The future of Australia's nursing workforce: COVID-19 and burnout among nurses

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Abbreviations and definitions

COVID-19	A viral respiratory disease caused by the SARS0CoV-2 virus. Sometimes also referred to as coronavirus or COVID (The World health Organization, 2021)
ICD	International Classification of Diseases
The WHO	The World Health Organization
J D-R Model	The job demands-resources model of burnout

Executive Summary

Australia delivers quality equitable and universal access to healthcare that ensures citizens are facilitated to achieve quality of life and engagement with the healthcare system. However, the delivery of such services requires a vast array of clinicians to provide healthcare across primary care, acute and preventative healthcare settings. The largest workforce in the healthcare system is the nursing and midwifery sector, accounting for 55% of the total workforce (Australian Institute of Health and Welfare, 2020b; Department of Health, 2021c). As the largest sector, nurses play a crucial role in all aspects of the healthcare system thus are required in increasing numbers to meet the current and future demands of the healthcare system. Despite the large an increasing number of healthcare workers including nurses, recent modelling undertaken by the Australian federal Department of Health has raised concern that the Australian healthcare workforce is facing a looming shortage of nurses (Department of Health, 2013). It is projected that the nursing workforce in Australia will face a shortage of up to 123,000 nurses by 2030, impeding the delivery of healthcare (Health Workforce Australia, 2014b). Thus, the future of the nursing workforce and delivery of healthcare in Australia is at risk if the workforce shortage can not be rectified.

One key element that contributes to the numbers within the nursing workforce is retention of clinicians (Health Workforce Australia, 2014b). However, the rate of turnover among nurses is significantly higher than that of other industries. Indicating that there are specific factors that contribute to the poor retention of nurses. One such factor that increases workforce exit among nurses is burnout (Leiter & Maslach, 2009). Identified by The World Health Organization in 2019 as an "occupational phenomenon" burnout is a term used to describe the ineffective management of workplace stressors which culminates in emotional exhaustion, depersonalisation and feelings of reduced professional accomplishment (The World Health Organization, 2019). There are several key factors that have been theorised to contribute to the development of burnout including the Job Demands-Resources (J D-R) model which considers burnout a progressive overload resulting from a mismatch between resources available to workers and the demands of their job (Dall'Ora et al., 2020; Demerouti et al., 2001). Burnout not only contributes to turnover but a range of other outcomes such as illness, psychological distress and risks to healthcare consumers which decrease the capacity of the nursing workforce to deliver effective care.

This report utilised a rapid evidence review to analyse the available peer-reviewed literature examining the experiences of nurses working through the COVID-19 pandemic in Australia. The report seeks to answer the question, are Australian nurses working through the COVID-19 pandemic reporting conditions that may contribute to burnout? If so, what are those conditions? The analysis of the literature is informed by the J D-R model of burnout and a theoretical review of burnout literature.

The rapid evidence review identified that Australian nurses are experiencing conditions such as wellbeing challenges, safety concerns, workload increases and scarcity of resources all of which can contribute to the development of burnout. Finally, this report makes some suggestions as to how employers of nurses and policymakers can mitigate the effects of working through the COVID-19 pandemic that are likely to contribute to burnout.

The future of Australia's nursing workforce is influenced by the retention of nurses. With burnout a key contributor to workforce exit and reduced capacity of nurses alleviating the circumstances that contribute to the development of burnout may aid in the safeguarding of the nursing workforce and delivery of healthcare in Australia.

Introduction

The World Health Organisation (WHO) designated 2021 as the year of health and care workers, calling for a collaborative effort to invest and support care workers to ensure equitable quality healthcare can be delivered globally (The World Health Organization, 2012). Despite the recent and renewed focus on the healthcare workforce stimulated by the COVID-19 pandemic, issues of retention, capacity and the future supply of nurses have long been debated by policymakers (Department of Health, 2013). With ample supply of future healthcare workers key to the delivery of equitable healthcare.

In Australia, nurses are the largest professional group within the healthcare workforce and are involved in the delivery of care across the vast and complex healthcare system (Department of Health, 2021c). However, Australian modelling is projecting nursing workforce shortages limiting the capacity of the healthcare system to deliver quality healthcare (Health Workforce Australia, 2012). Whilst there are several factors that contribute to the workforce shortages of nurses, one key area that has been identified by Healthcare Workforce Australia as a key contributor is lack of nurse retention (Health Workforce Australia, 2014b). The decision of a nurse to leave the workforce is influenced by many factors, one of which is burnout (Leiter & Maslach, 2009). Burnout is a state that arises from ineffectively managed workplace stressors and is associated with several negative outcomes (Dall'Ora et al., 2020; Demerouti et al., 2001; Maslach, 1993; Maslach et al., 2001; Tavella et al., 2020; The World Health Organization, 2019). Therefore, burnout is likely to contribute to the immanent nursing workforce shortages in Australia.

Whilst the conditions that contribute to burnout among nurses has been studied previously, the COVID-19 pandemic has placed additional and unforeseen stressors on the nursing workforce in Australia. This research report seeks to answer the question are Australian nurses working through the COVID-19 pandemic reporting conditions that may contribute to burnout? If so, what are those conditions? Understanding the role of nursing through the pandemic on the conditions that contribute to burnout may aid in the creation of responses that address the contributing factors of burnout and ensure the future of the nursing workforce. This report explores the relationship between nursing, burnout and COVID-19 through four sections as outline below.

Section one provides background and context to the healthcare system that nurses work within, in addition to the role of a nurse in the provision of healthcare services. Also highlighting the role nurses have played in the evolving COVID-19 pandemic, providing key services and capacity through the COVID-19 public health response. This section positions the research question amongst the key public policy issue of future nursing workforce shortages (Health Workforce Australia, 2014b). However, increasing nursing retention is a key action which will ensure capacity and decrease the number of shortages projected.

Section two explores the concept of burnout through a review of literature as a key driver of nursing workforce exit. This section further explores the workplace contributing factors of burnout, highlighting two key theoretical models. Moreover, the outcomes of burnout on the capacity of nurses and the nursing workforce are also considered in addition to the rates workplace stressors experienced by Australian nurses prior to COVID-19. Section two provides the context and theoretical framework that the analysis in section three will utilise.

Section three utilises a rapid evidence review approach to analyse the available peer reviewed evidence about the experience of Australian nurses working through the COVID-19 pandemic. Of the selected studies a thematic analysis was undertaken informed by the jobs demands - resources model (J D-R model) of burnout to ascertain the COVID-19 conditions that Australian nurses are reporting that may contribute to the progression of burnout. There were four key themes that are contributors or signs of burnout identified among the included literature, these are mental health and wellbeing, safety concerns, workload and resources. Through the analysis, it is apparent that the COVID-19 pandemic has placed addition workplace stressors on nurses, when considering the rates of burnout prior to the pandemic, it is likely COVID-19 will ensure burnout remains a workforce issue for the future of the nursing workforce. Finally, section four concludes with some key considerations mitigate the risk of nurses progressing to burnout as informed by the rapid evidence review.

Ultimately, this report sought to understand the relationship between the COVID-19, the experiences of nurses and the risks of burnout as a key consideration for the future of the nursing workforce. This rapid evidence review has found that the COVID-19 pandemic has placed addition workplace stressors on nurses that are theorised to contribute to the development of burnout. Without action, burnout risks continuing, or increased nursing workforce exit contributing to the projected nursing workforce shortages that jeopardise the delivery of healthcare in Australia and the future of the nursing workforce.

1. Background and context

This section provides context to the role of nurses within the Australian healthcare system and the impact COVID-19 has had on the health system.

Healthcare in Australia

In 2021, Australia ranked the global leader for equity and overall health outcomes and third for healthcare system performance when compared to other high income countries (Schneider et al., 2021). The delivery of such a healthcare system relies on the collaboration between many practitioners to ensure efficient, effective and appropriate care to consumers. The COVID-19 pandemic has highlighted the crucial role of healthcare workers including nurses in the provision of a healthy society. However, the context of the healthcare system in which these practitioners operate in plays an important role in the provision of nursing care and workforce matters.

The Australian healthcare system is complex and interrelated with responsibility, accountability and financing shared between the federal government, state or territory governments, private providers and citizens (Australian Institute of Health and Welfare, 2020a). Crucially, Australia delivers healthcare under a tax payer funded universal health insurance program or 'Medicare', which provides free or subsidised selected healthcare services to Australian and New Zealand citizens, permanent residents and some citizens of counties with reciprocal agreements[1] (Australian Institute of Health and Welfare, 2020a; Department of Health, 2020). Medicare ensures equitable access to healthcare services including medical services, public hospitals and some medicines for consumers (Department of Health, 2020). There are many services provided under Australia's healthcare system, however, they can be divided into three broad categories, primary care, hospital and specialist services and preventative medicine. Nurses deliver care as part of a multidisciplinary team across the healthcare system and place a key role in the patient centred approach of healthcare delivery (The World Health Organization, 2020).

Within the healthcare system, primary care is often a consumers first encounter with the healthcare system and is typically provided through community-based services such as general practice clinics (Australian Institute of Health and Welfare, 2020a). Services delivered through the primary care are most frequently used by the Australian public, in 2018-19, 83.2% of Australians had attended a general practice in the last 12 months (Australian Bureau of Statistics, 2020). Acute care and specialist services are most often provided through hospitals either in the public or private sector, however, can be delivered in the community settings and include services such as emergency departments, surgery, and complex condition management (Australian Institute of Health and Welfare, 2020a). Health promotion and preventative medicine programs are also a key component of the healthcare system which includes services such as immunisation programs or cancer screening services (Australian Institute of Health and Welfare, 2020a).

Despite the strengths of the healthcare system there remains significant policy challenges now and into the future. One key area of concern for the Australian government and healthcare providers is the future of the healthcare workforce including nurses, with the delivery of healthcare services requiring appropriate numbers of appropriately skilled staff now and into the future (Department of Health, 2013).

Nursing in Australia and the healthcare workforce

The workforce required to deliver healthcare in Australia is large, diverse and growing. In 2020, Australia's healthcare workforce consisted of over 642,000 registered healthcare practitioners such as nurses, medical officers and allied health professionals (Department of Health, 2021c). To ensure the delivery of services the healthcare workforce has continued to grow, from 2016 to 2020, there has been a greater than three percent yearly increase in the number of employed healthcare professionals (summarised in figure I) (Department of Health, 2021c). The delivery of healthcare relies on interdisciplinary collaboration between a vast array of clinicians comprised of many professions and additional staff such as volunteers and support staff. In 2018, 55% of all registered practitioners were nurses and midwives thus are the largest workforce division within the healthcare sector (Australian Institute of Health and Welfare, 2020b; Department of Health, 2021c).

As the largest workforce division, nurses are crucial to the delivery of healthcare and are distributed throughout that healthcare system. Of the approximately 450,000 nurses in the workforce, 75% are registered nurses, 16% are enrolled nurses and 6.4% are duel registered nurse midwives (Department of Health, 2021b). Thus, most nurses in the Australian healthcare workforce are university educated and employed in public hospitals, suggesting their role is in the acute setting and engaged in patient facing roles (Australian Institute of Health Welfare, 2016). A large and diverse nursing workforce is essential to meet the demands of an expanding population with increasingly more complexed care needs (Department of Health, 2013).

The workforce planning for the nursing workforce is complex with funding, regulation, training and employment of nurses requires the interrelationship between state and federal governments, universities, regulators and private sector or not-for profit organisations (Australian Institute of Health and Welfare, 2020a; Department of Health, 2021b). The demand for healthcare workers is growing due to the aging population, high rates of chronic disease, increasing consumer expectations and a reliance on short term medical interventions (Department of Health, 2013). Thus, it is expected that the demand for healthcare workers such as nurses will continue to rise into the future to respond to the increasing care needs.

[1] Countries with reciprocal agreements Belgium, Finland, Italy, Malta, Netherlands, Norway, Republic of Ireland, Slovenia, Sweden and United Kingdom (Services Australia, 2020)

The number of professionals employed in the healthcare workforce is influence through serval workforce supply factors. These factors include university graduates, immigration of trained professionals and productivity of the workforce through innovation and care delivery advances (Department of Health, 2013). However, Health Workforce Australia (2014b) , identified the need to focus policies on retaining nurses in the healthcare workforce, as this will yield the greatest effect on increased nursing workforce security and sustainability. Whilst the nursing workforce is complex and dynamic a shared understanding and collaboration to act on the key workforce barriers and facilitators will aid in the delivery of quality services.

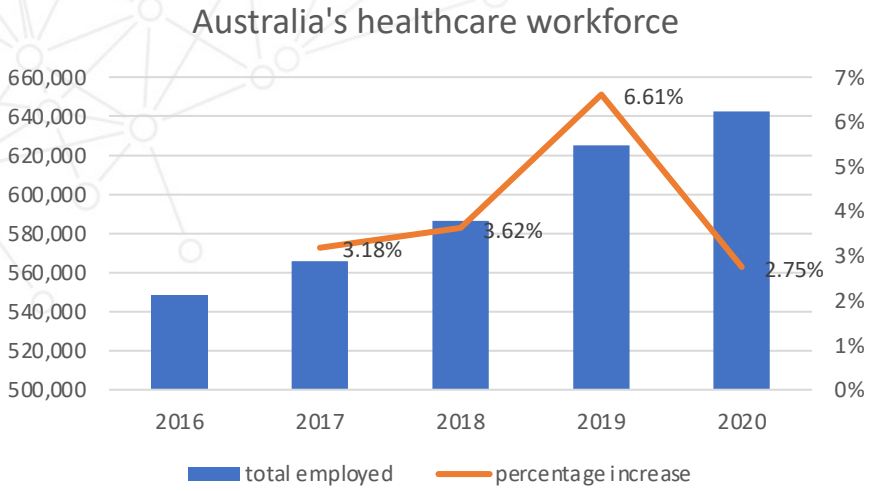

Figure I - Registered healthcare professionals in Australia

COVID-19, healthcare and nurses

In response to the COVID-19 pandemic the federal, state and territory governments imposed a range of restrictions to limit COVID-19 transmission and ensure capacity within the healthcare system. These restrictions included limiting movement, imposing social distancing closing non-essential businesses and implementing personal protective equipment (PPE) requirements such as masks (Storen & Corrigan, 2020). In aged care and healthcare sectors restrictions were placed on visitors, the PPE requirements of workers were increased and there were changes to the number and types of surgeries undertaken (Australian Institute of Health and Welfare, 2021; Department of Health, 2021a). Across Australia, the level of restrictions has varied throughout the pandemic in response to the level of community transmission. Crucially, in their role, nurses have faced rapid changes in both their professional and personal lives in response to the COVID-19 pandemic.

As part of Australia's COVID-19 response nurses have played a crucial role in the provision of key services such as testing and vaccination, increasing the capacity of the health system through training and research (Victorian Department of Health, 2021). Additionally, caring for those ill with COVID-19 in Australia has exposed nurses to the risk of contracting the illness. It is estimated that healthcare workers in Australia are 2.69 times more likely to contract COVID-19 than community members (Quigley et al., 2021). Nurses have face professional and personal changes through restrictions in addition for those on patient facing roles, an increased risk of illness highlighting the additional stressors experienced by nurses through the COVID-19 pandemic.

Despite, the recent focus on nurses in the context of COVID-19 the nursing workforce has and will be an essential part of the Australian healthcare system. Providing care to the community across the life spectrum, nurses facilitate the achievement of quality of life. The role of nurses is most often with direct patient care, planning or part of multidisciplinary healthcare teams in either an autonomous or collaborative capacity (The World Health Organization, 2020). Nurses cooperate with a range of practitioners to deliver services across Australia's healthcare system in community, hospitals, residential care settings and the education sector. Today in Australia, nurses have specialist skills in assessment, communication and complex interventions however, often feel undervalued whilst facing violence and aggression (Jones & Cheek, 2003). The role of a nurse within the diverse and expansive healthcare system is highly varied and expanding to accommodate new models of care, however, central to the delivery of safe and effective care. Working in these conditions does come with physical and psychological risks towards nurses that can result in workforce exit or reduced capacity.

Future nursing workforce

Despite increasing numbers of healthcare professional registered and working within the Australian healthcare, there has been concern regarding the future of the healthcare workforce (Department of Health, 2013). One tool utilised by the Australian Government to inform healthcare workforce policy decisions is national workforce projections through modelling (Crettenden et al., 2014).

Commenced in 2012 and updated in 2014 the Australian Government Department of Health conducted workforce planning and analysis of the supply and demand for doctors, nurses and midwives in Australia initially until 2025 then updated to consider projections to 2030 (Health Workforce Australia, 2012, 2014a, 2014b). Health Workforce Australia utilised a stock flow model which utilises the current workforce, estimated workforce entries and losses to project future workforce numbers (Crettenden et al., 2014). Such estimations can be used by governments to consider policy changes which may result in increased numbers of healthcare professionals in the workforce.

Nursing workforce shortages are a key issue for Australia and the world, with inaction leading to poor health outcomes and inequitable healthcare access. A key factor which may contribute to the increased security of Australia's future nursing workforce is improved retention (Health Workforce Australia, 2012, 2014b).

Nursing turnover and intention to leave the profession among Australian nurses is prevalent within the workforce, with contributing factors such as burnout cited as the reasons for workforce exit (Holland et al., 2018). Identifying and mitigating the reasons for nurses leaving the profession will aid in the safeguarding against the projected workforce shortages. Therefore, with projected nursing workforce shortages action should be taken to reduce turnover and increase nursing capacity. It is crucial that policymakers, nurses and the healthcare sector understand and address the workplace factors that may contribute to the future of the nursing workforce and healthcare in Australia.

2. Burnout

As identified above, burnout contributes to a lack of nurse retention. This section provides a theoretical review of the definition, causes and outcomes of burnout.

Defining burnout

Whilst not unique to the nursing or healthcare workforce, the concept 'burnout' has gained significant interest among researchers seeking to understand the relationship between workers and the workforce. In 2019, The WHO added burnout to the International Classification of Disease highlighting that although not a medical condition it is a term used to define a "work-related stress syndrome" resulting from unsuccessful management of workplace stressors (De Hert, 2020; The World Health Organization, 2019). Despite the recent nature of the WHO classification of burnout, there have been several decades or research in the field seeking to understand when and why burnout happens. The term burnout was first introduced in 1974, following observation of decreased motivation and commitment in mental health workers (Freudenberger, 1974). Freudenberger (1974) identified signs and behaviours of burnout such as motivation loss, exhaustion and fatigue, whilst suggesting those who are "dedicated and committed", in human services industries are most prone to burnout. Highlighting that the role of nurses along with other healthcare workers places them at risk of burnout due to the type of work undertaken and the very nature of their role requiring them to engage extensively with consumers whilst working long and physically demanding hours.

Described as an "occupational phenomena" , burnout results from continued and unrelenting exposure to workplaces stressors without successful management of the stressors (Montgomery et al., 2019; The World Health Organization, 2019). There are three dimensions which contribute the development and experience of burnout for nurses. Emotional exhaustion which is exhibited through a severe lack of energy, depersonalisation experienced through a withdrawal from work or the development of negative feelings and attitudes towards work and reduced professional accomplishment which includes perceptions of work related skill loss (Butera et al., 2021; Maslach & Jackson, 1981; Maslach et al., 2001; The World Health Organization, 2019). Crucially, burnout is experienced when all three dimensions are manifesting together, however, emotional exhaustion is central to the progression of the two other dimensions (Maslach et al., 2001).

When experiencing burnout state the relationship between the three dimensions appears iterative, feeding into each other and prompting further actions to distance from work or increasing the perception of reduced accomplishment, compounded by emotional exhaustion (Maslach et al., 2001). Significantly, burnout is a state that only relates to an individual's work or workplace. However, an individual's work life is not separate from personal life, there can also be conflict between the two, further contributing to burnout (Leineweber et al., 2014). Occupational stress in the Australian nursing workforce occurs in a variety of settings and can be highly variable between nursing specialties, healthcare settings and individuals. Whilst the exact combination of workplace characteristics and personality traits that may contribute to the development of burnout are individualistic, there are some common workplace characteristics that are likely to lead to burnout.

Factors that contribute to burnout

As burnout is considered an 'occupational phenomenon', understanding the relationship between the workplace and individuals is key to the identification of circumstances that may contribute to the development of burnout in nurses. There have been several theories that seek to explain the relationship between workers, workplaces and burnout. Due to the widely utilised Maslach Burnout Inventory (MBI), which measures and assesses an individuals experience of burnout, the multidimensional model of burnout is one of the most prominent theories of the development of burnout (Dall'Ora et al., 2020).

Maslach (1993) multidimensional model considered burnout a result of incompatibility between a person and one or more of six work related circumstances over time. These circumstances incorporate chronic workload burden, insufficient control over resources, inadequate reward (financial, social or intrinsic), lack of positive community connection, inequitable workplace and, misalignment between personal values and job requirements (Dall'Ora et al., 2020; Maslach, 1993). Maslach (1993) multidimensional theory focuses on the components of the workplace that without appropriate coping mechanisms lead an individual to the burnout state. A theoretical review of burnout predictors in nursing found factors such as high workload, low job control, poor renumeration, value misalignment and poor community connection, thus the components hypothesised by Maslach's work are strongly represented in nursing burnout literature (Dall'Ora et al., 2020). It is clear that the presence of certain workplace dimensions contributes to the development of burnout among clinicians. Crucially, the high pressure, patient facing role of many nurses in addition to the workplace exposes them to many of the factors considered predictors of burnout.

However, the six conditions proposed by Maslach do not always align with nurse reported burnout factors. Nurses also cite shift work, complexity of work, patient outcomes and hospital related factors including supervisor support as key contributors to the development of burnout (Dall'Ora et al., 2020). An alternative theory that explores the development of burnout is the job demands-resources (J D-R) model which suggests that burnout is experienced at the point when the workplace demands are greater than the resources available to workers (Demerouti et al., 2001; Holland et al., 2013). The J D-R model proposes burnout develops through a two stage process whereby increasing workplace demands result in exhaustion, which further diminishes the ability of the induvial to meet demands facilitating disengagement (Demerouti et al., 2001).

Much like the multidimensional model of burnout the J D-R model highlights that burnout arises when there is a divergence between the workplace circumstance and the individual, however, the J D-R model views burnout as an iterative process highlighting the progressively overloading experience of burnout (Demerouti et al., 2001). Moreover, the JDR model considers additional factors such as supervisor support, workload and shift work as contributing factors to burnout (Demerouti et al., 2001). Ultimately the J D-R model considers burnout a result of job demands that exceed the resources available to the individual. Resources within the J D-R model included financial or intrinsic rewards, social or workplace support or job control (Demerouti et al., 2001). With demands in the J D-R model focused on the fatiguing elements of providing care such as workload and contact with patients (Demerouti et al., 2001).

The two frameworks propose versions of workplace characteristics that may contribute to the presence of burnout. It is important to consider the workplace factors nurses face that lead to the three dimensions of burnout developing. As identified by Dall'Ora et al. (2020) there are conditions beyond those proposed by the multidimensional model of burnout, for this reason the remainder of the report will consider the factors relating to burnout as identified by the J D-R model . Figure III compares the elements of multidimensional model of burnout with the J D-R model.

J D-R model (Demerouti et al., 2001)		Multidimensional theory of burnout (Maslach, 1993)
Job demands	Time pressure	Excessive workload
	Physical workload	Lack of resource control
	Recipient contact	
	Physical environment	Inadequate rewards
	Shift work	
Job resources	Feedback	Poor workplace community connection
	Rewards	
	Job control	Perceived workplace unfairness
	Participation	
	Job security	Worker workplace value divergence
	Supervisor support	

Figure III- Comparison between two key burnout theories

Outcomes of burnout

Burnout among nurses is a concern in the management of the current nursing workforce and health system in addition to a key consideration for the future nursing workforce. Burnout can contribute to a vast array of negative outcomes for both individuals and the broader healthcare system in which they operate, including patients. Ultimately, when nurses are experiencing burnout the capacity of the nursing workforce at present and into the future is diminished through decreased work outputs, increased risk to patients and higher rates of turnover or absenteeism.

- ***Individual outcomes***

Whilst burnout is characterised by emotional exhaustion, depersonalisation or a distancing from work and reduced positive feelings about their work or workplace (Maslach, 1993; Maslach et al., 2001; The World Health Organization, 2019). However, these dimensions can manifest in a range of signs and symptoms experienced by individuals and their colleagues. People experiencing burnout most often report exhaustion, anxiety, inability to relax, poor self-esteem and poor concentration (Maslach et al., 2001; Tavella et al., 2020). Additionally, burnout has been shown to diminish the general health of nurses with insomnia, anxiety and depression prevalent among clinicians experiencing burnout (Khamisa et al., 2015). Therefore, when experiencing such symptoms, the capacity of the nurses to complete their role is reduced due to the symptoms of burnout and associated psychological distress. Whilst an individual maybe experiencing burnout, it is also likely that their signs and symptoms impact their colleagues, potentially causing tension or further perpetuating the negative dimensions among the workplace culture (Maslach et al., 2001). Thus, individual experiences of burnout contribute to the broader consequence of burnout for the nursing workforce and the personal life of the individual. Nurses that are experiencing burnout and the psychological distress associated reduce the capacity of the workforce thus cannot contribute to their fullest extent.

- ***Broader consequences***
  - ***Adverse patient outcomes and capacity***

Despite an efficient healthcare system, there remains instances of Australian healthcare consumers experiencing inappropriate care, adverse events or near miss incidents whilst receiving healthcare (Australian Commission on Quality Safety in Healthcare, 2019). There are many factors that contribute to suboptimal patient experiences, however, as healthcare is delivered by people, human error remains a central contributor. The risk of poor outcomes such as medical errors and decreased patient safety greatly increases when burnout is prevalent within the healthcare workforce. When considering medication administration errors, nurses report burnout as a significant contributing factor to the cause of these errors (Montgomery et al., 2021). Thus, when nurses are experiencing burnout, they are at increased risk of errors which may have poor outcomes for the consumer and reputational, legal or financial negative outcomes for the nurse. Not only is the safety of patients at risk when receiving care from burnt-out clinicians, the capacity of the nurse to deliver care is significantly diminished. Nurses experiencing burnout, nurses are more likely to disregard elements of their work and neglect to deliver appropriate or complete care (Basar & Basim, 2016). Therefore, burnout is associated with reduce capacity of the

nursing workforce due to the increased risk of errors and missed care thus the delivery of suboptimal healthcare.

- ***Turnover and absenteeism***

Crucial to the future of the nursing workforce is the number of nurses available to work and the extent to which nurses stay in the workforce. Concerningly, 25- 35% of Australian nurses have reported intentions to leave the profession (Holland et al., 2018). This is larger than the 18% average workforce turnover rate in Australia (Australian HR Institute, 2018). Highlighting there are nursing specific contributing factors to workforce exit. One factor that contributes to a nurses intention to leave the workforce is burnout (Chan et al., 2013; Leiter & Maslach, 2009). Burnout strongly predicts the intention of nurses to leave their employment (Leiter & Maslach, 2009). Resulting from a decreased feeling of accomplishment at work, increased exhaustion or cynicism leading to a lack of perceived reward for working thus, exit the workforce (Kelly et al., 2021). A recent study with over 50,000 nurses in the united states has found that of the nurses that had left their roles, 31.5% cited burnout as the reason for leaving (Shah et al., 2021). Additionally, nurses that are experiencing burnout utilise sick leave and have more absence days from work than those not experiencing burnout (Dall'Ora et al., 2020). Therefore, the workforce exit and reduced workforce capacity from absenteeism from burnout are a risk to the Australian nursing workforce particularly in the context of the projected workforce shortages outlined in section 1.4.

Burnout among nurses prior to COVID-19

As evidenced by the large body of literature documenting burnout, it is not a new phenomenon. Research prior to the COVID-19 pandemic highlighted that burnout was having a broad effect on the nursing profession in Australia. In 2016, when surveyed, Australian nurses reported often their workload was often very hard to complete and has intensified since the previous survey three years prior (Holland et al., 2018). Highlighting that factors that contribute to burnout were increasing prior to the covid Reporting that the workload pressures increased workplace stress among nurses (Holland et al., 2018). Moreover a survey in 2007 revealed nurses reported moderate levels of burnout, with the strongest workplace stressors including workload and role conflict had the strongest link with burnout (Spooner-Lane & Patton, 2007). Suggesting factors fundamental to the nursing role have the most impact on the likelihood of burnout particularly workload. Moreover, finding that nurses employed in full time positions are more likely to experience burnout due to repeated exposure to workplace stressors (Spooner-Lane & Patton, 2007).

The experience of nurses prior to the COVID-19 pandemic is supported by J D-R model of burnout with workplace factors such as workload and role conflict contributing to burnout (Demerouti et al., 2001). The literature suggests Australian nurses have been experiencing moderate levels of burnout prior to COVID-19. Understanding the implications of the COVID-19 pandemic on the nursing workforce rests on the additional cited stressors in the context of the pandemic, as the role of a nurse has not fundamentally changed. Thus it is likely that nurses will be experiencing additional workplace stressors on top of the previously identified stressors.

3. Nursing and COVID-19

This section draws on the limited, however, rapidly increasing number of papers examining the experiences of nurses working in the COVID-19 in Australia. The following sections outline the key themes identified in the early pandemic literature that explain the workplace stressors experienced by nurses working through the covid-19 pandemic.

Methodology

The aim of this review is to explore the questions: Are Australian nurses working in the COVID-19 reporting conditions that may contribute to burnout? If so, what are those conditions? These questions are important to understand for the future of the nursing workforce as highlighted in the previous section 2.3, burnout contributes to workforce exit of nurses and decreased workforce capacity. Thus, understanding the new challenges posed by the COVID-19 pandemic can aid in the formulation of solutions.

A rapid evidence review enables the synthesis of secondary data in a timely way that can be used by policy makers to build knowledge an inform decisions (Temple University, 2021). To conduct the rapid evidence review an incremental literature scan was undertaken from September to October 2021 of google scholar, Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Pubmed to consider peer reviewed literature. Key search terms including "nurse or nurses or nursing" AND "COVID-19" AND "experiences or perceptions or attitudes or views", OR "burnout" were utilised. A snowball technique was also applied searching the reference list of articles to include additional studies. This yielded 156 results. Results were then included if reporting on Australian clinicians, including nurses. The dates of publication were restricted to 2020-current to ensure only COVID-19 conditions were captured. The studies were then scanned by title and abstract to include data about experiences, feelings, workplace and conditions during the COVID-19 pandemic whilst ensuring that the clinicians included were nurses in Australia. This reduced the included papers to nine. The included literature is summarised in Appendix A.

To analyse the included literature the findings were thematically scanned to consider the workplace conditions that contribute to burnout as informed by the J D-R mode of burnout (introduced in section 2.2). Following analysis four key themes that include possible contributors to burnout were identified including mental health and wellbeing, safety concerns, workloads and resources.

- ***Wellbeing and mental health***

As highlighted in the previous section, burnout is associated with several negative mental and wellbeing symptoms and results from unmanaged chronic workplace stressors. Throughout the COVID-19 pandemic, Australian healthcare workers, including nurses have reported increased rates of psychological distress with high levels of an anxiety, depression and stress (Holton et al., 2020; Northwood et al., 2021). Additionally, when measuring burnout healthcare workers reported high levels of personal and workplace burnout (Northwood et al., 2021). Compared to pre-pandemic findings indicating nurses working in Australian hospitals through the COVID-19 pandemic reported higher rates of anxiety and depression than their medical or allied health counterparts and the general public in Australia (Holton et al., 2020). These studies have highlighted that nurses in particular are under increased workplace stress which has resulted in increased levels of burnout and associated symptoms. Severe anxiety was correlated with providing care to COVID-19 positive patients compared to nurses who had not provided care to COVID-19 positive people (Holton et al., 2020). Demonstrating the effect working through the COVID-19 pandemic is having on the nursing workforce.

Moreover, Williams et al. (2021) , found nurses were expressing feelings of anxiety, overwhelmed by work and vulnerable exhibiting symptoms of burnout such as sleep disturbances. Therefore, it is apparent that nurses are reporting negative mental health and wellbeing outcomes in addition to burnout as a result of providing care in the COVID-19 pandemic. Crucially, nurses identified protective factors such as social interactions were diminished when COVID-19 restrictions were in place further compacting the negative experiences and impact of COVID-19 on nurses (Northwood et al., 2021).

Nurses are reporting some of the signs and symptoms such as sleeplessness, felling overwhelmed and anxiety which are associated with the burnout literature (Maslach et al., 2001; Tavella et al., 2020). Moreover, the experiences, symptoms and reported burnout of nurses working in the COVID-19 pandemic in Australia indicate the pandemic has had a negative impact on the workplace culture. The perception that the workplace is associated with negative experiences such as anxiety diminishes the perceived rewards of attending work thus elicit burnout as suggested by the J D-R model (Demerouti et al., 2001). Additionally, the reported psychological distress and burnout scores reported by Northwood et al. (2021) indicates that nurses are already experiencing burnout associated with the pandemic.

The negative effect of working through the COVID-19 pandemic on nurses burnout is supported by the international literature. A systematic review of international experiences found international nurses working in the COVID-19 pandemic were experiencing high rates of burnout (Galanis et al., 2021). The social restrictions placed on some nurses has diminished the coping mechanisms of nurses to manage the workplace stressors further compounding the negative perceptions of the workplace. The J D-R model highlights that social support facilitates the psychological ability of an individual to manage workplace stressors (Demerouti et al., 2001). The experience of lack of social support increasing burnout is also supported by international COVID-19 literature which found nurses that had decreased social support had increased rates of burnout (Galanis et al., 2021). Therefore, the experience of working through the

COVID-19 pandemic having a negative effect on the wellbeing and level of burnout among clinicians.

- ***Safety concerns***

Working within the healthcare sector throughout the COVID-19 pandemic nurses expressed concerned and anxiety at the risk of contracting COVID-19. Several surveys have found nurses are concerned and stressed regarding the potential transmission of COVID-19 to their friends and family following contacting the illness at their workplace (Ashley et al., 2021; Halcomb et al., 2020; Krzyzaniak et al., 2021; Lord et al., 2021). For some nurses, the potential to contract COVID-19 themselves or transmit the virus to loved ones caused workplace anxiety (Ashley et al., 2021). This was of particular concern to nurses that have caregiving roles outside of the workplace (Halcomb et al., 2020). As the nursing workforce is majority female, it is prevalent that nurses are providing care to children or family outside of work. Moreover, nurses reported their colleagues were less understanding of their caregiving roles outside of work which contributed to their stress (Williams et al., 2021). This highlights the home and workplace friction that nurses experience which can erode the resources available to nurses to manage workplace stressors leading to burnout. Nurses also reported concern that they would inadvertently infect a consumer with COVID-19, this was predominantly found in the aged care sector (Krzyzaniak et al., 2021). Conversely, some nurses reported feeling that PPE prohibited them from delivering quality care to their consumers (Smallwood et al., 2021). When considering the J D-R model, the perceived reward of going to work is diminished by the concern that the workplace may increase the risk of COVID-19, thus, this circumstance my contribute to the development of burnout (Demerouti et al., 2001).

Sadly, violence and aggression towards healthcare workers such as nurses is not COVID-19 related and is a well-documented occupational risk. However, nurses have reported throughout the pandemic they have been subjected to verbal and physical abuse relating to enforcing government mandated visitor restrictions or perceptions that nurses are spreading COVID-19 (Ashley et al., 2021; Krzyzaniak et al., 2021). Nurses have also been purposely spat of coughed on by healthcare recipients (Ashley et al., 2021). It is challenging to gather accurate data on the rates of violence and aggression experienced by nurses as some see it as "part of the job", however, the experience of violence and aggression before the COVID-19 pandemic was a commonly reported occurrence (Pich et al., 2017).

Violence and aggression can contribute to the development of burnout through the conflict between workers and several of the domains proposed by the J D-R model of burnout including workplace rewards and recipient contact (Demerouti et al., 2001). Suggesting that when faced with violence and aggression in the workplace, there is a misalignment between the reward of working and the expectation of attending work, thus the nurse is likely to experience one or more of the burnout dimensions emotional exhaustion, cynicism or reduced professional accomplishment through continued emotional effort (Viotti et al., 2015). As the demands of attending work are misaligned with the perceived rewards and exhaustion arises burnout is more likely (Demerouti et al., 2001). Similarly, for risk of COVID-19 infection, nurses may perceive the workplace benefit as reduced due to the increased risk of exposure and the additional stressors this place on those with caring responsibilities outside of the workplace. Thus, the risk posed by contracting and transmitting covid-19 is a workplace stressor that may contribute to burnout that is unique to the covid-19 pandemic. Internationally, fear and concern regarding that safety of working through the COVID-19 pandemic has been associated with higher levels and rates of burnout (Galanis et al., 2021). Thus the experience of Australian nurses expressing concern for safety when working through the COVID-19 pandemic is likely to contribute to burnout through the erosion of workplace reward through the perception of increased risk and the sustain emotional effort required to manage violent or aggressive behaviours.

- ***Workload***

As identified by the J D-R model workload is one of the workplace conditions that can contribute to the progression of nurses to burnout and has a strong link to emotional exhaustion cynicism and depersonalisation (Demerouti et al., 2001). Working through the COVID-19 pandemic, nurse have reported increases to their workload through a variety of additional tasks and changes to the available workforce. Increases to workloads were reported particularly impacted by the sick leave and isolation requirements of colleagues as a result of the COVID-19 pandemic (Krzyzaniak et al., 2021; Northwood et al., 2021). This left nurses having to work extended hours or concerned shifts would go unfilled. Additionally, nurses reported increases in workload due to the requirement to monitor government restrictions about visitors, PPE and other COVID-19 related changes (Krzyzaniak et al., 2021). Crucially, in many parts of the healthcare system, the patient workload has not decreased therefore, these additional tasks are further contributing to the established workload of nursing. However, nurses working in community settings such as general practice clinics reported a decrease in hours, likely resulting from an increase in telehealth appointments and decrease in patient physical presentations to community settings (Halcomb et al., 2020). Highlighting the complex and dynamic nature of the nursing workforce.

Workload whilst a previously identified stressor in the pre-pandemic literature (Holland et al., 2018), the COVID-19 has place additional demands on most nurses such as understanding government restrictions. These demands have the potential to contribute to the progression of burnout and further exhaust nurses. The J D-R model suggest workload is a job demand, without the resources such as time, support or psychological stamina to meet the demand burnt arises (Demerouti et al., 2001). Increasing or unachievable workload has the strongest link with emotional exhaustion which intern feeds into the development of the other burnout characteristics (Dall'Ora et al., 2020).

Therefore, the addition of additional tasks to the workload of nurses poses an increased risks of burnout developing.

- ***Resources***

The resources required to deliver safe and efficient care to the public throughout the COVID-19 pandemic have at times caused additional workplaces stressors for Australian nurses. The J D-R model proposes that job resources are required to protect workers health and complete their job and reduce the associated physical or psychological costs (Demerouti et al., 2001). Throughout the COVID-19 pandemic Australian nurses have reported circumstance where there have been insufficient resources that would protect them from the physical and mental negative outcomes of COVID-19, such as infection and exhaustion.

Several papers found nurses reported a lack of available PPE, particularly in the early phase of the pandemic which caused concern and anxiety (Halcomb et al., 2020; Krzyzaniak et al., 2021; Lord et al., 2021). Crucially, the lack of PPE is cited as also contributed to the safety concerns reported by nurses (Halcomb et al., 2020; Krzyzaniak et al., 2021). As without appropriate PPE nurses are at increased risk of contracting COVID-19. An additional resource that has been affected throughout the pandemic was available staff, particularly staff that can cover sick or isolation leave. Nurses reported concern that if they were required to isolate their colleagues would be "let down" and the quality of care delivered would be negatively impacted (Smallwood et al., 2021) . Unlike other industries, nursing shifts are required to be backfilled every day, with high numbers of COVID-19 exposures and illness among healthcare workers additional sick leave has diminished the available nursing resources to deliver safe an effective care.

There is a strong and establish link between low staffing levels and burnout among nurses, with the requirement to complete extra shifts or work with less nurses leading to exhaustion and burnout (Dall'Ora et al., 2020). The resources both physical and human to deliver care is essential and limits the progression of burnout, throughout the pandemic nurses have faced conditions that have limited the availability of job resources thus are at increased risk of the development of burnout.

Limitations

There are several limitations to this paper that must be considered. Firstly, the nature of a rapid evidence review limits the breadth and analysis of the material, this is in no way intended as an exhaustive list. A rapid evidence review seeks to capture a 'snapshot' of available evidence form a brief period (Temple University, 2021). Thus a further systematic review would yield a much deeper analysis. Secondly, the rapidly evolving nature of the COVID-19 pandemic and the initial low rates of infection in Australia may mean that much of Australia's 'third wave' will not have been studied at the time of this report's authoring. Similarly, the availability of evidence is limited due to the short time period since the beginning of the pandemic, further research is needed to understand the implications of covid on the nursing workforce. However, due to the large workload the sector is currently managing in the context of Australia's 'third wave' it maybe sometimes before researchers can engage with clinicians comprehensively. Additionally, this is in no way intended as an extensive review, it is likely that since the conclusion of the literature search more evidence has come to light, as with all research, this paper is a working document, intended to begin the conversation that COVID-19 has impacted the lives of all Australians including nurses adding to the workplace stressors and contributing to burnout.

4. Addressing nursing burnout: COVID-19 considerations

Burnout is as occupational risk of undertaking healthcare roles such as nursing, however, the experience if COVID-19 has amplified this already prevalent phenomenon. As evidenced by the rapid evidence review above, there are significant negative consequences for individuals and the broader future of the nursing workforce if burnout is prevalent among clinicians. The following section outlines some key considerations that may aid in the reduction of counterbalancing of workplace stressors that lead to nurse burnout identified by the COVID-19 literature reviewed above. Whilst addressing burnout may aid in the retention of nurses developing and maintaining workforce, however, addressing burnout is ultimately targeted at delivering access to and quality healthcare to the Australian population through assurance of capacity in the nursing workforce throughout COVID-19 and beyond.

Wellbeing and mental health

Interventions that target general health and wellbeing protect against the development of burnout and add to the resources available to nurses to manage the workplace stressors (Awa et al., 2010). Thus, nurses should be encouraged to partake in wellbeing, health and mental health programs. This can include fitness programs, employee assistance programs such as counselling and access to health clinics (Awa et al., 2010). Participating in wellbeing interventions decreases the rate and severity of burnout, with employer or service provider lead initiatives resulting in the longest lasting effectiveness (Awa et al., 2010). Therefore, provides nurses with positive personal resources facilitates the ability to cope with the demands of nursing decreasing the likelihood of burnout. Employers and policymakers should consider the availability of such services to protect nurses from developing burnout and ensure access through cost subsidy or reduction.

Resilience is a key protective factor against the development of burnout, enabling nurses to cope more effectively with the workplace stressors (Edward & Hercelinskyj, 2007). Thus supporting nurses to develop resilience behaviours through supervision reflective practices and professional development will facilitate the protection against burnout (Edward & Hercelinskyj, 2007). Enabling nurses to respond and cope with the stressors of providing care through the COVID-19 pandemic and beyond requires governments, health service managers and nurses themselves to consider burnout protective factors and facilitate the development of skills and a status that will enable coping with the workplace stressors.

Safety

The rapid evidence review highlighted two key safety concerns of nurses that have the potential to lead to burnout. Physical safety concerns resulting from patient or family aggression and safety concerns regarding the contraction of COVID-19. Employers of nurses and healthcare policymakers should ensure all nurses face a minimal risk to violence and aggression in the workplace. Practices such as risk assessments of consumers or family and predictive actioning, increased education and specialised aggression management teams reduce the incidence and severity of violence episodes (Morphet et al., 2018). Universal implementation of such interventions will ensure nurses working across the diverse healthcare sector will face less violence and aggression which will limit the levels of burnout resulting from exposure to aggression.

The provision of PPE among healthcare workers will limit the risk of contracting COVID-19 whilst working. However, there are further strategies that healthcare service providers and governments can implement to further reduce the anxiety of contracting COVID-19. PPE education and increase the confidence of utilising the PPE and ensure nurses have accurate understanding of the effectiveness of the equipment (Key et al., 2020). In a recent survey, 59% of Australian clinicians reported that they would benefit from additional PPE training (Ramanan et al., 2020). Therefore, increase workplace

education may facilitate the reduction of key burnout contributing factors. However, as identified by the rapid evidence review at times nurses do not have access to PPE. Thus it is also suggested that health services implement anonymous reporting PPE concerns including poor supply to highlight issues among health service leaders that may otherwise go unreported (Key et al., 2020). This will reduce the fear associated with reporting and enable the opportunity for service providers to address the concerns of nursing before the burnout state develops.

Workload

Workload is identified as a key contributor of burnout, however, has been identified as a contributor to burnout prior and during the COVID-19 pandemic. Crucially, health service providers and leaders should ensure the division of care is prioritised and the workload of nurses is minimised through the assistance of other resources such as students and unregulated healthcare workers. Assistants in nursing are utilised to complete tasks not requiring the technical skill or assessment expertise of registered nurses (Australian College of Nursing, 2019; Blay & Roche, 2020). Changing the skill mix of care minimising the patient contact role of registered nurses and increasing the oversight role thus re-distributing the workload among more healthcare workers.

However, increasing the numbers of unregulated healthcare workers such as assistants in nursing under the supervision of registered nurses does come with risks to patients (Twigg et al., 2016). Thus it is recommended that governments review the use of unregulated healthcare workers such as assistants in nursing and move to regulate the industry (Australian College of Nursing, 2019). Enabling a broader implementation of healthcare assistants in a regulated manor with a universal scope of practice to ensure quality care (Australian College of Nursing, 2019). Increasing the ability of the nursing workforce by re-directing the focus of the role and utilise assistants in nursing to meet the increasing workload.

Resources

When considering access to resources required to deliver care through the COVID-19 pandemic it is important to consider the role of nurses as a resource and the equipment such as PPE required to deliver care. It is essential that healthcare leaders assess and provided appropriate numbers and skilled nurses to deliver care through a pandemic which requires planning (Fernandez et al., 2020). However, the identification of the lack of resources requires decisionmakers such as health service leaders and policymakers to be available and receptive to feedback from nurses (Rosa et al., 2020). Ensuring nurses have appropriate advocacy and feedback mechanisms will enable the raising of concerns of inappropriate resourcing facilitates the opportunity for healthcare leaders to address to concerns of nurses before burnout arises.

Conclusion

The nursing workforce is a large and essential component of the healthcare workforce in Australia. The COVID-19 experience for nurses is unique, as they face changes, restrictions and disruptions in their work and personal lives all of which can contribute to burnout. The future of the nursing workforce is strongly influenced by retention of nurses, however, there is a strong link between burnout and workforce exit. For this reason, burnout, particularly in the context of COVID-19 is a crucial issue facing the future of the nursing workforce.

The impact of COVID-19 pandemic on the nursing workforce is complex and dynamic, however, the additional workplace stressors are having a phycological impact on the nursing workforce and may increase burnout. Comparing the emerging COVID-19 literature, to literature before the pandemic there is evidence that there has been additions to the types of workplace stressors reported by nurses. The rapid evidence review of the literature identified four key themes of stressors placed on nurses through the COVID-19 pandemic wellbeing impacts, safety concerns, workload and resources. Therefore, the COVID-19 pandemic has placed additional burnout contributing conditions on nurses amplifying the workplace stressors that may contribute to the development of burnout.

The experience of burnout through the COVID-19 is resulting from the addition of further stressors to the already overwhelmed nursing and healthcare sector. Managing workplace stressors is the role of healthcare leaders, service providers and governments and nurses themselves. To address some of the workplace stressors identified policy makers, healthcare employers and leaders must consider reform including but not limited to:

- Ensuring accessibility and availability of wellbeing and health interventions
- Utilising health service resources to build resilience of nurses
- Implementing evidence informed violence and aggression mitigation interventions
- Increasing supply of and use confidence of PPE
- Reviewing and implementing the use of assistants in nursing without increasing the risks to consumers through regulation
- Facilitating the feedback mechanisms to ensure resources concerns are made know to health service leaders
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Appendix A

Rapid evidence review included literature

Article	Type of study	Summary
The Experiences of Primary Healthcare Nurses During the COVID-19 Pandemic in Australia (Halcomb et al., 2020)	Nurses employed in primary healthcare participated in a cross-sectional online survey (637 responses received)	Nurses considered resignation over concern to personal safety regarding the transmission of COVID-19 between them and their family through workplace exposure Nurses are concerned about transmitting COVID-19 to family, particularly those with care giving roles at home (such as children or elderly parents) Insufficient amounts and types of PPE were reported which inhibited the ability to participate in work Nurses expressed concern over contracting COVID-19 and the risks to themselves putting their health at risk Over half of the nurses reported having caring roles outside of work such as child raising or caring for elderly relatives
Psychological well-being of Australian hospital clinical staff during the COVID-19 pandemic (Holton et al., 2020)	Cross-sectional survey with 668 respondents (all health professionals, 391 nursing and midwifery respondents)	Nurses and midwifes reported higher rates of anxiety depression and stress than the baseline Australian population and medical or allied health clinicians. Nurse respondents reported mild stress levels which was associated with providing direct care for COVID-19 positive patients, having caring responsibilities at home and poor health. Higher anxiety scores were associated with caring for COVID-19 positive patients
Effective communication is key to intensive care nurses' willingness to provide nursing care amidst the COVID-19 pandemic (Lord et al., 2021)	Self-administered questionnaire with ICU nurses (83 participants)	90% of surveyed nurses expressed concern for contracting COVID-19 in their workplace and the risk of transmitting COVID-19 to others such as family members Lack of availability of PPE in the workplace is a concern for nurses
Nursing in the time of COVID-19: exploring nurse preparedness early in a global pandemic. (Williams et al., 2021)	Survey with 214 nurses	Nurses reported their family was understanding of their clinical work and the demands of their job, unlike their colleagues who failed to understand their caring responsibilities outside of their workplace. When considering the COVID-19 pandemic the nurses reported feelings such as anxiousness followed by, overwhelmed, vulnerable, frightened, angry and exhausted. Nurses also reported difficulty sleeping or unable to stay asleep. Some nurses reported feeling engaged and interested or positively challenged by the COVID-19 pandemic.
An assessment of psychological distress and professional burnout in mental health professionals in Australia during the COVID-19 pandemic (Northwood et al., 2021)	Cross-sectional survey of mental health professionals (48 were nurses)	Working through the COVID-19 pandemic has resulting in negative workplace culture citing increased workload, inability to backfill vacant shifts and very low workplace morale. Negative impact on social protective factors such as social life through restrictions has increased the negative experiences. Moderate to high levels of burnout among respondents

High levels of psychosocial distress among Australian frontline healthcare workers during the COVID-19 pandemic: a cross-sectional survey (Smallwood et al., 2021)	**Survey of self-identified frontline healthcare (7846 participants 39.4% were nurses)**	**Nurses expressed concerned that patients were not receiving care due to lack of resourcing** **Visitor restrictions preventing family from being at the bedside of consumers went against their values** **Participants felt concerned that their co-workers would be let down if they needed to isolate and could not attend a shift** **Some expressed concern PPE prohibited them from delivering good healthcare** **Inability to see and engage with to family, friend and workplace relationships that negatively affected mental health**
Burnout and psychological distress amongst Australian healthcare workers during the COVID-19 pandemic (Dobson et al., 2021)	A cross sectional survey of staff at an Australian metropolitan hospital (84 respondents were nurses)	Nurses reported mild to severe anxiety, depression and post traumatic stress disorder related to working through the COVID-19 pandemic The COVID-19 pandemic is creating psychological distress among healthcare workers When assessed for burnout they were already experiencing the state
The psychological well-being of primary healthcare nurses during COVID-19: A qualitative study (Ashley et al., 2021)	Semi- structured interviews of 25 nurses	Verbal and physical abuse experiences from the general public in relation to perceptions that nurses were spreading COVID-19.Respondents reported being deliberately coughed or spat on by patients or family members Lack of inclusion in workplace decision-making left nurses feeling de-valued Potential workplace exposure to COVID-19 created anxiety regarding the potential transmission of COVID-19 to family or friends
Impact of the COVID-19 pandemic on the Australian residential aged care facility (RACF) workforce (Krzyzaniak et al., 2021)	Surveyed of clinical and non-clinical staff at aged care facilities (375 respondents, 44% were nurses, 4% were assistants in nursing and 46% included administration staff which may include nurses in non-clinical roles)	High levels of workplace stress with inadequate PPE cited as a cause of additional stress increasing the risk of exposing themselves and others to COVID transmission including family or a consumer Staff reported difficulty isolating residents appropriately with not enough room or staff to monitor people appropriately, increasing workload. Visitor restrictions left the workers experiencing abuse or complains from family members Respondents reported suffering burnout, anxiety, insomnia and depression. Respondents reported a very high workload. Increased workload was influenced by reading and communicating government restrictions and the increased care needs of consumers High workload was contributing to exhaustion Throughout this time residents have required additional support, which added to the workload of staff