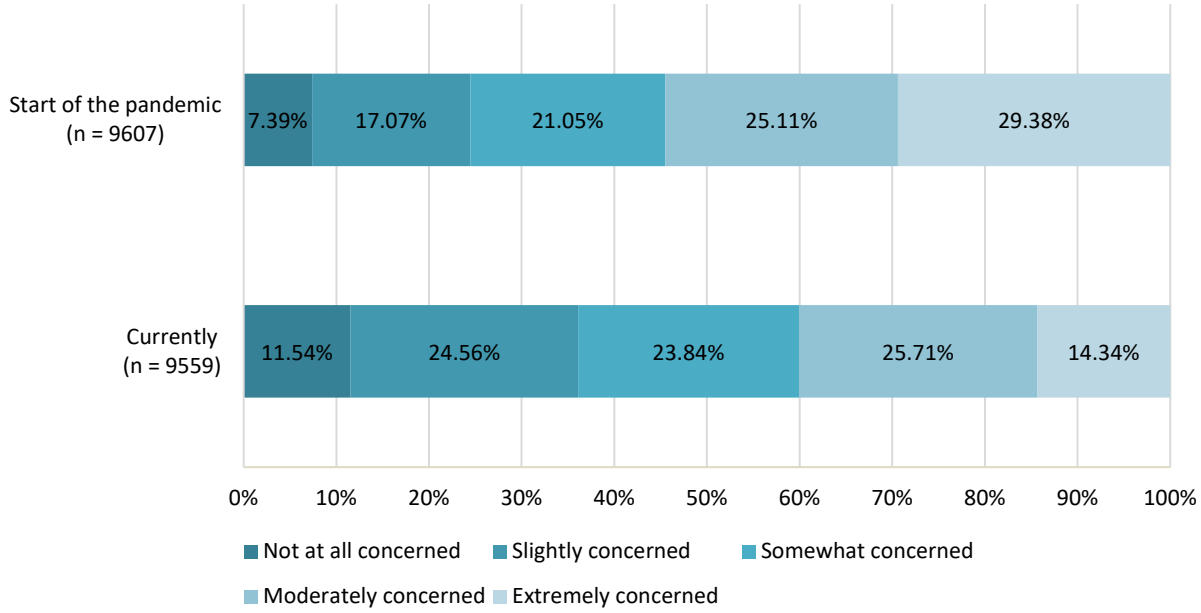

Figure 7. Respondents' concern regarding risk to their personal health due to COVID-19.

Respondents reported having lower levels of concern regarding workplace risks to their personal health due to COVID-19 at the time of the survey. For example, a higher proportion of respondents were not at all or only slightly concerned (*n* = 3,451, 36.10%) at the time of the survey compared with at the start of the pandemic (*n* = 2,350, 24.46%), with only 14.34% (*n* = 1,371) being extremely concerned at the time of the survey (Figure 7). This varied somewhat according to main workplace category, with those working in the residential aged care facilities being more likely to feel extremely concerned (*n* = 343, 20.16%) at the time of the survey than those working in hospitals (*n* = 767, 13.86%) or in primary healthcare (*n* = 193, 11.23%; see Appendix A, Table A7 [p. 93])**.**

Staff testing for COVID-19

At the time of the survey, just under two-thirds of respondents had been tested for COVID-19 (*n* = 5,855, 61.03%) and this varied little by main workplace category. The mean number of times respondents had been tested was 2.07 (*SD* = 1.77). Of those that had been tested, 25.06% (*n* = 1,455) had been tested 3 or more times, 2.97% (*n* = 168) reported testing positive for COVID-19, and a further 1.20% (*n* = 68) were awaiting results. Respondents working in residential aged care facilities reported the highest proportion of positive COVID-19 test results (Table 23).

Table 23. Number of positive COVID-19 tests by main workplace

Main workplace		Tested positive for COVID-19			
		Yes	**No**	**Decision pending**	**Total**
Hospital	*n*	111	3255	41	3407
	%	3.26	95.54	1.20	100
Residential Aged Care	*n*	43	916	7	966
	%	4.45	94.82	0.72	100
Primary Care	*n*	9	944	14	967
	%	0.93	97.62	1.45	100
Other	*n*	5	291	6	302
	%	1.66	96.36	1.99	100
Total	*n*	168	5406	68	5642
	%	2.98	95.82	1.21	100

Note. First row reports frequencies and second row reports row percentages.

When respondents were asked if they thought they may have contracted COVID-19 through workplace exposure, the majority (*n* = 139/162, 85.80%) believed that they had (Figure 8)**.** Respondents working in residential aged care facilities were the most likely to believe they acquired COVID-19 through workplace exposure (*n* = 41, 95.35%).

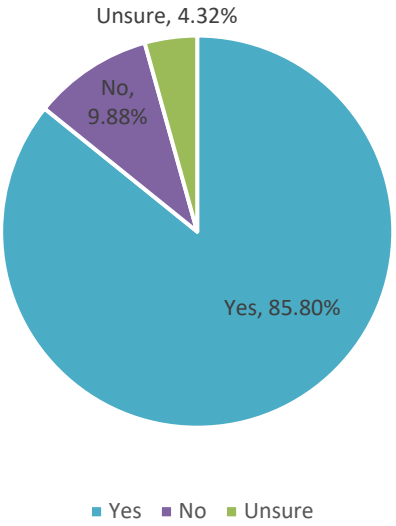

Figure 8. Respondents' beliefs about acquiring COVID-19 through workplace exposure.

Respondents who tested positive for COVID-19 were asked if they had experienced any work-related distress as a result (e.g., stigma for being COVID-19 positive, sense of letting colleagues down). Just over two-thirds (*n* = 112, 67.47%) of these respondents indicated that they had experienced work-related distress (Table 24). Those who tested positive and were working in the hospital sector reported the highest work-related distress associated with having tested positive (*n* = 81, 74.31%).

Table 24. Number of respondents who tested positive for COVID-19 and reported work-related distress by main workplace

		Experienced work-related distress		
Main workplace		**No**	**Yes**	**Total**
Hospital	*n*	28	81	109
	%	25.69	74.31	100
Residential Aged Care	*n*	18	25	43
	%	41.86	58.14	100
Primary Care	*n*	6	3	9
	%	66.67	33.33	100
Other	*n*	2	3	5
	%	40.00	60.00	100
Total	*n*	54	112	166
	%	32.53	67.47	100

Note. First row reports frequencies and second row reports row percentages.

Commentary on the impact of work-related distress

Respondents who had tested positive for COVID-19 and had experienced work-related distress were given the opportunity to describe the impact this had had on them. Respondents (*n* = 107) described a range of strong negative emotions associated with testing positive for COVID-19 and expressed concerns for their family and distress associated with letting down their colleagues. Commonly noted emotions included anger, anxiety, disappointment, fear, embarrassment, guilt, insecurity, sadness, and shame.

> *"I feel very guilty that I could have potentially infected other staff, and that many staff had to be furloughed. My husband also got covid from me, and we were seperated [sic] from our kids away from home. The impact has been quite devastating to my mental health." (Registered Nurse, Hospital)*

> *"Massive impact. Feel like a failure. Feel incompetent. Feel stressed, anxious and sad." (Enrolled Nurse, Residential Aged Care Facility)*

> *"Experienced extreme guilt for getting sick. I was considered a senior nurse who was also responsible for check on other donning and doffing. I felt I must have breached protocols, and didn't do my job properly." (Registered Nurse, Hospital)*

Some respondents also described the distress associated with the physical impact of the virus, including ongoing fatigue, loss of taste or smell, headaches, pain, and shortness of breath:

> *"I often feel guilty for the ongoing fatigue I feel. It's difficult to concentrate late in the day when I'm tired. I feel like I'm working extra hard to focus. The headaches are ongoing." (Registered Nurse, Hospital)*

> *"I feel useless in that 3.5 weeks after DHHS [Department of Health and Human Services] cleared me, I am experiencing health issues that have prevented me going about my day to day activities and also unable to get back to work. My colleagues are working their backsides off." (Registered Nurse, Hospital)*

"Very distressing. Physical illness during active infection then ongoing fatigue, pain and mental fog. Mentally traumatised by loss of so many residents, people we cared about. Guilt with how they died and not being there to care for them." (Enrolled Nurse, Residential Aged Care Facility)

Other respondents were distressed by and disappointed with the low level of support and communication from workplaces, and voiced a loss of trust or faith in management:

"No follow-up at all from immediate manager, I had thoughts I was 'blamed' for my infection because lack of care. Infection control officer unaware of my identity and circumstances. Frankly considering resignation due to uncaring management." (Registered Midwife, Hospital)

"Did not feel supported by management or executives. Although it was not my fault I still felt immense guilt that I was putting my family at risk. I also felt like I maybe blamed in some way by my hospital so they could shift blame from themselves." (Registered Nurse, Hospital)

"Everything has changed. Management did not communicate and still have not explained what went wrong. Things are not back to normal and don't know if the facility will survive. Feel used and have zero faith in the management." (Personal Care Worker, Residential Aged Care Facility)

Missed work due to the pandemic

More than half of all respondents (*n* = 5,134/9,518, 53.94%,) indicated that they had missed work due to reasons associated with COVID-19. Of those that reported they had missed days of work because of COVID-19, the following reason(s) were given: contact with known or suspected case at work (10.75%), contact with known or suspected case outside of work (6.46%), recent travel (4.24%), showing symptoms of COVID-19 (39.04%), screened for COVID-19 (52.46%), tested positive for COVID-19 (3.04%), other reasons (25.65%). When respondents were asked what type of leave they took to cover their missed days, the most common type of leave selected was personal/sick leave (64.12%) and special COVID-19 paid leave (22.45%; Table 25).

Table 25. Type of leave taken by respondents who missed days due to COVID-19

Type of leave	***n***	**%**
Special COVID-19 paid leave	1162	22.45
Other special paid leave	84	1.62
Workers compensation	48	0.93
Personal/sick leave	3318	64.12
Annual leave	552	10.67
Long service leave	96	1.86
Leave without pay	971	18.76
Other leave type	279	5.39

Note. *n* = number of respondents, % = percentage of respondents. Multiple responses allowed; hence percent will sum to greater than 100. Total number of respondents = 5175.

Personal concerns related to COVID-19

A series of 16 questions asked whether currently there were any personal concerns because of COVID-19; six questions concerned their own personal and family situation and the others were personal concerns around work.

Concerns about home life because of COVID-19

Respondents were asked to indicate their level of concern when responding to series of statements related to impacts on their home life. On a personal level, 42.66% (*n* = 4,004) of respondents indicated that they were moderately or extremely concerned about their own psychological wellbeing. This was a similar proportion to those that were moderately or extremely concerned with their own personal health and safety (*n* = 4,163, 44.11%). Those who worked in residential aged care facilities and hospitals were more concerned about their health and psychological wellbeing than those who worked in primary healthcare or other workplaces (see Appendix A, Tables A8 and A9, [pp. 93-94]).

On a family level, approximately six out of ten respondents were moderately or extremely concerned with keeping their family or the people they lived with safe (Figure 9). Other significant concerns for respondents because of COVID-19 were risk to vulnerable family members and managing the personal needs of family/people they live with. Experiencing financial hardship and partners losing work/hours were not as notable concerns for respondents. The pattern of responses was similar across the four main workplaces with the exception of experiencing financial hardship; those working in residential aged care facilities were more likely to report being extremely concerned (21.71%; see Appendix A, Table A10 [p. 94]).

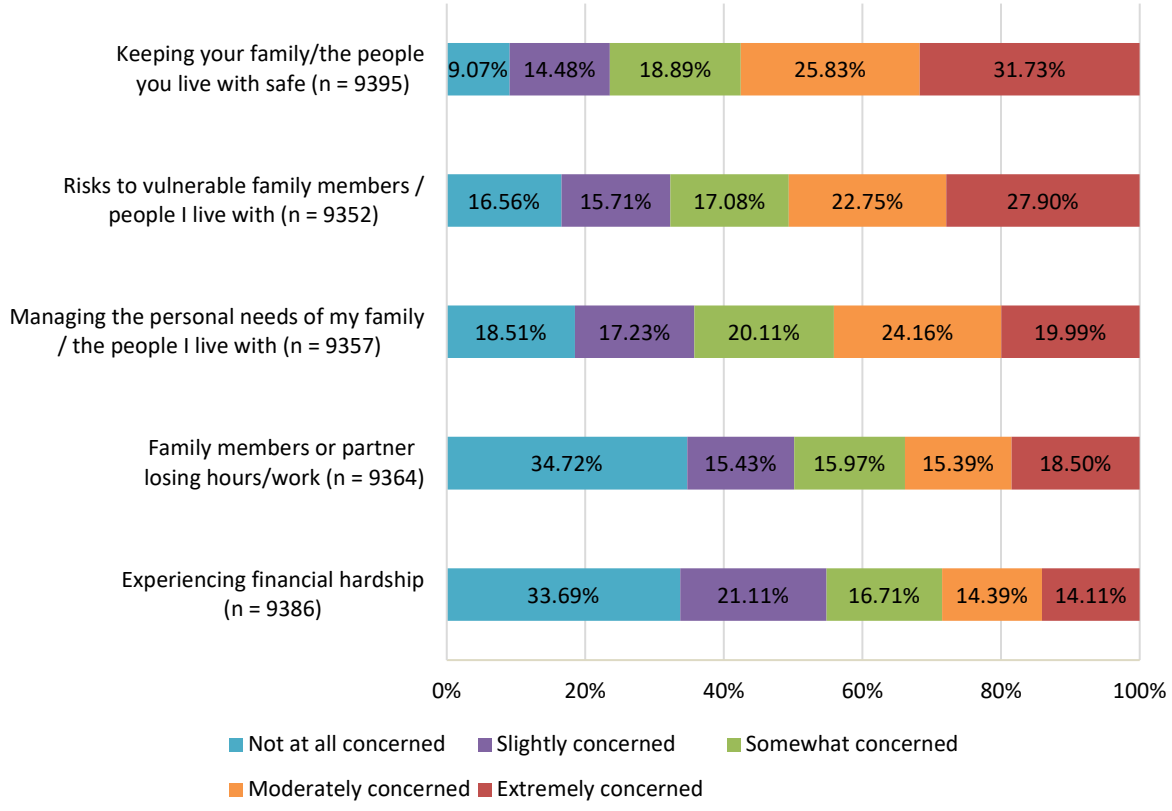

Figure 9. Respondents' current personal concerns because of COVID-19.

Concerns about the workplace because of COVID-19

Respondents were asked to indicate their level of concern in response to a series of statements related to the workplace as a result of COVID-19 (Figure 10). Respondents were most concerned about having adequate staff, with 53.18% (*n* = 4,981) of nurses and midwives cited they were moderately to extremely concerned about this. A similar proportion of respondents were also moderately or extremely concerned about the welfare of their colleagues (*n* = 4,889, 52.15%) and having the right skills mix in their workplace (*n* = 4,819, 51.43%). Respondents were generally not concerned about having access to hand sanitizer at work or having supplies to disinfect themselves before going home. One-quarter of respondents (*n* = 2,322) were moderate or extremely concerned about job security. This proportion was highest for those who worked in residential aged care facilities (35.75%; see Appendix A, Table A11 [p. 95]).

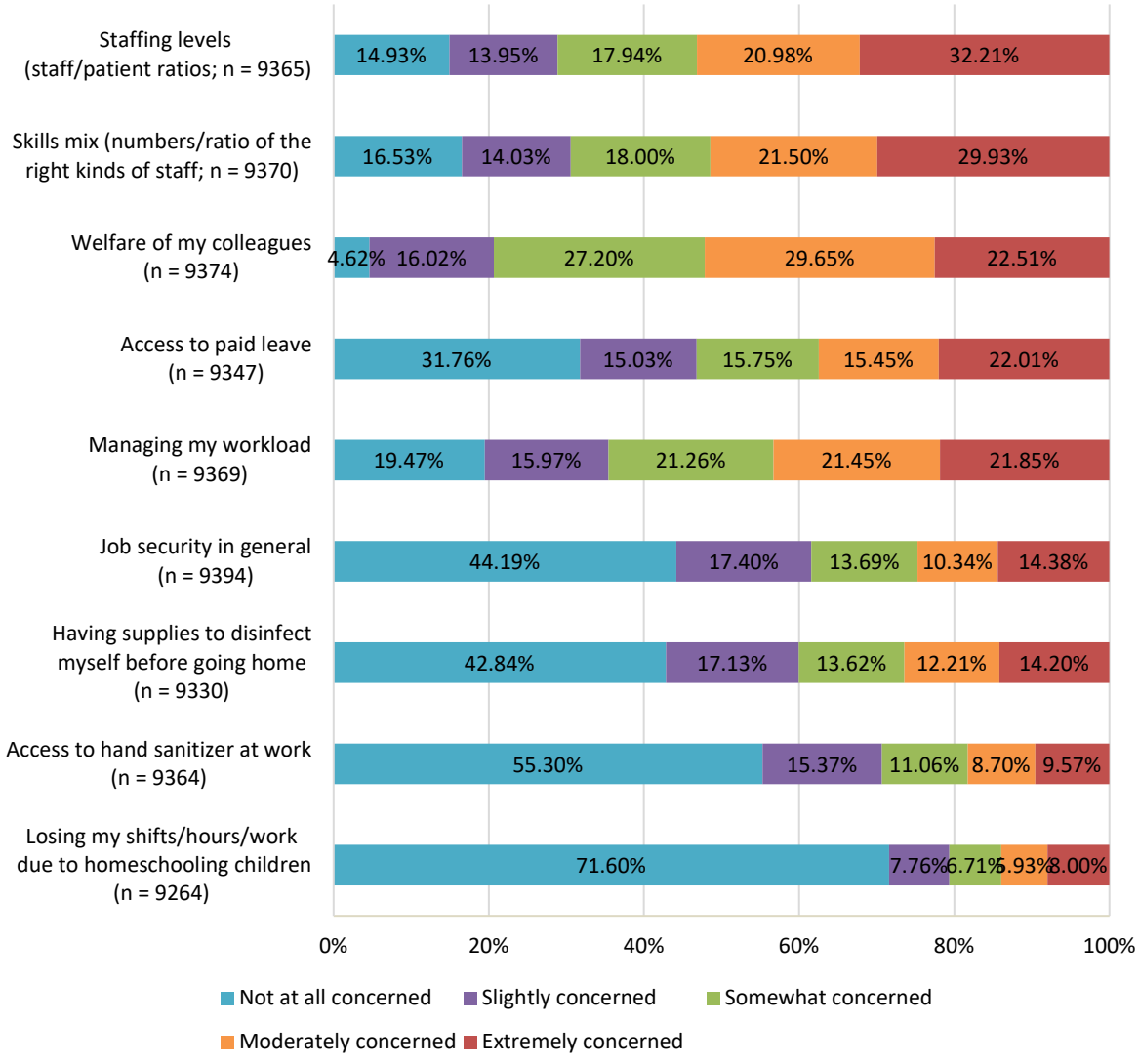

Figure 10. Respondents' general workforce concerns because of COVID-19.

Psychological support

Respondents were asked if they had sought mental health or wellbeing support from external providers. Of those who responded (*n* = 9,430), 16.63% reported they had. Those who worked in residential aged care facilities were the group least likely to seek external mental health or wellbeing support. Of those that had sought help, the most common source was from counselling or psychology/psychiatry services (*n* = 490, 32.49%), followed by GPs (*n* = 278, 18.44%), and workplace programs (*n* = 147, 9.75%).

Self-isolation and related behaviours

Respondents were asked questions regarding self-isolation and related behaviours. A total of 9,217 responded to this section. Since the pandemic began, the majority of respondents (84.38%) did not choose to isolate from those people they lived with. The group most likely to self-isolate were those who worked in residential aged care facilities (19.24%; see Appendix A, Table A12 [p. 95])**.** Of those that did choose to isolate, the majority (*n* = 1,281, 89.21%) isolated in their own residence. Of the 10.79% (*n* = 155) of those who isolated in an alternative accommodation, some indicated that they paid for it themselves (41.29%), no payment was required (23.23%), it was paid for by a government grant (19.35%), or their workplace paid for it (9.68%). Ten respondents (6.45%) were not sure who paid for the accommodation.

Commentary on self-isolation and related behaviours

Respondents were given the opportunity to describe any other self-isolating behaviours they felt were necessary to keep themselves or their family, friends, or community safe. In total, 5,113 respondents provided further information. Some respondents described limiting social contact within their family and/or and not going into community spaces.

> *"I just went to work then home. Never went out in the community at all in case I had the virus. Don't want to spread it around." (Enrolled Nurse, Hospital)*

> *"Using separate [sic] bathrooms/ sleeping in separate [sic] room from my husband. Cooking meals separate [sic] from the family. Washing clothing separate [sic] in very hot water/ No touch contact. Educating family on hand hygiene." (Personal Care Worker, Primary Care)*

> *"I avoided face to face contact with anyone outside of work. Supermarket shopping was done online and delivered without contact." (Enrolled Nurse, Hospital)*

> *"Stopped going to the gym in fear of getting Covid from the gym and bringing it to the hospital and vice versa." (Registered Nurse, Hospital)*

Other respondents described a strict 'decontamination' process when arriving home:

> *"Isolating from community with my family when not working. Avoiding contact with family when returning home from a shift to disinfect and wash before contact." (Registered Midwife, Hospital)*

> *"Change my clothes before going home, I leave shoes outside, shower immediately and we stay in my room once I get home From work." (Registered Nurse, Hospital)*

"We have divided our garage so there is a dedicated decontaminating area. We then isolate until we have showered and cleaned up. I have stopped breast feeding my baby as the risks are unknown." (Registered Nurse, Hospital)

However, some respondents felt they could not perform self-isolating behaviours due to caring responsibilities or indicated that they did not work to limit the risk to their families:

"I didn't work to avoid exposure to my family." (Registered Nurse, Hospital)

"I could not isolate as had to care for children." (Registered Midwife, Hospital)

"Isolated from elderly parents due to fear of infecting them. Therefore no child care and so work missed, with no entitlement to any paid leave due to being casual." (Registered Nurse, Hospital)

Community support and harassment

Respondents were asked three questions regarding: (i) community support for their work, (ii) experiences of abuse or threats at work from the public or patients, and (iii) experiences of abuse or threats outside of work (Table 26). Responses are compared by main workplace to explore the variation across sectors. Most respondents (59.24%) had experienced or felt community support for the work they do. Those working in residential aged care facilities reported experiencing the least support of the four workplace categories (43.37%). One-third of respondents (33.22%) had experienced abuse or been threatened by members of the pubic/patients at work, with those working in hospital (36.03%) and residential aged care facilities (33.90%) more likely to report this than those working in primary healthcare or other workplaces.

Table 26. Community support by main workplace

		Survey item response			
Main workplace		**Yes**	**No**	**Unsure**	**Total**
Experienced or felt community support for your work					
Hospital	*n*	3333	1330	684	5347
	%	62.33	24.87	12.79	100
Residential Aged Care	*n*	700	624	290	1614
	%	43.37	38.66	17.97	100
Primary Care	*n*	1074	375	202	1651
	%	65.05	22.71	12.24	100
Other	*n*	317	143	84	544
	%	58.27	26.29	15.44	100
Total	*n*	5424	2472	1260	9156
	%	59.24	27.00	13.76	100
Experienced abuse or been threatened by members of the public/patients at work					
Hospital	*n*	1947	3373	84	5404
	%	36.03	62.42	1.55	100
Residential Aged Care	*n*	555	1048	34	1637
	%	33.90	64.02	2.08	100
Primary Care	*n*	445	1200	30	1675
	%	26.57	71.64	1.79	100
Other	*n*	130	409	7	546
	%	23.81	74.91	1.28	100
Total	*n*	3077	6030	155	9262
	%	33.22	65.10	1.67	100

Note. First row reports frequencies and second row reports row percentages.

Approximately 15% of respondents had also experienced abuse or felt threatened by members of the public in settings outside of work (Table 27), with those working in hospital settings experiencing the highest proportion (17.60%; see Appendix A, Table A13 [p. 96]).

Table 27. Number of respondents who experienced abuse or threats by the public outside of work

Experience of abuse or threats by the public	***n***	**%**
Yes	1480	15.91
No	7635	82.08
Unsure	187	2.01
Total	9302	100

Note. *n* = number of respondents, % = percentage of respondents.

There have been anecdotal reports from people in the community with Asian backgrounds that they have been subject to racial abuse since the start of the COIVD-19 pandemic. When examined by ethnic background of healthcare providers (Table 28), a higher proportion of those with Asian backgrounds reported experiencing abuse or feeling threatened outside of work as compared with other ethnic groups at 18.05%. When this was further examined by regional Asian groupings, those from China reported the highest proportion of abuse or feeling threatened (*n* = 35/137, 25.55%).

Table 28. Number of respondents who experienced abuse or threats by the public outside of work by major ethnic groupings

		Experienced abuse or threats			
Major ethnic groupings		**Yes**	**No**	**Unsure**	**Total**
Australia/NZ	*n*	1044	5320	111	6475
	%	16.12	82.16	1.71	100
Polynesian/Micronesian	*n*	5	32	1	38
	%	13.16	84.21	2.63	100
UK/Europe	*n*	154	929	25	1108
	%	13.90	83.84	2.26	100
Middle East/North Africa	*n*	4	29	3	36
	%	11.11	80.56	8.33	100
Asian	*n*	111	479	25	615
	%	18.05	77.89	4.07	100
Americas & Caribbean	*n*	10	66	2	78
	%	12.82	84.62	2.56	100
Total	*n*	1328	6855	167	8350
	%	15.90	82.10	2.00	100

Note. First row reports frequencies and second row reports row percentages.

Pandemic response registration and workplace expectations

Pandemic response registration

In response to the pandemic, AHPRA established a short-term pandemic response register to allow more health practitioners to return to practice for the next 12 months if they met certain eligibility criteria. Results showed that there were 197 respondents who signed up for the register, of which 56 (28.57%) returned to practice after joining the register. Only 26 of the 197 respondents (13.20%) opted out of the register. Survey responses also showed that over 1000 nurses and midwives enrolled in a government funded program focused on upskilling or return to practice (Table 29).

Table 29. Number of respondents enrolled in a government funded upskilling or re-entry program

Enrolment	***n***	**%**
Yes, an upskilling program	1005	10.96
Yes, a return to clinical practice program	64	0.70
No, I did not access any	8101	88.34
Total	9170	100

Note. *n* = number of respondents, % = percentage of respondents.

Workplace changes; workload, multiple jobs, work roster

Respondents were asked if they were employed at more than one workplace at the beginning of the pandemic, with 27% (*n* = 2,489) reporting that they were. Of those that worked at more than one place, approximately one-third (32.00%) were asked to give up working at one of the places. Staff most affected were those who worked in residential aged care facilities, with 60.55% being asked to give up work at one of their locations (Table 30).

Of those who were asked to give up working at one of their workplaces, 69.94% (*n* = 556) reported they did not receive any advice on their rights. This did not vary notably by workplace. Overall, of those who did work at more than one place, 86.56% (*n* = 689) did not continue working at both workplaces. When asked how the situation was resolved, approximately 600 responses were received, with varying responses from the situation was not well resolved to reassignments and taking leave.

Table 30. Number of respondents who were asked to give up work by main workplace

Main workplace		Yes	No	Total
Hospital	*n*	318	1032	1350
	%	23.56	76.44	100.00
Residential Aged Care	*n*	284	185	469
	%	60.55	39.45	100.00
Primary Care	*n*	131	332	463
	%	28.29	71.71	100.00
Other	*n*	60	136	196
	%	30.61	69.39	100.00
Total*	*n*	793	1685	2478
	%	32.00	68.00	100.00

Note. First row reports frequencies and second row reports row percentages.
*n = 4 of those who worked at more than one place did not answer this question.

Workload and roster changes

Respondents were asked to indicate to what degree their workload had changed as a result of the pandemic. Almost half (n = 4,278, 46.74%) of all respondents felt their workload had significantly or moderately increased since the pandemic (Table 31). For 12.18% (n = 1,115) of respondents, their work had moderately or significantly decreased.

Table 31. Workload changes during the pandemic of all respondents

Workload changes	*n*	%
Significantly decreased	653	7.13
Moderately decreased	462	5.05
Slightly decreased	668	7.30
No change	1608	17.57
Slightly increased	1484	16.21
Moderately increased	2091	22.84
Significantly increased	2187	23.89
Total	9153	100.00

Note. n = number of respondents, % = percentage of respondents.

The workplace sector that reported the highest proportion of their workload significantly or moderately increasing was residential aged care facilities (*n* = 908, 56.71%; Figure 11). All other sectors had approximately 43-45% of respondents reporting a significant or moderate increase in workload. Of those working in a hospital, residential aged care facilities, or primary care, there were few people who reported a moderate or significant decrease in workload (< 15%).

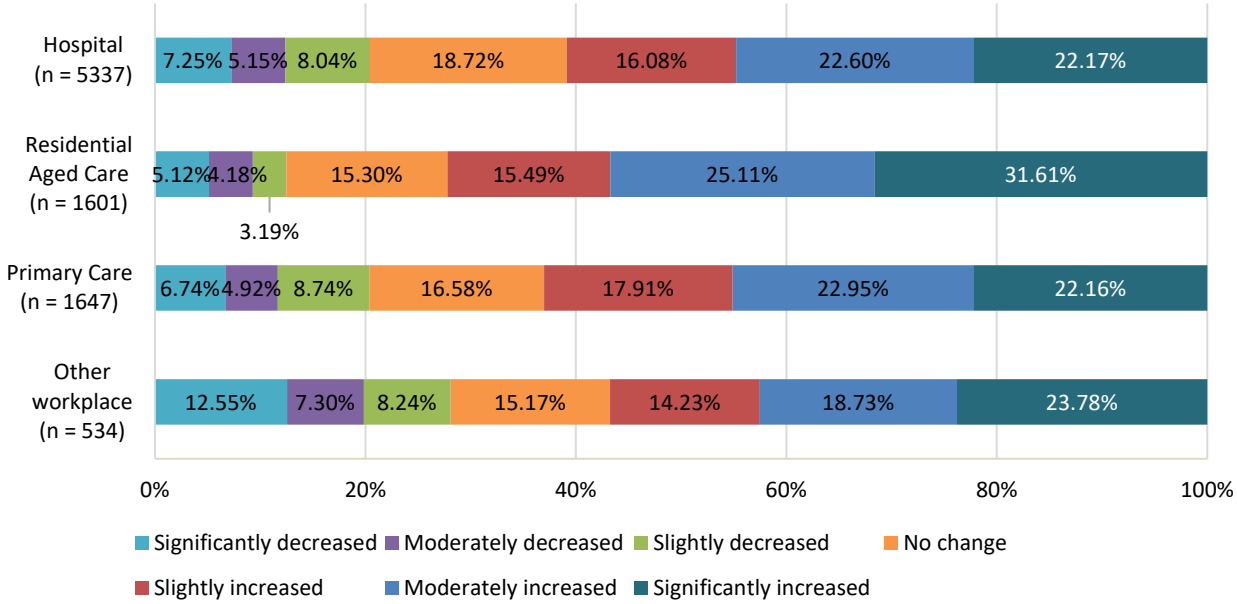

Figure 11. Workload changes by workplace sector as a result of COVID-19.

When asked if their employment / scheduled work roster had been impacted by the pandemic, half of respondents reported their employment roster had been unaffected (Table 32). Twenty per cent (*n* = 1,794) reported an increase in paid or unpaid hours. Those working in residential aged care facilities were most likely to report an increase in paid and unpaid hours (*n* = 380, 24.48%) and those working in the "other" workplace category were most likely to report hours reduced with no reimbursement or took unpaid leave (*n* = 65, 12.33%; see Appendix A, Table A14 [p. 97])**.** There were 77 respondents who also provided free text response to "other" changes in roster. Many of these responses were from those employed in casual positions losing work/hours or having to reduce to one job.

Table 32. Impact of pandemic on employment/scheduled work roster of all respondents

Impact on employment/ roster	*n*	%
My employment/work roster has been unaffected	4436	49.79
Increase in paid hours	1159	13.01
Increase in unpaid hours	635	7.13
Approached by employer to take annual leave	591	6.63
Hours reduced, compensated by federal government payments (e.g. Job Keeper)	116	1.30
Hours reduced, compensated through employer payments provided by the public/private agreement in my state/territory	107	1.20
Alternative or flexible working arrangements put in place	375	4.21
Paid special leave	79	0.89
Took unpaid leave	196	2.20
Hours reduced, no reimbursement	483	5.42
No longer employed in the position	136	1.53
Other	597	6.70
Total	8910	100.00

Note. *n* = number of respondents, % = percentage of respondents.

Reasons for change in employment roster

Respondents whose employment or scheduled work roster had been impacted by the pandemic (either increased or decreased hours) were asked which workplace factors had affected those changes (Table 33)**.** Over half of all respondents (52.28%) indicated their work had been impacted by lack of staff.

Table 33. Factors affecting employment/scheduled work roster changes

Factors	*n*	%
Changes to/closures of elective surgeries	1400	44.63
Changes to/closures of specific services	945	30.12
Changes to/closures of outpatient appointments	586	18.68
Bed occupancy reduced	893	28.47
Lack of staff	1640	52.28
Increased patient numbers	849	26.11
Other closures/cutbacks	444	14.15
Total	6727	214.44

Note. Multiple responses allowed; percentages will sum to > 100%. Total number of respondents = 3,317.

For those respondents who selected “other closures/cutbacks” (*n* = 444), most (*n* = 395) provided a response as to how other workplace factors had affected their employment/work roster. These included: border closures, cessation of casual staff, closure of birthing services and other clinics, community/home services reduced or cancelled, education ceased, hospital concerns over budget,

more work due to less staff, added cleaning responsibilities, no agency relief staff, broken equipment not repaired and delays in restocking, complete closure of certain programs, and reduced access to GPs.

Workplace scope of practice and education

Respondents were asked whether they were asked by their employer to work outside of their usual scope of practice (Table 34). The majority of respondents (*n* = 7,119, 82.30%) reported they were not asked to work outside of their scope of practice. For 3.85% of respondents the question was not relevant to their situation. Those working in hospitals were the group most likely to be asked to work outside of their scope of practice (20.29%)**.**

Of the 17.70% of respondents who responded they were asked to work outside of their scope of practice, just over a third (*n* = 524, 34.32%) reported received education or training for this. Those working in residential aged care facilities were the group least likely to have received education for this (31.49%), although the differences were not large across the four workplace categories (see Appendix A, Table A15 [p. 98]).

When respondents were asked if they trained staff to advance their scope of practice for the pandemic (i.e., to work in a different clinical area should this be required), 17.06% (*n* = 1,552) responded they had.

Table 34. Number of respondents requested by employer to work outside of scope of practice

Main workplace		Yes	No	Total
Hospital	*n*	1027	4034	5061
	%	20.29	79.71	100.00
Residential Aged Care	*n*	181	1330	1511
	%	11.98	88.02	100.00
Primary Care	*n*	242	1327	1569
	%	15.42	84.58	100.00
Other	*n*	76	403	479
	%	15.87	84.13	100.00
Total	*n*	1526	7094	8620
	%	17.70	82.30	100.00

Note. First row reports frequencies and second row reports row percentages. Excludes *n* = 456 who replied not applicable.

Workplace redeployment

Overall, 18.75% (*n* = 1,702) of respondents were redeployed to a different area, hospital, or speciality of work due to COVID-19. Those who worked in the hospital setting were most likely to be redeployed to another area (25.99% of hospital workers; see Appendix A, Table A16 [p. 98]).

Of the respondents who were redeployed, over half (*n* = 941, 55.55%) indicated they had not received any education or training for that position. Over a quarter (26.20%) were redeployed to COVID-19 screening clinics or drive through testing (Table 35).

Table 35. Re-deployment areas for those who were re-deployed

Area	***n***	**%**
COVID-19 screening clinics or drive-through	436	26.20
Emergency department	105	6.31
Intensive care	87	5.23
General medicine	200	12.02
Primary care	30	1.80
Aged care	160	9.62
Non-clinical administrative duties	90	5.41
Other	556	33.41
Total	1664	100.00

Note. *n* = number of respondents, % = percentage of respondents.

Of those who selected “other” deployment areas, 542 named the area to which they were re-deployed, of which approximately 38% of responses were related to COVID-related jobs including; COVID-19 wards, infection control, temperature checking and front door screening, public health unit, PPE trainer/supply/spotter and hotel quarantine.

Personal Protective Equipment

Respondents were asked a series of questions regarding personal protective equipment (PPE) at their primary workplace. While acknowledging that PPE availability was publicised as an issue for many facilities and organisations at the beginning of the pandemic, the responses to the PPE questions in this section reflect the PPE status at the time of the survey (August - October 2020).

At the time of the survey, most respondents reported that they often or always had the right types of PPE (*n* = 7,150, 82.23%), had the right size of PPE (*n* = 6,142, 71.21%), and sufficient supplies of PPE (*n* = 6,435, 74.32%; Figure 12). This varied slightly according to workplace, with those working in residential aged care facilities most likely to report that they never or rarely had a sufficient amount of PPE (11.49%), nor the right types of PPE (7.12%; see Appendix A, Tables A18-20, pp. 99-100).

Figure 12. PPE size, type, and availability at primary workplace.

Note. Excludes respondents who responded not applicable. See Appendix A, Table A17 (p. 99) for number of respondents.

Respondents were asked if their workplace has a policy for breaks while working in full PPE. Of the 7,389 respondents (*n* = 1,556 noted this was not applicable to them), 34.93% (*n* = 2,581) indicated that their workplace had a policy, 25.01% (*n* = 1,848) responded that there was no policy, and 40.06% (*n* = 2,960) of respondents were unsure if their workplace had a policy.

Over 40% of respondents responded that their workplace did not include respiratory fit checking every time PPE is used (Table 36). This proportion was the lowest for hospital workers (36.32%) and over 50% for those who worked in the workplaces of residential aged care facilities, primary healthcare, and other facilities (see Appendix A, Table A21 [p. 101]).

Table 36. Respirator fit checking every time when working in PPE for all respondents

Respirator fit checking	*n*	%
Yes	2378	32.27
No	3075	41.72
Unsure	1917	26.01
Total	7370	100.00

Note. *n* = number of respondents, % = percentage of respondents. Excludes *n* = 1,548 who replied not applicable.

Personal Protective Equipment reuse

Respondents were asked if they had ever had to reuse any single-use, disposable PPE. Of those who responded (*n* = 8,153), 43.42% of respondents reported they had not had to reuse PPE (Table 35). This varied somewhat by main workplace, with hospital workers more likely than other sectors to report having had to reuse single-item PPE (see Appendix A, Tables A22-25 [pp. 101-103). The most frequently reused single-use item reported was goggles/glasses; 37.61% of respondents reported having reused this item. Other items that were frequently reused were face shields (33.29%) and masks (28.40%). Other PPE mentioned in free text responses (*n* = 65) included hair coverings/nets and work supplied scrubs. When respondents were asked if they had reported any PPE concerns to their employer, 43.68% (*n* = 3,246) of indicated that they had.

Table 37. Reuse of single-use, disposable PPE for all respondents

Type of PPE	*n*	%
Masks	2022	24.80
Respirators	134	1.64
Gloves	419	5.14
Gowns	832	10.20
Aprons	338	4.15
Glasses/goggles	3066	37.61
Face shields	2714	33.29
Shoe covers	204	2.50
Other	65	0.80
No reuse of single-use PPE	3540	43.42
Total*	13334	163.55

Note. *n* = number of respondents, % = percentage of respondents. Multiple responses permitted; hence percent will sum to greater than 100. *Excludes *n* = 695 who replied not applicable.

Commentary on concerns with Personal Protective Equipment

Respondents who had reported PPE concerns to their employer were asked to describe the issue(s) they had raised. Those who described their concerns (*n* = 3,078) mentioned a range of issues, such as having the right types of PPE, the right size or fit of PPE, the availability and amount of PPE, re-use or long-term use of PPE, the efficacy or quality of PPE, adverse reactions to PPE, policies, accessibility of PPE, training for and the time needed to don and doff PPE correctly, as well as people stealing PPE for personal use. Illustrative quotes are provided below and in Appendix A (Table A26, pp. 104-105).

"Having to go through supervisor for supplies, having to clean single use equipment that was falling apart (face shields), one per shift face shied [sic] when I have thought they were potentially contaminated." (Registered Nurse, Hospital)

"Had to wait 45min to get onto Covid ward because there were no blue gowns available. -I was denied a faceshield when allocated to Gen/med ward because they were running low and told I should be reusing them. I explained I was working on a Covid ward and all my PPE was disposed of at end of shift. ANUM argued I should have cleaned it my shield and brought it to this shift." (Enrolled Nurse, Hospital)

"Lack of masks, hand sanitiser, wipes. Concern about being advised to not drink or take toilet breaks once you have your mask on because there is not enough masks to go around and you have to keep that first one on until your lunch break." (Registered Midwife, Primary Care)

"The masks are kept locked up in a clinical nurses room, which I do not have access to in the afternoons when they are not there." (Personal Care Worker, Residential Aged Care Facility)

Many respondents indicated that they had expressed these concerns during the initial outbreak of COVID-19, with some respondents explaining that their concerns were later addressed:

"At the start of the pandemic, there was confusing [sic] about most aspects of ppe, including supply & supplies being in locked offices with no access out of business hours. Once policies & procedures were implemented, no further issues have been experienced." (Enrolled Nurse, Hospital)

"When the pandemic started there were a lot of concerns raised by staff and also patients about whether we should be using masks, goggles etc. Manager told us it was not best practice and then became hostile when challenged. Some nurses very upset and experienced mental health issues about the way they were treated. I also wanted to have Temperatures taken for staff which my manager said also was not best practice but this was contradicted by our infection control nurse. All these things have been implemented now." (Registered Nurse, Primary Care)

"We were running low on face masks - I alerted management and issues was resolved immediately before we ran out." (Enrolled Nurse, Residential Aged Care Facility)

However, some respondents felt that their concerns had been ignored or not adequately addressed, or reported that they had been reprimanded for voicing concerns:

"Staff going to patients in full PPE then approaching other staff not in PPE whilst in full PPE an [sic] not social distancing and having a social chat. This has regularly occurred in the place I do outreach visits. Staff going to patients in full PPE 5 minutes later the Doctor walks in with no PPE and examines the same patient. Also at my outreach place of work. I have escalated this every time and have been ignored." (Registered Midwife, Hospital)

"At the height of pandemic, I asked my manager in person regarding face mask it was denied. Manager stating that the facility was clean." (Personal Care Worker, Residential Aged Care Facility)

"Lack of masks (correct fit & type for procedures), hats, scrub gear (needed to change at start of shifts). Hand Gel, Adherence of distance rules, no number set for staff room, most days more than 50 in room which I believe should have 20 max under guidelines per square foot measurements. No (cough/ sneeze) screen or markings on floor to help with social distance at desk area. Suggested I could leave if not happy at work!!!" (Registered Nurse, Hospital)

"At the first out break we asked for PPE and we were reprimanded." (Personal Care Worker, Residential Aged Care Facility)

Personal Protective Equipment support and training

Respondents were asked about the workplace support and training they had received regarding PPE use (Figure 13). The majority of respondents (59.01%) agreed or strongly agreed that the PPE training they received had equipped them to practice safely during the pandemic. This varied little by workplace category (see Appendix A, Table A27 [p. 105]). Similarly, the majority (57.61%) of respondents agreed or strongly agreed that they were supported by their workplace regarding PPE concerns and requirements. This varied a little by place of work with those working in primary healthcare and other environments feeling slightly more supported (> 60%) than those working in hospitals and residential aged care facilities (see Appendix A, Table A28 [p. 106]). Over a quarter of respondents (*n* = 2,407, 28.34%) disagreed or strongly disagreed that there were adequate resources and staff to deliver high quality PPE training. There was little variability here by workplace categories (see Appendix A, Table A29 [p. 106]).

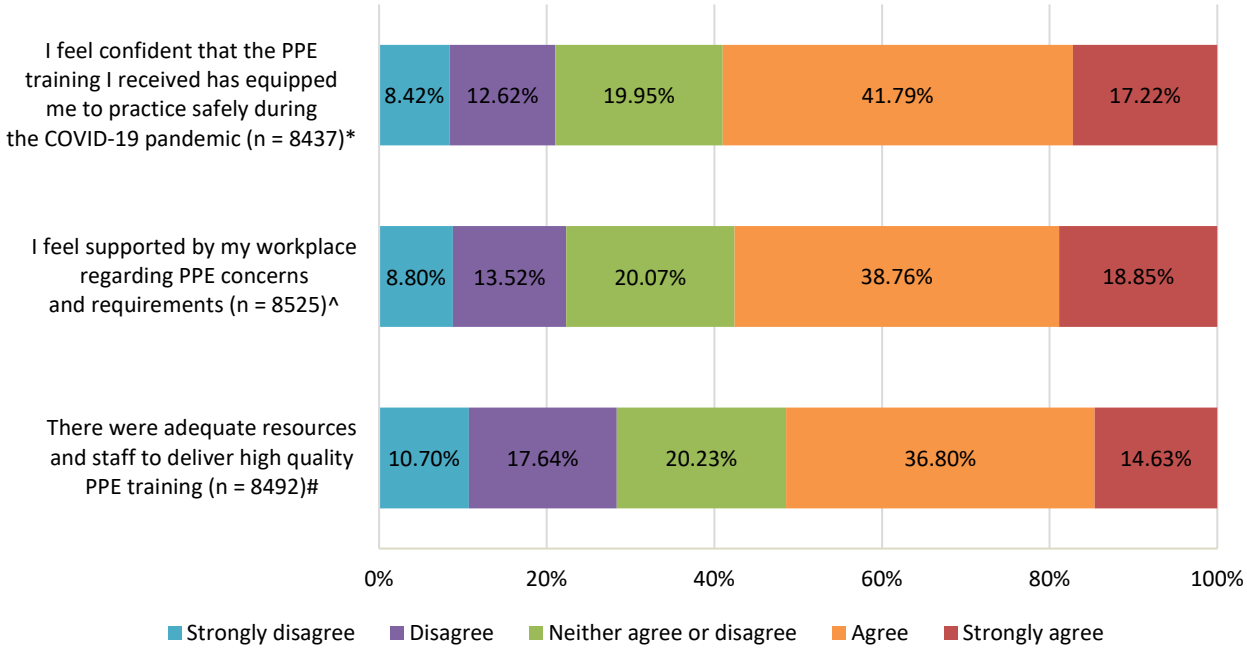

Figure 13. Respondents' perceptions of PPE training and support received.

Note. * excludes *n* = 360 who responded not applicable (n/a), ^ excludes *n* = 279 n/a, and # excludes *n* = 310 n/a.

Working conditions and wellbeing

The following section describes workplace outcomes with respect to the following domains:

- Practice environment
- Psychosocial workplace conditions and demands
- General health
- Job satisfaction
- Resilience
- Depression, anxiety, and stress
- Burnout

Where differences were observed by each of the main workplace categories, they are described in text below and displayed in graphs, where appropriate. Note, in addition, for each of the working conditions and wellbeing domains, comprehensive summaries of the results by the four main workplace categories are presented in Appendix B.

Practice environment

The quality of nursing practice environments was assessed using a modified version of the Practice Environment Scale – Nursing Work Index (PES-NWI).[21] Revised subscales assessed whether nursing philosophy for quality care, praise and supervisory support, nursing leadership, and resource and staffing adequacy were present in the workplace. Scores above 2.5 showed some agreement that the desirable practice characteristic was present in the workplace, while scores below 2.5 indicated some disagreement.

On average, there was agreement that nursing philosophy for quality care (*M* = 2.91, *SD* = 0.65) was present in the practice environment for all respondents. Perceptions of praise and supervisory support (*M* = 2.65, *SD* = 0.79), nursing leadership (*M* = 2.61, *SD* = 0.69) and resource and staffing adequacy (*M* = 2.39, *SD* = 0.75) were closer to the neutral midpoint, indicating neither agreement nor disagreement that they were present in the workplace. Subscale scores according to main workplace category are depicted in Figure 14. Respondents working in residential aged care facilities were more likely to agree that nursing leadership (*M* = 2.69, *SD* = 0.71) was present in the working environment compared with all other workplaces, and were less likely to agree that praise and supervisory support (*M* = 2.56, *SD* = 0.86) was present in the practice environment (see Appendix B, Table B1 [p. 107]) for all subscale mean scores according to main workplace category). Additionally, respondents working in residential aged care facilities (*M* = 2.19, *SD* = 0.81) and hospitals (*M* = 2.39, *SD* = 0.72) were less likely to agree that resource and staffing adequacy were present in the practice environment compared with those working in primary care (*M* = 2.52, *SD* = 0.73) and other workplaces (*M* = 2.59, *SD* = 0.80).

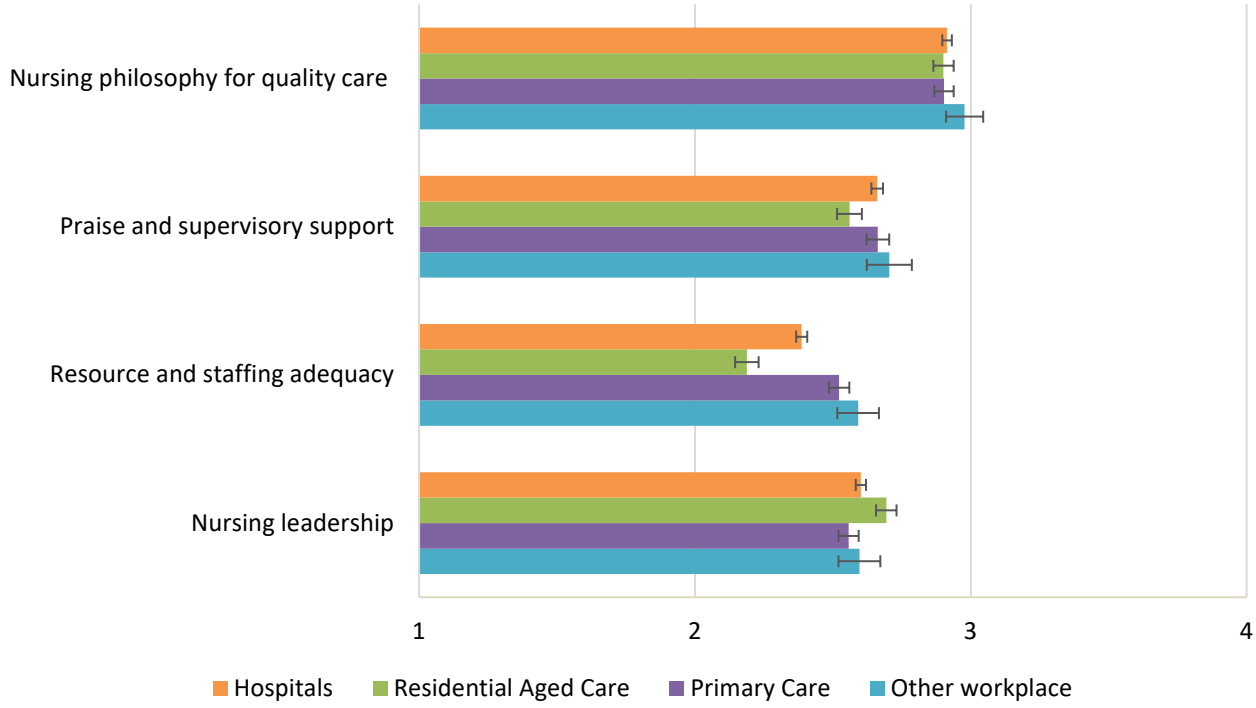

Figure 14. PES subscale mean scores and 95% confidence intervals by main workplace.

Psychosocial workplace conditions and self-rated health

Psychosocial workplace conditions and general health were measured using the Copenhagen Psychosocial Questionnaire Version 3 (COPSOQ-III).[22] Higher scores (range: 0 – 100) indicated greater clarity, conflict, demand, or pace.

Workplace demands

On average, respondents reported a high level of cognitive (*M* = 76.62, *SD* = 18.97) and emotional demand (*M* = 66.34, *SD* = 20.48) at work, frequently working at a fast pace (*M* = 73.61, *SD* = 21.25), and a moderate level of quantitative demand (*M* = 52.57, *SD* = 19.44). Workplace demands were also compared across workplaces (Figure 15). Respondents working in residential aged care facilities reported the highest level of workplace demand, with higher scores on emotional demand (*M* = 69.16, *SD* = 20.98), quantitative demand (*M* = 59.55, *SD* = 19.80), and work pace (*M* = 77.30, *SD* = 21.54) compared to all other workplaces. Respondents working in residential aged care facilities (*M* = 77.75, *SD* = 19.65) and hospitals (*M* = 77.75, *SD* = 18.01) reported a similarly high level of cognitive demand at work.

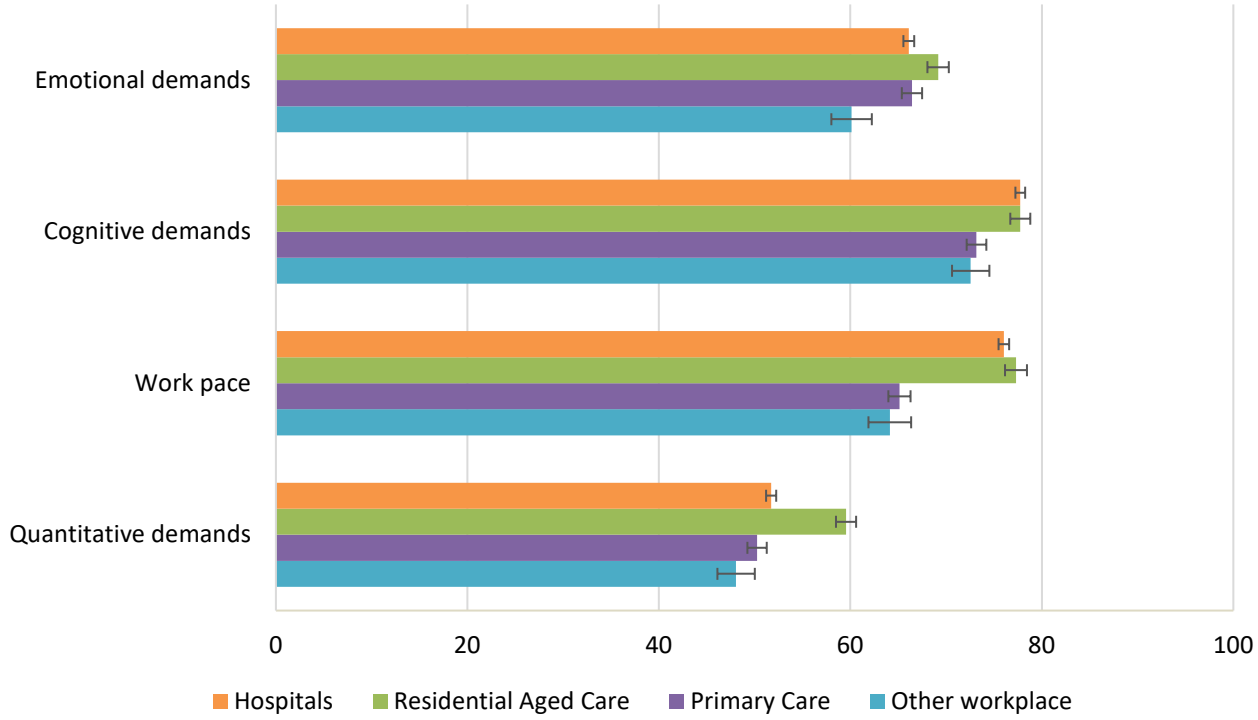

Figure 15. COPSOQ-III workplace demand mean scores and 95% confidence intervals by main workplace.

Role clarity and conflict

Overall, respondents expressed a high level of role clarity (*M* = 70.46, *SD* = 19.21) and moderate levels of role conflict (*M* = 50.36, *SD* = 26.62). Respondents working in residential aged care facilities reported the lowest role clarity (*M* = 68.71, *SD* = 20.02) and the highest level of role conflict (*M* = 57.32, *SD* = 26.94), whereas respondents working in 'other' types of workplaces reported the greatest role clarity (*M* = 72.06, *SD* = 19.45) and the lowest role conflict (*M* = 44.73, *SD* = 28.58; Figure 16).

Work life conflict

A moderate level of work life conflict (*M* = 51.19, *SD* = 29.83) was reported by all respondents (Figure 16). Work life conflict was highest for respondents working in residential aged care facilities (*M* = 56.42, *SD* = 29.55), followed by those working in hospitals (*M* = 52.64, *SD* = 29.17), primary care (*M* = 44.09, *SD* = 30.20), and other types of workplaces (*M* = 42.80, *SD* = 30.74).

Self-rated health

Respondents were asked to assess their health over the past four weeks. A majority of respondents rated their health as good (*n* = 3,527, 43.49%) or very good (*n* = 1,323, 16.32%), while one-third rated their health as moderate (*n* = 2,622, 32.33%). A small proportion of respondents assessed their health as bad (*n* = 552, 6.81%) or very bad (*n* = 85, 1.05%). Self-rated health was similar across different workplaces (see Appendix B, Table B5 [p. 110]).

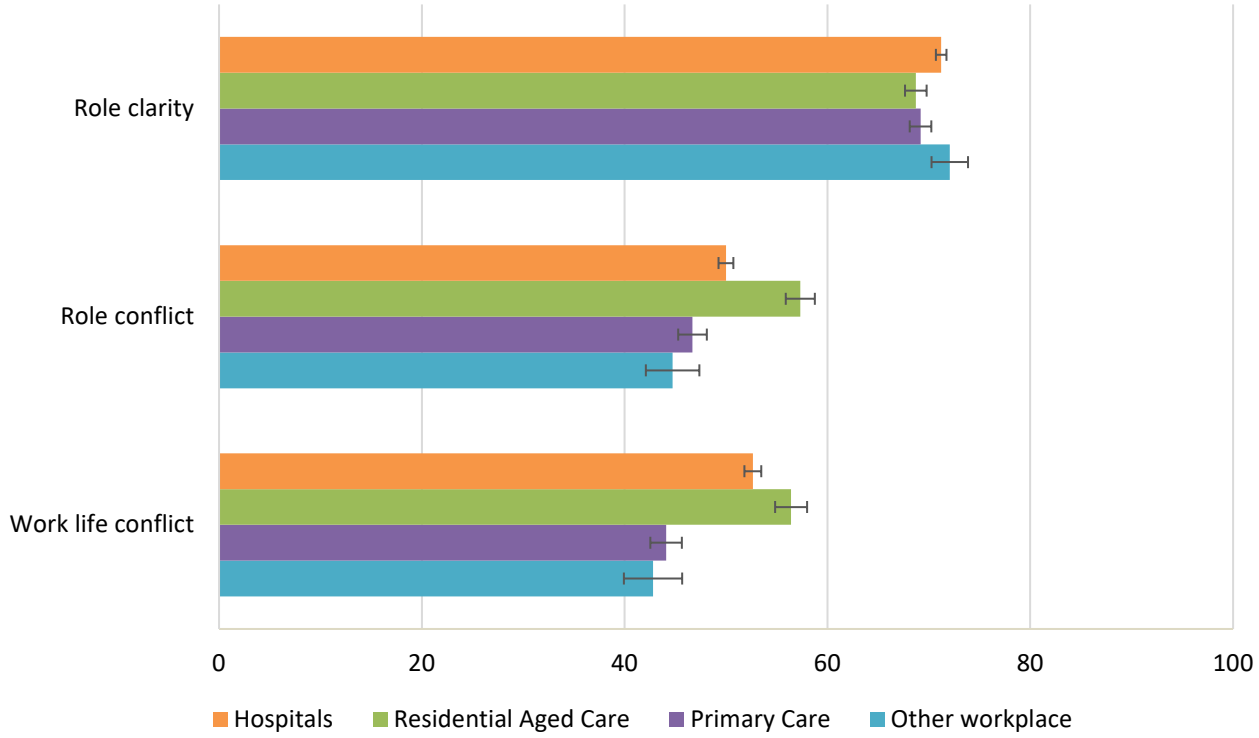

Figure 16. COPSOQ-III role clarity, role conflict, and work life conflict mean scores and 95% confidence intervals by main workplace.

Job satisfaction

Job satisfaction was assessed using a modified version of the McCloskey/Mueller Satisfaction Scale (MMSS).[23] Respondents indicated their satisfaction with leadership and career opportunities, work and scheduling flexibility, extrinsic rewards, and collegial relationships. Higher scores (range: 1 – 5) indicated greater satisfaction with the aspect of work. Overall, respondents indicated moderate satisfaction with work and scheduling flexibility within their workplace (*M* = 3.70, *SD* = 0.87), as well as some satisfaction with extrinsic rewards (*M* = 3.30, *SD* = 1.02) and collegial relationships (*M* = 3.31, *SD* = 0.90). On average, respondents expressed some dissatisfaction with leadership and career opportunities (*M* = 2.77, *SD* = 0.95).

Across all workplace category groups, there was some dissatisfaction with leadership and career opportunities (Figure 17). Respondents working in residential aged care facilities indicated lower job satisfaction compared with other workplace groups, with the lowest mean scores on satisfaction with leadership and career opportunities (*M* = 2.72, *SD* = 1.04), work and scheduling flexibility (*M* = 3.54, *SD* = 0.91), extrinsic rewards (*M* = 3.15, *SD* = 1.07), and collegial relationships (*M* = 3.14, *SD* = 0.94).

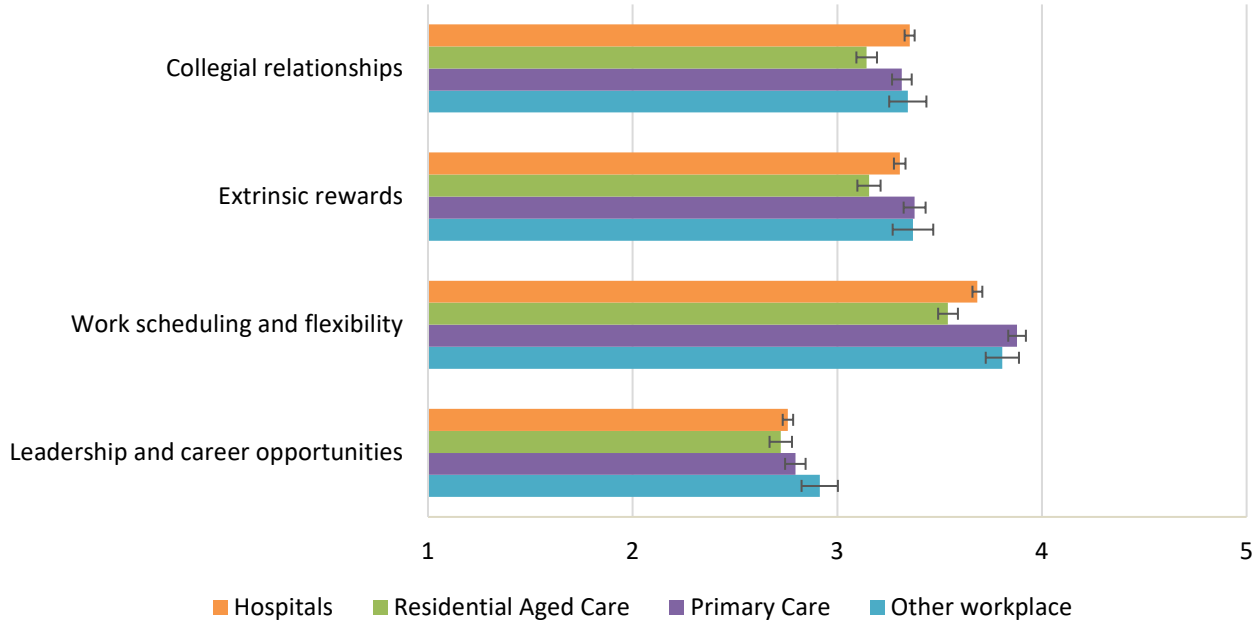

Figure 17. MMSS subscale mean scores and 95% confidence intervals by main workplace.

Resilience

Resilience was measured using the Brief Resilience Scale (BRS).[24] Scores below 3 indicate low resilience, 3 to 4.3 average resilience, and scores greater than 4.3 high resilience.[25] The whole sample reported an average level of resilience (*M* = 3.42, *SD* = 0.75). Level of resilience was comparable across respondents working in hospitals (*M* = 3.42, *SD* = 0.74), residential aged care facilities (*M* = 3.39, *SD* = 0.71), primary care (*M* = 3.43, *SD* = 0.78), and other workplaces (*M* = 3.49, *SD* = 0.74).

Depression and anxiety

To assess mental health among respondents, the Depression Anxiety Stress Scales (DASS-21)[26] was used to measure self-reported depression, anxiety, and stress. Higher subscale scores (range: 0 – 42) indicate more severe symptoms of depression, anxiety, and stress. On average, respondents reported symptoms of depression (*M* = 8.20, *SD* = 9.36), anxiety (*M* = 6.97, *SD* = 8.09), and stress (*M* = 11.31, *SD* = 8.94) in the normal range.[27] However, some respondents indicated extremely severe scores on stress (*n* = 225, 2.97%), anxiety (*n* = 702, 9.25%), and/or depression (*n* = 459, 6.05%).

Workplace comparisons showed that mean anxiety scores were higher for respondents working in residential aged care facilities (*M* = 7.87, *SD* = 8.66) and scores for this group were mildly above the population mean for anxiety (Figure 18). For the remaining workplace groups, anxiety scores were higher for those working in hospitals (*M* = 7.11, *SD* = 8.07) compared with those working in primary care (*M* = 5.96, *SD* = 7.64) and other workplaces (*M* = 6.11, *SD* = 7.52), but anxiety scores for these three groups were in the normal range.

Respondents working in residential aged care facilities also reported the highest scores on stress (*M* = 11.59, *SD* = 9.33) and depression (*M* = 8.94, *SD* = 9.75) compared with other workplace groups, however, it should be noted that these scores were in the normal severity range for these subscales.

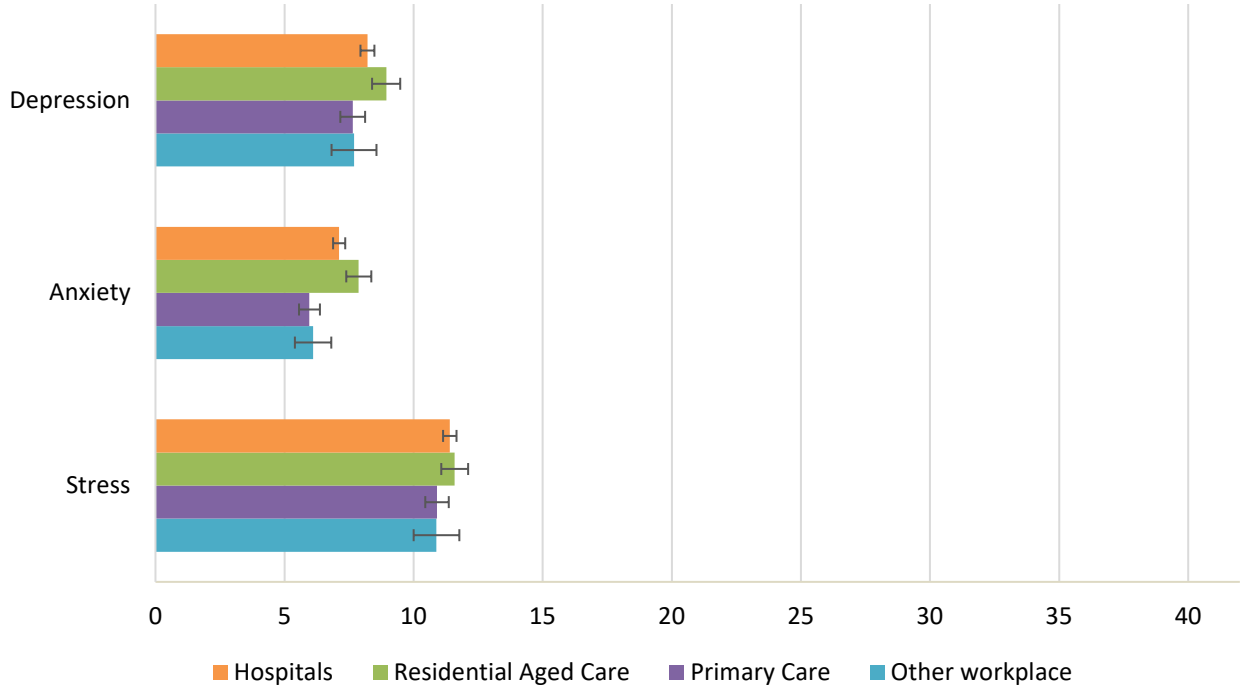

Figure 18. DASS-21 subscale mean scores and 95% confidence intervals by main workplace.

Burnout

Job-related burnout was assessed using two instruments. The Maslach Burnout Inventory - Human Services Survey (MBI-HSS)[28] measures emotional exhaustion (i.e., feeling emotionally exhausted and overextended by workplace demands; score range: 0 – 54), depersonalisation (i.e., detachment and impersonal responses towards service recipients; score range: 0 – 30), and personal accomplishment (i.e., feeling competent and successful in one's work with people; score range: 0 – 48) among professionals who help people through their work. According to the model, burnout is defined as high scores on emotional exhaustion and depersonalisation, as well as a low score on personal accomplishment.

Overall, emotional exhaustion was approaching a high level, depersonalisation was low, and personal accomplishment was moderate (Table 38). These results show an overextended profile of the workforce rather than a burnout profile.

Table 38. Correlations between MBI and OLBI subscales

Subscale	M	SD	EE	DP	PA	DE	EX
1. Emotional exhaustion (EE)	26.66	12.67	-				
2. Depersonalisation (DP)	6.41	6.05	.58**	-			
3. Personal accomplishment (PA)	34.69	7.91	-.22**	-.31**	-		
4. Disengagement (DE)	2.32	0.49	.64**	.54**	-.46**	-	
5. Exhaustion (EX)	2.61	0.49	.78**	.46**	-.38**	.69**	-

Burnout dimensions were investigated according to main workplace type (Figure 19). Emotional exhaustion subscale scores were high among respondents working in residential aged care facilities (*M* = 28.97, *SD* = 13.11) and hospitals (*M* = 26.83, *SD* = 12.40), but were more moderate for those working in primary care (*M* = 25.15, *SD* = 12.46) and other types of workplaces (*M* = 22.80, *SD* = 13.50). Respondents working in residential aged care facilities (*M* = 6.85, *SD* = 6.19) and hospitals (*M* = 6.84, *SD* = 6.14) indicated a moderate level of depersonalisation, while respondents working in primary care (*M* = 5.02, *SD* = 5.58) and other workplaces (*M* = 5.04, *SD* = 5.35) showed a low level of depersonalisation. Finally, personal accomplishment subscale scores were moderate for all groups, but were lowest for respondents working in hospitals (*M* = 34.17, *SD* = 7.85) and residential aged care facilities (*M* = 34.86, *SD* = 8.20), compared with respondents working in primary care (*M* = 35.93, *SD* = 7.56) and other workplaces (*M* = 35.76, *SD* = 8.20).

Figure 19. MBI-HSS subscale mean scores and 95% confidence intervals by main workplace.

The Oldenburg Burnout Inventory (OLBI)[30] was also included in the survey to measure exhaustion (i.e., level of emotional, cognitive, and physical strain) and disengagement (i.e., negative attitudes and level of disconnection from work) more broadly (score range: 1 – 4). This measure was job-related, but not occupationally specific, therefore items did not address working with people specifically. In line with the results of the MBI-HSS, respondents indicated higher levels of exhaustion than disengagement (Table 38). The emotional exhaustion subscale of the MBI-HSS was highly correlated with the exhaustion subscale of the OLBI, suggesting these subscales were measuring similar psychological constructs. A weaker relationship was observed between the depersonalisation and disengagement subscales, suggesting the two subscales were measuring somewhat different aspects of job-related detachment (e.g., detachment from service recipients, tasks, or occupation).

The OLBI burnout dimensions were also investigated according to main workplace category (Figure 20). Exhaustion was higher for respondents working in residential aged care facilities (*M* = 2.67, *SD* = 0.51) and hospitals (*M* = 2.62, *SD* = 0.47), compared with those working in primary care (*M* = 2.55, *SD* = 0.51), and other workplaces (*M* = 2.45, *SD* = 0.54). Similarly, disengagement was highest among respondents working in residential aged care facilities (*M* = 2.41, *SD* = 0.50) and hospitals (*M* = 2.33, *SD* = 0.48), followed by those working in primary care (*M* = 2.25, *SD* = 0.50) and other workplaces (*M* = 2.22, *SD* = 0.53).

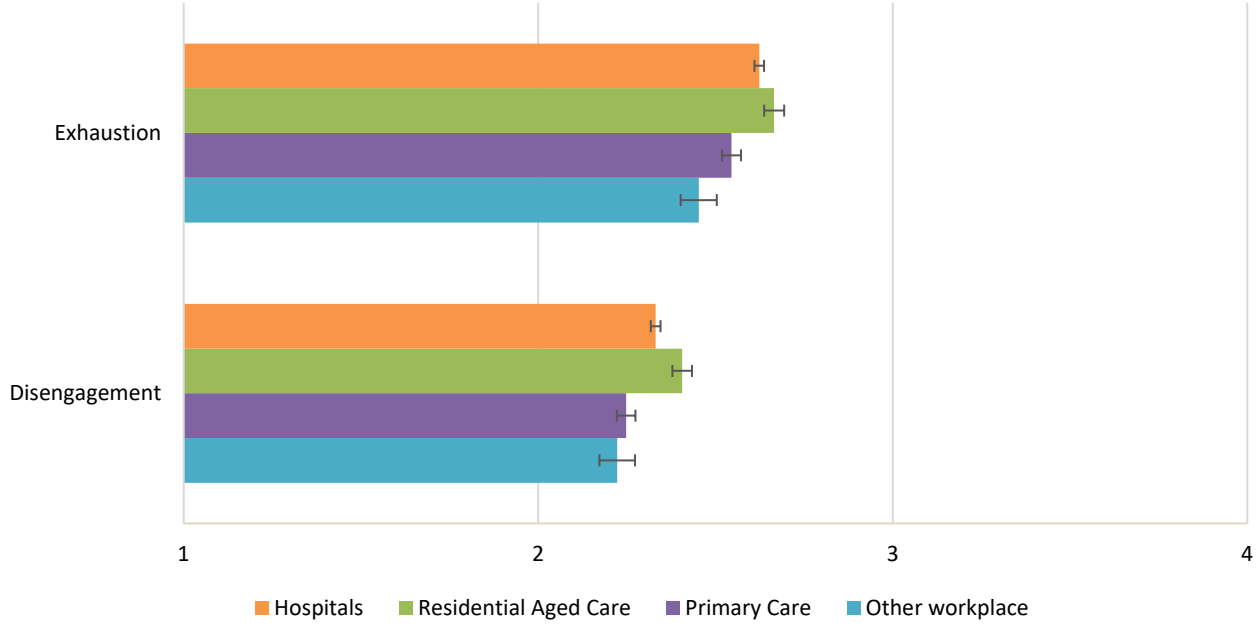

Figure 20. OLBI subscale mean scores and 95% confidence intervals by main workplace.

Discussion

This study explored the impacts the COVID-19 pandemic has had on the Australia nursing, midwifery, and personal care worker professions across all sectors of healthcare. To the best of the authors' knowledge, this was the largest collective wellbeing survey of nurses, midwives, and personal care workers during the COVID-19 pandemic in Australia. Australia has been fortunate not to have experienced the large numbers of people infected with COVID-19 that other countries have experienced; as at 9 April 2021 there have been 29,385 cases (one-quarter of which were overseas acquired), with 909 total deaths.[6] However, the pandemic has still meaningfully affected Australian nurses, midwives, and personal care workers. This section highlights key findings from this report for further consideration and possible actions to improve Australia's workforce preparedness for significant health crises in the future.

COVID-19 in the workplace

Healthcare workers, and nurses in particular, are at increased risk of COVID-19 infection because of their increased patient contact time in hospitals and close contact with people who have contracted COVID-19.[34] Quigley and colleagues[8] estimated that healthcare workers in Australia were nearly three times more likely to be infected with COVID-19 compared with the general population. Globally, the International Council of Nurses (ICN)[35] estimated that greater than 1.6 million healthcare workers in 34 countries have been infected with COVID-19, and on average, across time, 10% of all confirmed cases of COVID-19 infections are among healthcare workers (range: 0-15%).

In this survey, 21% of respondents had provided direct care to patients with confirmed COVID-19, and 3% of respondents had themselves tested positive for COVID-19. Most of those respondents who tested positive believed they had contracted COVID-19 through workplace exposure. The results of this survey, taken together with evidence from the wider literature, highlight that even with effective control of COVID-19 in Australia, workplaces must continue to improve policies and remain vigilant with respect to practices, procedures, resources, and organisational culture to minimise infections within the nursing and midwifery workforce. There is an expectation that healthcare workers are obligated to provide care and treatment to patients, potentially sacrificing their own health and wellbeing, and it is vital that workplaces and governments commit to providing a safe workplace environment in which to practice.[36]

When respondents were asked directly about organisational preparedness, there were mixed perceptions of plans, policies, and procedures across workplaces and healthcare settings. Approximately half of all respondents indicated that their workplace had a plan or protocol in place when the pandemic was declared to respond to known or suspected COVID-19 cases; workplace plans were more common in GP practices and tertiary hospitals compared with other workplaces. Positively, most respondents reported that their workplace plan or protocol had been updated since the start of the pandemic, and that they had received infection control and prevention training. Some policies and procedures were also rated favourably, such as staff screening for risk factors or symptoms of COVID-19, and workplace cleaning. However, other policies and procedures were rated poorly by a notable proportion of respondents (20-30%), such as managing staff abuse, access to workplace psychological or mental health support, being able to deploy more staff if required, and debriefing processes.

Personal Protective Equipment

A significant contributor to the high rates of healthcare worker infection early in the pandemic, and an ongoing concern for healthcare workers worldwide, has been the lack of sufficient and appropriate PPE.[37] Requiring nurses to provide treatment and care to patients with insufficient personal protection risks their safety and wellbeing, their ability to work and provide care to the community, and the safety of their loved ones.[38] These issues around PPE have come under considerable public scrutiny and it has been an immense challenge for governments and workplaces to provide adequate and appropriate supplies of PPE for healthcare workers.[18]

The results of this survey echoed the widely publicised issues with PPE in healthcare settings. Over half of respondents reported that they had re-used single-use PPE in their workplace and just under half of respondents had reported PPE concerns to their employer. Workplaces have a duty of care to nurses, midwives, and personal care workers to deliver adequate and appropriate PPE.[38] It is imperative that PPE concerns and requirements continue to be addressed by management to ensure the effective control of COVID-19 infections. Any harm to patients because of a lack of PPE is not the responsibility of individual healthcare workers, but of systems and organisations.[38]

More encouragingly, at the time of the survey 82% of respondents reported often or always having the right types of PPE. This is higher than that reported in international research; a survey in a university teaching hospital in the UK found only 52% of staff perceived adequate PPE provision,[18] and a survey of over 3,000 healthcare workers across 48 US states found PPE was only reported as being available all of the time by 48% of respondents.[39] In addition to this, over half (58%) of all respondents in this survey agreed that they were supported by their workplace regarding any PPE concerns and requirements. This was higher than the 45% of respondents of the UK university teaching hospital survey who reported feeling supported by their workplace with any PPE concerns.[39] It is likely that the higher proportion of support reported by Australian nurses was influenced by both the relatively small case numbers in Australia and the timing of the survey.

Personal concerns related to COVID-19

As might be expected given the mixed views on preparedness, policies, and procedures, many respondents expressed personal concerns about the impacts of COVID-19 on their health, wellbeing, homelife, and the work environment. Results showed that although there had been a reduction in concern about COVID-19 workplace risks to personal health from the beginning of the pandemic to the time of the survey, half of all respondents expressed moderate to extreme concern about having adequate staffing levels, having the right skills mix, and the welfare of their colleagues. Moreover, six out of ten respondents were still moderately to extremely concerned about their own personal health and safety, keeping their families and loved ones safe, managing the needs of their families and loved ones, and for their own psychological wellbeing. Many respondents reported taking precautions to keep family members and friends safe, however, few respondents (15%) chose to self-isolate. Although this is much lower than the 41% of healthcare workers in the US who chose to self-isolate while caring COVID-19 patients, it should be noted that this study also found that those who self-isolated had significantly greater depressive symptoms.[39] Therefore, the low rates of self-isolation among Australian nurses, midwives, and care workers may be protective against mental health problems.

Workforce wellbeing

There was widespread international concern for the occupational wellbeing of nurses, midwives, and personal care workers prior to the COVID-19 pandemic,[40] and this survey set out to explore whether the challenges of the pandemic had contributed additional stress and impacted mental wellbeing. International COVID-19 surveys have found that healthcare workers have considerable levels of self-reported stress, anxiety, depression, and even symptoms of post-traumatic stress disorder.[39,41-43] Despite aforementioned personal concerns related to COVID-19, Australian nurses and midwives in this study appeared to be resilient and adaptive overall, even with reported increased workloads, and for some, workplace redeployment to unfamiliar areas or loss of work. Results showed that on average symptoms of depression, anxiety, and stress among respondents were in the normal range. There was also a low level of depersonalisation (i.e., detachment and impersonal responses towards clients), a moderate level of personal accomplishment in respondents' work with people, and some job satisfaction. On the other hand, results showed that respondents were experiencing a high level of emotional, physical, and cognitive exhaustion, highlighting that Australian nurses and midwives may have been overextended by their workplace demands during the COVID-19 pandemic.[44] Additionally, a small but notable proportion of respondents indicated extremely severe scores on stress, anxiety, and/or depression, which is a risk for individuals managing ongoing job demand.

The COVID-19 pandemic has negatively impacted workplace conditions and demands in many healthcare services, which in turn, may be influencing the wellbeing of Australian nurses, midwives, and care workers. There was general agreement among respondents that nursing philosophy for quality care was present in practice environments, however, there was neither agreement nor disagreement that praise and supervisory support, nursing leadership, and resource and staffing adequacy were present in practice environments. Furthermore, respondents indicated high workplace demands (i.e., cognitive and emotional demands, fast paced work), as well as moderate levels of role conflict and work life conflict. Although this report was descriptive and did not set out to test relationships for statistical significance, it is likely that these workplace conditions and demands contributed to the high level of exhaustion reported by respondents, and may also play a role in the mental health problems indicated by some nurses and midwives. This is supported by the wider nursing literature, which has found workload and staffing levels, job demands, role conflict, and organisational support factors to predict emotional exhaustion, and a relationship between burnout and mental health issues.[45] To support and maintain the wellbeing and capacity of the workforce, it is imperative that strategies are developed and implemented to improve the quality of practice environments, address workplace demands and exhaustion, and support the health and wellbeing of Australian nurses and midwives.

Residential Aged Care sector

Workplace comparisons throughout the report highlighted a concerning pattern of results for respondents working in residential aged care facilities, of which the majority were personal care workers. Respondents working in the residential aged care sector reported the highest proportion of positive COVID-19 test results, were the most concerned about the COVID-19 related risks to their personal health and psychological wellbeing, were more likely to have given up work at one of their employment locations, and were most concerned about job security and financial hardship compared with other workplace groups. Those working in residential aged care facilities also reported poorer psychosocial working conditions, for example, reporting the highest levels of

workplace demands, lowest role clarity, highest role conflict, and highest work life conflict. In regards to wellbeing, respondents working in the residential aged care facilities reported the lowest level of job satisfaction, the highest level of exhaustion, and more symptoms of depression, anxiety, and stress than respondents from other workplaces, with an average anxiety score that was also mildly above the population mean.[27] At the same time, these respondents were the least likely workplace group to report seeking external mental health or wellbeing support. This pattern of results highlights a wide range of occupational stressors facing those working within the residential aged care sector, which could be impacting job satisfaction and mental health. This group appear to require greater psychological support or practical support with psychological help-seeking.

Victorian COVID-19 outbreak

Victoria has been the Australian jurisdiction most affected by COVID-19 to date, with most Australian COVID-19 cases (approximately 69%) and deaths (90%) recorded in Victoria.[6] When the survey opened, Victoria was in lockdown and there were 7,877 active COVID-19 cases, 662 cases in hospital (43 in intensive care), and 1,932 active cases connected to the aged care sector.[46] There was also a high rate of infection among healthcare workers in Victoria; at the beginning of the survey around 2,000 healthcare professionals had contracted the virus, which increased to over 3,600 by the close of the survey.[46,47] In comparison, other Australian states and territories had lower rates of infection and less social distancing restrictions. As might then be expected, nurses, midwives, and personal care workers in Victoria were the most willing to participate in this study, with 45% of responses from this state, while other states and territories that were more fortunate to have lower rates of infection, were less represented. Results may more strongly reflect the experiences of nurses, midwives, and personal care workers in Victoria compared with other states and territories. This proposition will be explored in subsequent manuscripts analysing survey data at the state and territory level.

Strengths and limitations

The inherent strengths and limitations of this study should be considered when interpreting the reported results. The survey was cross-sectional in design and may not be representative of the wider nursing, midwifery, and personal care worker workforce. The survey was primarily promoted through ANMF membership and as such largely reflects nursing and midwifery membership, rather than personal care workers. This was also a snapshot survey with self-report items and measures; responses therefore may be influenced by self-presentation bias and recall errors relating to the beginning of the pandemic. Finally, analyses for this report were limited to descriptive statistics, consequently, it was not possible to determine the statistical significance of any relationships or group differences, nor was it possible to make causal inferences. Higher level analyses to test statistical relationships and the predictive strength of variables will be undertaken in future research. Further longitudinal research is required to determine causality.

The survey also had a number of strengths. First, while there are inherent limitations to cross-sectional studies, they are an efficient method of gathering data with minimal respondent burden and are highly useful for gaining insight into the experiences of respondents. There were between 8,000-11,000 responses to most questions in the survey. While the sample size is small relative to the population from which it is drawn, the respondents were heterogenous, representing a range of organisations, levels in nursing/midwifery, sectors (i.e., primary care, secondary, acute,

administration, research, education and other), ages, countries of birth, and most states and territories in Australia. These factors increase the generalisability of the results to the nursing and midwifery sector and may contribute to our understanding of how the organisational environment affects the psychosocial health of its workforce. A second strength was the survey design, in that it included quantitative and qualitative (open-ended) questions, which provided Australian nurses, midwives, and care workers an opportunity to share their experiences and have their voices heard regarding the impact of coronavirus on their personal and working lives. This survey design assists in understanding and interpretation of patterns in both the quantitative and qualitative data.

Considerations for policy, practice, support and research

Based on the findings of this research, the following considerations are made to advance policy, practice, support and future research direction to address the health, wellbeing, and safety of the nursing, midwifery, and personal care worker workforce (Table 39). These considerations are primarily focused on the leadership, management and coordination, safety, and support and wellbeing of frontline staff, as well as opportunities for future research.

Table 39. Considerations for policy, practice, support and research

Area	Consideration
Policy	
	1. **Leadership**: Empowering strong nursing and/or midwifery leadership in healthcare settings from mid-level clinicians through to the executive level to ensure nurses, midwives, and assistant staff (including personal care workers) have a strong voice regarding current challenges and suggestions for improvements to policy and practice of organisations.
	2. **Risk mitigation**: Learn from the risks identified within the first few weeks of the pandemic in Australia to establish a ready supply of basic hygiene and safety equipment designed to protect the health of staff (e.g., PPE), with supply chain logistics and access processes to minimize risk during future pandemic events.
	3. **Workforce coordination**: The deployment of staff across the healthcare sector should be considered within the context of minimizing multi-site placements that result in increased risk and exposure for the clinician and community.
	4. **Worker safety**: Develop consistent, contemporary policy related to PPE, inclusive of clarity regarding breaks from long term use of PPE.
Practice	
	5. **System design**: Design effective systems for the rapid deployment of staff across the healthcare system. Key considerations are to identify and address major system or industrial barriers that may hinder movement, flexibility, and protection of workers at these pressured times.
	6. **Education**: Provide standardised, consistent messaging, education and training regarding PPE use, donning, wearing, and doffing that is tailored to the working environment.
	7. **Communication**: Provision of consistent, evidence-informed information through trusted communication channels and to relevant staff to ensure accuracy of information and direction is reported.
	8. **Prioritise safety**: Active engagement from healthcare administration to ensure the health, wellbeing and safety of staff is prioritised as a business objective and perceived as such.

Support

9. **Evidence-based support**: Adoption of evidence-based programs designed to provide structured, tailored and meaningful support, and that actively engage staff, especially during times of significant disruption and/or significant trauma.
10. **Wellbeing monitoring systems**: Systems established to periodically monitor occupational health and wellbeing are adopted, monitored, and embedded as part of business activity reporting, and that include both predictors and performance outcomes of wellbeing. This is to be considered as a standardised approach to the health and wellbeing of staff, pre, during, and post the management of a pandemic (or significant disruption to the health care environment) to monitor long term impact and staff sustainability.

Research

11. **Longitudinal research**: Large, longitudinal research studies are undertaken (e.g., cohort studies) that focus on the inter-relationship between health system and organisational policies, the working environment, and the health, safety, and wellbeing of its workforce.
12. **Cross-sectional monitoring**: Undertake a repeat concise workforce and wellbeing survey biennially. Comparators can be considered both at a national level and with international data.

Conclusion

The *COVID-19 and Workforce Wellbeing Survey of Australian Nurses, Midwives, and Personal Care Workers* has been the largest national workforce wellbeing survey of nurses, midwives, and personal care workers during 2020. It is anticipated that this report will increase understanding of the impacts of the COVID-19 pandemic on the nursing, midwifery, and personal care worker workforce of Australia, as well as the demographics, working environments, and wellbeing of this broad community.

The survey highlighted a relatively robust, resilient, and dedicated workforce. Although, it should be noted that many respondents were still concerned about the impacts of COVID-19 on their health, wellbeing, homelife, and the work environment. Additionally, those working in residential aged care facilities reported the poorest outcomes across the range of occupational wellbeing indices. It is vital that employers continue to ensure the safety and wellbeing of the nursing and midwifery workforce by improving plans, policies, and procedures for major health crises, and continuing to provide appropriate and adequate PPE. It was also noted that whilst the community was supportive of the professions, marginal groups had experienced greater incidence of abuse or had been threatened by members of the public. It is imperative that employers of nurses, midwives, and personal care workers actively engage with their workforces, especially during such extreme events, by seeking their feedback and concerns, and working to support and maintain their safety and wellbeing as a priority, as it has a direct relationship with the health of the Australian community and management of our national security. It is anticipated that the *COVID-19 and Workforce Wellbeing Survey* will provide the data to support individuals, practices, policy, and organisations when considering the next steps and future plans. Ensuring the safety and wellbeing of healthcare workers will increase the stability of staff who are critical during major health crises such as COVID-19.

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Appendix A: further analyses of workforce and COVID-19 data

Table A1. Number of reported health conditions of respondents

Conditions	***n***	**%**
Immunocompromised	731	34.34
Severe asthma	536	25.18
Age > 65 years	382	17.94
Chronic lung disease	252	11.84
Poorly controlled hypertension	184	8.64
Poorly controlled diabetes	141	6.62
Other conditions	412	19.35

Note. *n* = number of respondents, % = percentage of respondents. Total number of respondents = 2,129.

Table A2. Main job classification by years worked as a nurse, midwife, or care worker

		Years of experience							
Job classification		**Current student/ no experience**	**New graduate or TPPP**	**1-4 years**	**5-9 years**	**10-19 years**	**20-29 years**	**30 years or more**	**Total**
Registered Nurse or Nurse Practitioner	*n*	2	146	667	1024	1660	1609	2960	8068
	%	0.02	1.81	8.27	12.69	20.58	19.94	36.69	100
Midwife	*n*	0	17	57	95	128	125	384	806
	%	0.00	2.11	7.07	11.79	15.88	15.51	47.64	100
Enrolled Nurse	*n*	1	33	261	239	465	236	427	1662
	%	0.06	1.99	15.70	14.38	27.98	14.20	25.69	100
Personal Care Worker	*n*	16	10	187	178	236	76	51	754
	%	2.12	1.33	24.80	23.61	31.30	10.08	6.76	100
Student	*n*	39	2	4	0	2	0	1	48
	%	81.25	4.17	8.33	0.00	4.17	0.00	2.08	100
Total	*n*	58	208	1176	1536	2491	2046	3823	11338
	%	0.51	1.83	10.37	13.55	21.97	18.05	33.72	100

Note. First row reports frequencies and second row reports row percentages.

Table A3. Main workplace by primary role before the pandemic

		Primary role									
Main workplace		**Patient or client care**	**Admin**	**Management**	**Teaching/ education**	**Research**	**Combined client care & management/ admin**	**Combined client care & education/ research**	**Not working**	**Other**	**Total**
Hospital	*n*	5229	49	378	183	40	411	178	70	71	6609
	%	79.12	0.74	5.72	2.77	0.61	6.22	2.69	1.06	1.07	100
Residential	*n*	1600	16	161	7	0	194	26	20	27	2051
Aged Care	%	78.01	0.78	7.85	0.34	0.00	9.46	1.27	0.98	1.32	100
Primary Care	*n*	1470	13	115	31	6	239	78	27	48	2027
	%	72.52	0.64	5.67	1.53	0.30	11.79	3.85	1.33	2.37	100
Other	*n*	350	16	32	83	16	78	24	36	67	702
	%	49.86	2.28	4.56	11.82	2.28	11.11	3.42	5.13	9.54	100
Total	*n*	8649	94	686	304	62	922	306	153	213	11389
	%	75.94	0.83	6.02	2.67	0.54	8.10	2.69	1.34	1.87	100

Note. First row reports frequencies and second row reports row percentages.

Table A4. Main workplace by years of experience working as a nurse, midwife, or care worker

		Years of experience							
Main workplace		**Current student/ no experience**	**New graduate or TPPP**	**1- 4 years**	**5-9 years**	**10-19 years**	**20-29 years**	**30 years or more**	**Total**
Hospital	*n*	16	139	712	938	1461	1219	2059	6544
	%	0.24	2.12	10.88	14.33	22.33	18.63	31.46	100
Residential Aged Care	*n*	9	35	327	378	519	269	499	2036
	%	0.44	1.72	16.06	18.57	25.49	13.21	24.51	100
Primary Care	*n*	5	18	92	174	392	408	920	2009
	%	0.25	0.90	4.58	8.66	19.51	20.31	45.79	100
Other	*n*	23	16	38	42	108	139	325	691
	%	3.33	2.32	5.50	6.08	15.63	20.12	47.03	100
Total	*n*	53	208	1169	1532	2480	2035	3803	11280
	%	0.47	1.84	10.36	13.58	21.99	18.04	33.71	100

Note. First row reports frequencies and second row reports row percentages.

Table A5. Public hospital category by workplace pandemic plan or protocol for responding to known or suspected COVID-19 cases

		Pandemic plan in place				
Type of hospital		**Yes**	**No**	**Unsure**	**N/A**	**Total**
Tertiary referral hospital	*n*	1445	361	554	9	2369
	%	61.00	15.24	23.39	0.38	100
Other major hospital	*n*	1024	340	476	7	1847
	%	55.44	18.41	25.77	0.38	100
Other small hospital (50 or few beds)	*n*	318	149	144	3	614
	%	51.79	24.27	23.45	0.49	100
Total	*n*	2787	850	1174	19	4830
	%	57.70	17.60	24.31	0.39	100

Note. First row report frequencies and second row reports row percentages. N/A = not applicable.

Table A6. Confidence in practicing safely because of COVID-19 infection control training by main workplace

		Main workplace				
Confidence rating		**Hospital**	**Residential Aged Care**	**Primary Care**	**Other**	**Total**
Not at all confident	*n*	274	104	60	16	454
	%	4.93	6.03	3.93	3.59	4.91
Somewhat confident	*n*	1120	245	259	55	1679
	%	20.17	14.20	16.97	12.33	18.15
Moderately confident	*n*	1914	514	493	118	3039
	%	34.47	29.80	32.31	26.46	32.85
Very confident	*n*	1706	638	553	174	3071
	%	30.72	36.99	36.24	39.01	33.20
Extremely confident	*n*	539	224	161	83	1007
	%	9.71	12.99	10.55	18.61	10.89
Total	*n*	5553	1725	1526	446	9250
	%	100	100	100	100	100

Note. First row reports frequencies and second row reports column percentages.

Table A7. Level of concern about risks to personal health due to COVID-19 by main workplace

		Main workplace				
Level of concern		**Hospital**	**Residential Aged Care**	**Primary Care**	**Other**	**Total**
Not at all concerned	*n*	609	198	196	95	1098
	%	11.00	11.64	11.40	16.96	11.54
Slightly concerned	*n*	1354	359	474	153	2340
	%	24.46	21.11	27.57	27.32	24.59
Somewhat concerned	*n*	1318	407	423	123	2271
	%	23.81	23.93	24.61	21.96	23.87
Moderately concerned	*n*	1487	394	433	128	2442
	%	26.87	23.16	25.19	22.86	25.66
Extremely concerned	*n*	767	343	193	61	1364
	%	13.86	20.16	11.23	10.89	14.34
Total	*n*	5535	1701	1719	560	9515
	%	100	100	100	100	100

Note. First row reports frequencies and second row reports column percentages.

Table A8. Level of concern about health and/or safety by main workplace

		Main workplace				
Level of concern		**Hospital**	**Residential Aged Care**	**Primary Care**	**Other**	**Total**
Not at all concerned	*n*	487	154	160	79	880
	%	8.89	9.25	9.41	14.29	9.37
Slightly concerned	*n*	1232	339	429	143	2143
	%	22.50	20.37	25.22	25.86	22.81
Somewhat concerned	*n*	1321	349	438	122	2230
	%	24.12	20.97	25.75	22.06	23.74
Moderately concerned	*n*	1529	441	436	124	2530
	%	27.92	26.50	25.63	22.42	26.93
Extremely concerned	*n*	907	381	238	85	1611
	%	16.56	22.90	13.99	15.37	17.15
Total	*n*	5476	1664	1701	553	9394
	%	100	100	100	100	100

Note. First row reports frequencies and second row reports column percentages.

Table A9. Level of concern about risks to psychological wellbeing due to COVID-19 by main workplace

		Main workplace				
Level of concern		**Hospital**	**Residential Aged Care**	**Primary Care**	**Other**	**Total**
Not at all concerned	*n*	833	218	271	120	1442
	%	15.30	13.18	15.97	21.82	15.43
Slightly concerned	*n*	1037	285	381	110	1813
	%	19.05	17.23	22.45	20.00	19.40
Somewhat concerned	*n*	1247	335	410	115	2107
	%	22.91	20.25	24.16	20.91	22.55
Moderately concerned	*n*	1474	440	398	112	2424
	%	27.08	26.60	23.45	20.36	25.94
Extremely concerned	*n*	852	376	237	93	1558
	%	15.65	22.73	13.97	16.91	16.67
Total	*n*	5443	1654	1697	550	9344
	%	100	100	100	100	100

Note. First row reports frequencies and second row reports column percentages.

Table A10. Level of concern about financial hardship due to COVID-19 by main workplace

		Main workplace				
Level of concern		**Hospital**	**Residential Aged Care**	**Primary Care**	**Other**	**Total**
Not at all concerned	*n*	1925	429	630	169	3153
	%	35.31	26.02	37.26	30.67	33.75
Slightly concerned	*n*	1149	325	385	113	1972
	%	21.07	19.71	22.77	20.51	21.11
Somewhat concerned	*n*	925	276	259	102	1562
	%	16.97	16.74	15.32	18.51	16.72
Moderately concerned	*n*	785	261	228	69	1343
	%	14.40	15.83	13.48	12.52	14.37
Extremely concerned	*n*	668	358	189	98	1313
	%	12.25	21.71	11.18	17.79	14.05
Total	*n*	5452	1649	1691	551	9343
	%	100	100	100	100	100

Note. First row reports frequencies and second row reports column percentages.

Table A11. Level of concern about job security due to COVID-19 by main workplace

		Main workplace				
Level of concern		**Hospital**	**Residential Aged Care**	**Primary Care**	**Other**	**Total**
Not at all concerned	*n*	2557	582	805	194	4138
	%	46.92	35.21	47.46	35.14	44.25
Slightly concerned	*n*	966	242	318	104	1630
	%	17.72	14.64	18.75	18.84	17.43
Somewhat concerned	*n*	747	238	201	92	1278
	%	13.71	14.40	11.85	16.67	13.67
Moderately concerned	*n*	530	224	156	54	964
	%	9.72	13.55	9.20	9.78	10.31
Extremely concerned	*n*	650	367	216	108	1341
	%	11.93	22.20	12.74	19.57	14.34
Total	*n*	5450	1653	1696	552	9351
	%	100	100	100	100	100

Note. First row reports frequencies and second row reports column percentages.

Table A12. Main workplace by number of respondents who isolated from those they live with

		Isolated		
Main workplace		**No**	**Yes**	**Total**
Hospital	*n*	4500	858	5358
	%	83.99	16.01	100
Residential Aged Care	*n*	1310	312	1622
	%	80.76	19.24	100
Primary Care	*n*	1462	200	1662
	%	87.97	12.03	100
Other	*n*	472	64	536
	%	88.06	11.94	100
Total	*n*	7744	1434	9178
	%	84.38	15.62	100

Note. First row reports frequencies and second row reports row percentages.

Table A13. Main workplace by number of respondents who experienced abuse or threats by the public outside of work

		Experienced of abuse or threats by the public			
Main workplace		**Yes**	**No**	**Unsure**	**Total**
Hospital	*n*	951	4345	106	5402
	%	17.60	80.43	1.96	100
Residential Aged Care	*n*	201	1396	39	1636
	%	12.29	85.33	2.38	100
Primary Care	*n*	234	1409	34	1677
	%	13.95	84.02	2.03	100
Other	*n*	84	456	6	546
	%	15.38	83.52	1.10	100
Total	*n*	1470	7606	185	9261
	%	15.87	82.13	2.00	100

Note. First row reports frequencies and second row reports row percentages.

Table A14. Changes to employment roster by main workplace

Impact		Main workplace				
		Hospital	**Residential Aged Care**	**Primary Care**	**Other**	**Total**
Employment/work roster has been unaffected	*n*	2579	769	885	189	4422
	%	49.58	49.55	55.31	35.86	49.79
Increase in paid hours	*n*	662	240	185	68	1155
	%	12.73	15.46	11.56	12.90	13.01
Increase in unpaid hours	*n*	331	140	125	37	633
	%	6.36	9.02	7.81	7.02	7.13
Approached by employer to take annual leave	*n*	487	36	45	21	589
	%	9.36	2.32	2.81	3.98	6.63
Hours reduced, compensated by federal government payments	*n*	53	10	23	29	115
	%	1.02	0.64	1.44	5.50	1.29
Hours reduced, compensated through employer payments*	*n*	76	14	6	11	107
	%	1.46	0.90	0.38	2.09	1.20
Alternative or flexible working arrangements put in place	*n*	211	46	82	36	375
	%	4.06	2.96	5.13	6.83	4.22
Paid special leave	*n*	64	6	6	3	79
	%	1.23	0.39	0.38	0.57	0.89
Took unpaid leave	*n*	111	38	29	18	196
	%	2.13	2.45	1.81	3.42	2.21
Hours reduced, no reimbursement	*n*	255	106	71	47	479
	%	4.90	6.83	4.44	8.92	5.39
No longer employed in the position	*n*	39	34	41	21	135
	%	0.75	2.19	2.56	3.98	1.52
Other	*n*	334	113	102	47	596
	%	6.42	7.28	6.38	8.92	6.71
Total	*n*	5202	1552	1600	527	8881
	%	100	100	100	100	100

Note. First row reports frequencies and second row reports column percentages. *Employer payments provided by the public/private agreement in state or territory.

Table A15. Main workplace by additional training and education received to work outside of usual scope of practice

		Received training			
Main workplace		**Yes**	**No**	**Not applicable**	**Total**
Hospital	*n*	351	608	65	1024
	%	34.28	59.38	6.35	100
Residential Aged Care	*n*	57	118	6	181
	%	31.49	65.19	3.31	100
Primary Care	*n*	90	131	21	242
	%	37.19	54.13	8.68	100
Other	*n*	26	44	5	75
	%	34.67	58.67	6.67	100
Total	*n*	524	901	97	1522
	%	34.43	59.20	6.37	100

Note. First row reports frequencies and second row reports row percentages.

Table A16. Main workplace by redeployment to a different area, hospital, or specialty of work due to COVID-19

		Redeployed		
Main workplace		**No**	**Yes**	**Total**
Hospital	*n*	3921	1377	5298
	%	74.01	25.99	100
Residential Aged Care	*n*	1528	59	1587
	%	96.28	3.72	100
Primary Care	*n*	1433	195	1628
	%	88.02	11.98	100
Other	*n*	463	65	528
	%	87.69	12.31	100
Total	*n*	7345	1696	9041
	%	81.24	18.76	100

Note. First row reports frequencies and second row reports row percentages.

Table A17. How often Personal Protective Equipment (PPE) is the right type, size, and of a sufficient amount at primary workplace

		Frequency						
		Never	**Rarely**	**Sometimes**	**Often**	**Always**	**Don't Know**	**Total**
Survey item								
Right types	*n*	110	284	1046	2345	4805	105	8695[a]
	%	1.27	3.27	12.03	26.97	55.26	1.21	100
Right size	*n*	226	538	1452	2357	3785	266	8624[b]
	%	2.62	6.24	16.84	27.33	43.89	3.08	100
Sufficient amount	*n*	176	458	1413	2419	4016	176	8658[c]
	%	2.03	5.29	16.32	27.94	46.38	2.03	100

Note. *n* = number of respondents, % = percentage of respondents. [a] excludes *n* = 240 who replied not applicable (N/A), [b] excludes *n* = 296 N/A, [c] excludes *n* = 228 N/A.

Table A18. Main workplace by the sufficient amount of PPE

		Frequency						
		Never	**Rarely**	**Sometimes**	**Often**	**Always**	**Don't know**	**Total**
Main workplace								
Hospital	*n*	66	210	790	1583	2382	91	5122
	%	1.29	4.10	15.42	30.91	46.51	1.78	100
Residential Aged	*n*	57	121	301	337	693	40	1549
Care	%	3.68	7.81	19.43	21.76	44.74	2.58	100
Primary Care	*n*	39	98	264	379	712	33	1525
	%	2.56	6.43	17.31	24.85	46.69	2.16	100
Other	*n*	13	29	51	110	215	12	430
	%	3.02	6.74	11.86	25.58	50.00	2.79	100
Total	*n*	175	458	1406	2409	4002	176	8626
	%	2.03	5.31	16.30	27.93	46.39	2.04	100

Note. First row reports frequencies and second row reports row percentages.

Table A19. Main workplace by the availability of the right types of PPE

		Frequency						
Main workplace		**Never**	**Rarely**	**Sometimes**	**Often**	**Always**	**Don't know**	**Total**
Hospital	*n*	45	119	536	1500	2893	49	5142
	%	0.88	2.31	10.42	29.17	56.26	0.95	100
Residential Aged	*n*	40	71	261	360	804	21	1557
Care	%	2.57	4.56	16.76	23.12	51.64	1.35	100
Primary Care	*n*	20	68	213	362	841	28	1532
	%	1.31	4.44	13.90	23.63	54.90	1.83	100
Other	*n*	5	25	33	114	248	7	432
	%	1.16	5.79	7.64	26.39	57.41	1.62	100
Total	*n*	110	283	1043	2336	4786	105	8663*
	%	1.27	3.27	12.04	26.97	55.25	1.21	100

Note. First row reports frequencies and second row reports row percentages.

Table A20. Main workplace by the availability of the right size of PPE

		Frequency						
Main workplace		**Never**	**Rarely**	**Sometimes**	**Often**	**Always**	**Don't know**	**Total**
Hospital	*n*	121	308	836	1530	2176	149	5120
	%	2.36	6.02	16.33	29.88	42.50	2.91	100
Residential Aged	*n*	47	110	310	357	686	42	1552
Care	%	3.03	7.09	19.97	23.00	44.20	2.71	100
Primary Care	*n*	44	88	253	351	706	57	1499
	%	2.94	5.87	16.88	23.42	47.10	3.80	100
Other	*n*	12	28	51	110	203	17	421
	%	2.85	6.65	12.11	26.13	48.22	4.04	100
Total	*n*	224	534	1450	2348	3771	265	8592
	%	2.61	6.22	16.88	27.33	43.89	3.08	100

Note. First row reports frequencies and second row reports row percentages.

Table A21. Main workplace by PPE policy on respirator fit checking

		Policy			
Main workplace		**Yes**	**No**	**Unsure**	**Total**
Hospital	*n*	1817	1737	1228	4782
	%	38.00	36.32	25.68	100
Residential Aged Care	*n*	253	641	338	1232
	%	20.54	52.03	27.44	100
Primary Care	*n*	228	529	294	1051
	%	21.69	50.33	27.97	100
Other	*n*	69	159	51	279
	%	24.73	56.99	18.28	100
Total	*n*	2367	3066	1911	7344*
	%	32.23	41.75	26.02	100

Note. First row reports frequencies and second row reports row percentages. Excludes *n* = 1,543 who replied not applicable.

Table A22. Reuse of single-use, disposable PPE for hospital workers only

Type of PPE	***n***	**%**
Masks	1219	24.89
Respirators	111	2.27
Gloves	225	4.59
Gowns	512	10.45
Aprons	207	4.23
Glasses/goggles	2122	43.32
Face shields	1797	36.69
Shoe covers	123	2.51
Other	46	0.94
No reuse of single-use PPE	1950	39.81
Total	8312	169.70

Note. *n* = number of respondents, % = percentage of respondents. Multiple responses permitted; hence percent will sum to greater than 100. Total number of respondents = 4,898. Excludes *n* = 238 who replied not applicable.

Table A23. Reuse of single-use, disposable PPE for residential aged care workers only

Type of PPE	*n*	%
Masks	320	21.96
Respirators	8	0.55
Gloves	83	5.70
Gowns	125	8.58
Aprons	61	4.19
Glasses/goggles	416	28.55
Face shields	425	29.17
Shoe covers	44	3.02
Other	6	0.41
No reuse of single-use PPE	705	48.39
Total	2193	150.51

Note. *n* = number of respondents, % = percentage of respondents. Multiple responses permitted; hence percent will sum to greater than 100. Total number of respondents = 1,457. Excludes *n* = 101 who replied not applicable.

Table A24. Reuse of single-use, disposable PPE for primary care workers only

Type of PPE	*n*	%
Masks	382	27.46
Respirators	7	0.50
Gloves	86	6.18
Gowns	148	10.64
Aprons	49	3.52
Glasses/goggles	429	30.84
Face shields	397	28.54
Shoe covers	32	2.30
Other	6	0.43
No reuse of single-use PPE	658	47.30
Total	2194	157.73

Note. *n* = number of respondents, % = percentage of respondents. Multiple responses permitted; hence percent will sum to greater than 100. Total number of respondents = 1,391. Excludes *n* = 219 who replied not applicable.

Table A25. Reuse of single-use, disposable PPE for “other” healthcare worker only

Type of PPE	***n***	**%**
Masks	95	25.13
Respirators	8	2.12
Gloves	25	6.61
Gowns	46	12.17
Aprons	21	5.56
Glasses/goggles	92	24.34
Face shields	89	23.54
Shoe covers	5	1.32
Other	6	1.59
No reuse of single-use PPE	211	55.82
Total	598	158.20

Note. *n* = number of respondents, % = percentage of respondents. Multiple responses permitted; hence percent will sum to greater than 100. Total number of respondents = 378. Excludes *n* = 135 who replied not applicable.

Table A26. Illustrative quotes for concerns with PPE

PPE concern	Illustrative quote
Accessibility of PPE	*"Current PPE locked up and assessable only by Num or AH num. this is not appropriate for front line staff. Nums are fearful that stocks will be stolen but this process puts staff at risk in maternity. Currently controlled by Birthsuite num who has minimal knowledge and understanding of clinical staff needs or their safety concerns." (Registered Midwife, Hospital)*
Availability and amount of PPE	*"Availability of gowns and N95 masks. Poor fitting N95 masks and N95 masks that appear to irritate many of the staff skin." (Registered Nurse, Hospital)*
Adverse reactions to PPE	*"I'll [sic] fitting masks Masks which caused breathing difficulties -were withdrawn as had latex particles at a later date." (Registered Nurse, Primary Care)*
Quality of PPE	*"N95 masks supplied are poor quality. Very difficult to get a seal. Many staff with rashes and sore inside nose from breathing in these masks. These are the only N95's we have access to and management have tried to source other brands but have been unable to get stock." (Registered Nurse, Hospital)*
Re-use or long-term use of PPE	*"I have questioned the reuse of face shields given they have a foam band that I feel is unable to be cleaned adequately. Currently the process is that the shield is used by the same person for that shift then discarded Also we were ' fit checked' for N95 masks a few months ago but currently only have 1 type available. This is not the one that was deemed suitable for me." (Registered Midwife, Hospital)*
People stealing PPE	*"Stock was not on the ward, people had been stealing the current ward stock and it had to be put in a locked area." (Registered Nurse, Hospital)*
PPE policies	*"Policy for Covid tested patients - lack of consultation, not properly distributed to staff or consulted with staff. Nurses then blamed when other health care workers enter the ward and feel there is inadequate PPE even though the PPE available meets policy requirements." (Registered Nurse, Hospital)*
Right size or fit of PPE	*"The surgical masks supplied are poorly fitting so they fog up your goggles when you're in the roomZ [sic] due to this you can [sic] see what you're doing with the patient. Often having to don and doff several times. It also means you often find yourself touching your mask and goggles inside the room trying to stop the humidification clouding the goggles. The masks are too loose, or uneven ear lip holes. The material itches your chin and personally causes me a rash…" (Registered Nurse, Hospital)*

Right type of PPE	*"Type of gowns used and availability of stock in the department." (Registered Nurse, Hospital)*
Time needed to don and doff PPE	*"Concern re. no additional time allowed or accounted for to don and doff ppe. Namely still expected to have the same no. of patients on a shift. My primary concern is that time pressure could lead to accidental contamination due to rushing." (Registered Nurse, Hospital)*

Table A27. Main workplace by respondent level of agreement that they feel confident the PPE training they received equipped them to practice safely during the COVID-19 pandemic

		Confidence in PPE training received					
Main workplace		**Strongly agree**	**Agree**	**Neither agree nor disagree**	**Disagree**	**Strongly disagree**	**Total**
Hospital	*n*	810	2139	1011	655	416	5031
	%	16.10	42.52	20.10	13.02	8.27	100
Residential Aged	*n*	332	600	274	164	137	1507
Care	%	22.03	39.81	18.18	10.88	9.09	100
Primary Care	*n*	220	619	319	189	121	1468
	%	14.99	42.17	21.73	12.87	8.24	100
Other	*n*	85	158	72	54	32	401
	%	21.20	39.40	17.96	13.47	7.98	100
Total	*n*	1447	3516	1676	1062	706	8407
	%	17.21	41.82	19.94	12.63	8.40	100

Note. First row reports frequencies and second row reports row percentages. Excludes *n* = 358 who replied not applicable.

Table A28. Main workplace by respondent level of agreement that they feel supported by their workplace regarding PPE concerns and requirements

		Supported by workplace					
Main workplace		**Strongly agree**	**Agree**	**Neither agree nor disagree**	**Disagree**	**Strongly disagree**	**Total**
Hospital	*n*	900	1949	1042	716	440	5047
	%	17.83	38.62	20.65	14.19	8.72	100
Residential Aged	*n*	292	552	301	199	153	1497
Care	%	19.51	36.87	20.11	13.29	10.22	100
Primary Care	*n*	297	622	293	190	122	1524
	%	19.49	40.81	19.23	12.47	8.01	100
Other	*n*	115	167	68	48	29	427
	%	26.93	39.11	15.93	11.24	6.79	100
Total	*n*	1604	3290	1704	1153	744	8495
	%	18.88	38.73	20.06	13.57	8.76	100

Note. First row reports frequencies and second row reports row percentages. Excludes *n* = 277 who replied not applicable.

Table A29. Main workplace by respondent level of agreement that there were adequate resources and staff to deliver high quality PPE training

		Supported by workplace					
Main workplace		**Strongly agree**	**Agree**	**Neither agree nor disagree**	**Disagree**	**Strongly disagree**	**Total**
Hospital	*n*	742	1922	1022	864	520	5070
	%	14.64	37.91	20.16	17.04	10.26	100
Residential Aged	*n*	240	540	268	272	190	1510
Care	%	15.89	35.76	17.75	18.01	12.58	100
Primary Care	*n*	192	510	340	297	148	1487
	%	12.91	34.30	22.86	19.97	9.95	100
Other	*n*	65	142	80	62	47	396
	%	16.41	35.86	20.20	15.66	11.87	100
Total	*n*	1239	3114	1710	1495	905	8463
	%	14.64	36.80	20.21	17.67	10.69	100

Note. First row reports frequencies and second row reports row percentages. Excludes *n* = 307 who replied not applicable.

Appendix B: further analyses of workforce wellbeing data

Table B1. PES-NWI mean scores for all respondents and according to main workplace

						95% CI	
Subscale	***n***	**Missing**	***M***	***SD***	***SE***	***Lower***	***Upper***
All respondents*							
Nursing leadership	8262	3696	2.61	0.69	0.01	2.59	2.62
Resource and staffing adequacy	8169	3789	2.39	0.75	0.01	2.37	2.40
Praise and supervisory support	8151	3807	2.65	0.79	0.01	2.63	2.66
Nursing philosophy for quality care	8084	3874	2.91	0.65	0.01	2.90	2.93
Hospital							
Nursing leadership	4913	1705	2.60	0.66	0.01	2.58	2.62
Resource and staffing adequacy	4843	1775	2.39	0.72	0.01	2.37	2.41
Praise and supervisory support	4843	1775	2.66	0.75	0.01	2.64	2.68
Nursing philosophy for quality care	4812	1806	2.91	0.61	0.01	2.90	2.93
Residential Aged Care							
Nursing leadership	1405	650	2.69	0.71	0.02	2.66	2.73
Resource and staffing adequacy	1402	653	2.19	0.81	0.02	2.15	2.23
Praise and supervisory support	1391	664	2.56	0.86	0.02	2.52	2.61
Nursing philosophy for quality care	1358	697	2.90	0.69	0.02	2.86	2.94
Primary Care							
Nursing leadership	1471	559	2.56	0.71	0.02	2.52	2.59
Resource and staffing adequacy	1464	566	2.52	0.73	0.02	2.49	2.56
Praise and supervisory support	1452	578	2.66	0.80	0.02	2.62	2.70
Nursing philosophy for quality care	1451	579	2.90	0.68	0.02	2.87	2.94
Other							
Nursing leadership	445	258	2.60	0.81	0.04	2.52	2.67
Resource and staffing adequacy	435	268	2.59	0.80	0.04	2.52	2.67
Praise and supervisory support	438	265	2.70	0.87	0.04	2.62	2.79
Nursing philosophy for quality care	436	267	2.98	0.71	0.03	2.91	3.05

Note. *n* = number of respondents, missing = number of missing respondents, *M* = mean, *SD* = standard deviation, *SE* = standard error, 95% CI = 95% confidence interval for mean. *Some participants (*n* = 28) were missing data on the workplace comparison variable; these participants were excluded from subgroup analysis, but were retained in the overall sample (i.e., all respondents).

Table B2. COPSOQ-III workplace demand mean scores for all respondents and according to main workplace

						95% CI	
Subscale	***n***	**Missing**	***M***	***SD***	***SE***	***Lower***	***Upper***
All respondents*							
Quantitative demands	8088	3870	52.57	19.44	0.22	52.15	53.00
Work pace	8067	3891	73.61	21.25	0.24	73.15	74.07
Cognitive demands	8113	3845	76.62	18.97	0.21	76.21	77.03
Emotional demands	8067	3891	66.34	20.48	0.23	65.90	66.79
Hospital							
Quantitative demands	4777	1841	51.73	18.61	0.27	51.20	52.25
Work pace	4771	1847	76.03	19.48	0.28	75.48	76.58
Cognitive demands	4801	1817	77.75	18.01	0.26	77.24	78.26
Emotional demands	4774	1844	66.10	19.90	0.29	65.54	66.67
Residential Aged Care							
Quantitative demands	1365	690	59.55	19.80	0.54	58.50	60.60
Work pace	1360	695	77.30	21.54	0.58	76.15	78.44
Cognitive demands	1362	693	77.75	19.65	0.53	76.70	78.79
Emotional demands	1358	697	69.16	20.98	0.57	68.05	70.28
Primary Care							
Quantitative demands	1471	559	50.25	19.75	0.51	49.24	51.27
Work pace	1461	569	65.13	22.56	0.59	63.97	66.28
Cognitive demands	1474	556	73.17	20.11	0.52	72.15	74.20
Emotional demands	1463	567	66.43	20.67	0.54	65.37	67.49
Other							
Quantitative demands	448	255	48.07	21.03	0.99	46.11	50.02
Work pace	448	255	64.12	24.00	1.13	61.89	66.35
Cognitive demands	449	254	72.57	21.03	0.99	70.62	74.52
Emotional demands	446	257	60.13	22.70	1.08	58.01	62.24

Note. *n* = number of respondents, missing = number of missing respondents, *M* = mean, *SD* = standard deviation, *SE* = standard error, 95% CI = 95% confidence interval for mean. *Some participants (*n* = 27) were missing data on the workplace comparison variable; these participants were excluded from subgroup analysis, but were retained in the overall sample (i.e., all respondents).

Table B3. COPSOQ-III role clarity and conflict mean scores for all respondents and according to main workplace

						95% CI	
Subscale	***n***	**Missing**	***M***	***SD***	***SE***	***Lower***	***Upper***
All respondents*							
Role clarity	8058	3900	70.46	19.21	0.21	70.04	70.88
Role conflict	8029	3929	50.36	26.62	0.30	49.78	50.94
Hospital							
Role clarity	4758	1860	71.21	18.37	0.27	70.69	71.74
Role conflict	4736	1882	49.99	25.69	0.37	49.26	50.72
Residential Aged Care							
Role clarity	1358	697	68.71	20.02	0.54	67.65	69.78
Role conflict	1359	696	57.32	26.94	0.73	55.89	58.76
Primary Care							
Role clarity	1464	566	69.18	20.78	0.54	68.11	70.24
Role conflict	1455	575	46.69	27.46	0.72	45.28	48.10
Other							
Role clarity	451	252	72.06	19.45	0.92	70.26	73.86
Role conflict	453	250	44.73	28.58	1.34	42.09	47.37

Note. *n* = number of respondents, missing = number of missing respondents, *M* = mean, *SD* = standard deviation, *SE* = standard error, 95% CI = 95% confidence interval for mean. *Some participants (*n* = 27) were missing data on the workplace comparison variable; these participants were excluded from subgroup analysis, but were retained in the overall sample (i.e., all respondents).

Table B4. COPSOQ-III work life conflict mean scores for all respondents and according to main workplace

						95% CI	
Main workplace	***n***	**Missing**	***M***	***SD***	***SE***	***Lower***	***Upper***
All respondents*	8010	3948	51.19	29.83	0.33	50.53	51.84
Hospital	4736	1882	52.64	29.17	0.42	51.81	53.47
Residential Aged Care	1351	704	56.42	29.55	0.80	54.84	57.99
Primary Care	1453	577	44.09	30.20	0.79	42.53	45.64
Other	442	261	42.80	30.74	1.46	39.92	45.67

Note. *n* = number of respondents, missing = number of missing respondents, *M* = mean, *SD* = standard deviation, *SE* = standard error, 95% CI = 95% confidence interval for mean. *Some participants (*n* = 28) were missing data on the workplace comparison variable; these participants were excluded from subgroup analysis, but were retained in the overall sample (i.e., all respondents).

Table B5. Self-rated health for all respondents and according to main workplace

		Main workplace				
General health		**All respondents***	**Hospital**	**Residential Aged Care**	**Primary Care**	**Other**
Very bad	*n*	85	44	17	20	3
	%	1.05	0.92	1.25	1.36	.65
Bad	*n*	552	291	103	125	30
	%	6.81	6.08	7.55	8.49	6.52
Moderate	*n*	2622	1516	481	471	143
	%	32.33	31.69	35.24	32.00	31.09
Good	*n*	3527	2128	565	623	201
	%	43.49	44.48	41.39	42.32	43.70
Very good	*n*	1323	805	199	233	83
	%	16.32	16.83	14.58	15.83	18.04

Note. First row reports *frequencies* and second row reports *column* percentages. *Some participants (*n* = 28) were missing data on the workplace comparison variable; these participants were excluded from subgroup analysis, but were retained in the overall sample (i.e., all respondents).

Table B6. MMSS mean scores for all respondents and according to main workplace

						95% CI	
Subscale	***n***	**Missing**	***M***	***SD***	***SE***	***Lower***	***Upper***
All respondents*							
Leadership and career opportunities	8229	3729	2.77	0.95	0.01	2.75	2.79
Work scheduling and flexibility	8128	3830	3.70	0.87	0.01	3.68	3.72
Extrinsic rewards	8049	3909	3.30	1.02	0.01	3.27	3.32
Collegial relationships	8033	3925	3.31	0.90	0.01	3.29	3.33
Hospital							
Leadership and career opportunities	4863	1755	2.76	0.91	0.01	2.73	2.78
Work scheduling and flexibility	4834	1784	3.68	0.86	0.01	3.66	3.71
Extrinsic rewards	4776	1842	3.31	1.00	0.01	3.28	3.33
Collegial relationships	4767	1851	3.35	0.86	0.01	3.33	3.38
Residential Aged Care							
Leadership and career opportunities	1392	663	2.72	1.04	0.03	2.67	2.78
Work scheduling and flexibility	1369	686	3.54	0.91	0.02	3.49	3.59
Extrinsic rewards	1363	692	3.15	1.07	0.03	3.10	3.21
Collegial relationships	1344	711	3.14	0.94	0.03	3.09	3.19
Primary Care							
Leadership and career opportunities	1488	542	2.80	0.98	0.03	2.74	2.85
Work scheduling and flexibility	1451	579	3.88	0.84	0.02	3.84	3.92
Extrinsic rewards	1445	585	3.38	1.04	0.03	3.32	3.43
Collegial relationships	1450	580	3.32	0.93	0.02	3.27	3.36
Other							
Leadership and career opportunities	459	244	2.91	0.97	0.05	2.83	3.00
Work scheduling and flexibility	447	256	3.81	0.87	0.04	3.73	3.89
Extrinsic rewards	440	263	3.37	1.06	0.05	3.27	3.47
Collegial relationships	446	257	3.34	0.98	0.05	3.25	3.44

Note. *n* = number of respondents, missing = number of missing respondents, *M* = mean, *SD* = standard deviation, *SE* = standard error, 95% CI = 95% confidence interval for mean. *Some participants (*n* = 27) were missing data on the workplace comparison variable; these participants were excluded from subgroup analysis, but were retained in the overall sample (i.e., all respondents).

Table B7. BRS mean scores for all respondents and according to main workplace

						95% CI	
Main workplace	***n***	**Missing**	***M***	***SD***	***SE***	***Lower***	***Upper***
All respondents*	7740	4218	3.42	0.75	0.01	3.40	3.44
Hospital	4585	2033	3.42	0.74	0.01	3.40	3.44
Residential Aged Care	1272	783	3.39	0.71	0.02	3.35	3.43
Primary Care	1417	613	3.43	0.78	0.02	3.39	3.47
Other	441	262	3.49	0.74	0.04	3.43	3.56

Note. *n* = number of respondents, missing = number of missing respondents, *M* = mean, *SD* = standard deviation, *SE* = standard error, 95% CI = 95% confidence interval for mean. *Some participants (*n* = 25) were missing data on the workplace comparison variable; these participants were excluded from subgroup analysis, but were retained in the overall sample (i.e., all respondents).

Table B8. DASS-21 total scores for all respondents and according to main workplace

						95% CI	
Subscale	***n***	**Missing**	***M***	***SD***	***SE***	***Lower***	***Upper***
All respondents*							
Stress	7588	4370	11.31	8.94	0.10	11.11	11.52
Anxiety	7588	4370	6.97	8.09	0.09	6.79	7.15
Depression	7589	4369	8.20	9.36	0.11	7.99	8.41
Hospital							
Stress	4512	2106	11.40	8.86	0.13	11.14	11.66
Anxiety	4517	2101	7.11	8.07	0.12	6.88	7.35
Depression	4517	2101	8.21	9.34	0.14	7.94	8.48
Residential Aged Care							
Stress	1230	825	11.59	9.33	0.27	11.07	12.11
Anxiety	1228	827	7.87	8.66	0.25	7.39	8.36
Depression	1229	826	8.94	9.75	0.28	8.39	9.48
Primary Care							
Stress	1386	644	10.90	8.66	0.23	10.45	11.36
Anxiety	1383	647	5.96	7.64	0.21	5.56	6.37
Depression	1384	646	7.64	9.05	0.24	7.16	8.12
Other							
Stress	435	268	10.88	9.38	0.45	10.00	11.77
Anxiety	435	268	6.11	7.52	0.36	5.40	6.81
Depression	434	269	7.69	9.20	0.44	6.82	8.56

Note. *n* = number of respondents, missing = number of missing respondents, *M* = mean, *SD* = standard deviation, *SE* = standard error, 95% CI = 95% confidence interval for mean. *Some participants (*n* = 25) were missing data on the workplace comparison variable; these participants were excluded from subgroup analysis, but were retained in the overall sample (i.e., all respondents).

Table B9. MBI-HSS total scores for all respondents and according to main workplace

						95% CI	
Subscale	***n***	**Missing**	***M***	***SD***	***SE***	***Lower***	***Upper***
All respondents*							
Emotional exhaustion	7889	4069	26.66	12.67	0.14	26.38	26.94
Depersonalisation	7903	4055	6.41	6.05	0.07	6.27	6.54
Personal accomplishment	7799	4159	34.69	7.91	0.09	34.51	34.86
Hospital							
Emotional exhaustion	4662	1956	26.83	12.40	0.18	26.48	27.19
Depersonalisation	4670	1948	6.84	6.14	0.09	6.66	7.02
Personal accomplishment	4614	2004	34.17	7.85	0.12	33.94	34.39
Residential Aged Care							
Emotional exhaustion	1321	734	28.97	13.11	0.36	28.26	29.67
Depersonalisation	1326	729	6.85	6.19	0.17	6.52	7.19
Personal accomplishment	1302	753	34.86	8.20	0.23	34.42	35.31
Primary Care							
Emotional exhaustion	1442	588	25.15	12.46	0.33	24.51	25.79
Depersonalisation	1447	583	5.02	5.58	0.15	4.73	5.31
Personal accomplishment	1431	599	35.93	7.56	0.2	35.54	36.32
Other							
Emotional exhaustion	439	264	22.80	13.50	0.64	21.53	24.07
Depersonalisation	435	268	5.04	5.35	0.26	4.54	5.55
Personal accomplishment	427	276	35.76	8.20	0.40	34.98	36.54

Note. *n* = number of respondents, missing = number of missing respondents, *M* = mean, *SD* = standard deviation, *SE* = standard error, 95% CI = 95% confidence interval for mean. *Some participants (*n* = 25) were missing data on the workplace comparison variable; these participants were excluded from subgroup analysis, but were retained in the overall sample (i.e., all respondents).

Table B10. OLBI mean scores for all respondents and according to main workplace

						95% CI	
Subscale	***n***	**Missing**	***M***	***SD***	***SE***	***Lower***	***Upper***
All respondents*							
Disengagement	7744	4214	2.32	0.49	0.01	2.31	2.33
Exhaustion	7766	4192	2.61	0.49	0.01	2.60	2.62
Hospital							
Disengagement	4596	2022	2.33	0.48	0.01	2.32	2.34
Exhaustion	4606	2012	2.62	0.47	0.01	2.61	2.64
Residential Aged Care							
Disengagement	1277	778	2.41	0.50	0.01	2.38	2.43
Exhaustion	1281	774	2.67	0.51	0.01	2.64	2.69
Primary Care							
Disengagement	1411	619	2.25	0.50	0.01	2.22	2.27
Exhaustion	1419	611	2.55	0.51	0.01	2.52	2.57
Other							
Disengagement	436	267	2.22	0.53	0.03	2.17	2.27
Exhaustion	436	267	2.45	0.54	0.03	2.40	2.50

Note. *n* = number of respondents, missing = number of missing respondents, *M* = mean, *SD* = standard deviation, *SE* = standard error, 95% CI = 95% confidence interval for mean. *Some participants (*n* = 24) were missing data on the workplace comparison variable; these participants were excluded from subgroup analysis, but were retained in the overall sample (i.e., all respondents).

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