Collegian xxx (xxxx) xxx

Contents lists available at ScienceDirect

Collegian

journal homepage: www.elsevier.com/locate/colegn

Australian nurses' and midwives' perceptions of their workplace environment during the COVID-19 pandemic

Nicola Whiteing[a,*], Deb Massey[a], Rae Rafferty[b], Olivia Penman[a], Christina Samios[a,c], Karen Bowen[b], Alexandre Stephens[b], Christina Aggar[a,b]

[a] Southern Cross University, Faculty of Health, Southern Cross Drive, Bilinga, 4225, Australia
[b] Northern New South Wales Local Health District, 89 Tamar St, Ballina, 2478, Australia
[c] Australian College of Applied Psychology, 255 Elizabeth Street, Sydney, 2000, Australia

ARTICLE INFO

Article history:
Received 21 September 2021
Revised 24 March 2022
Accepted 20 June 2022
Available online xxx

Keywords:
COVID-19
Workplace
Qualitative research
Midwives
Nurses

ABSTRACT

Background: Working as a front-line worker during a pandemic is a unique situation that requires a supportive work environment. An informed understanding of nurses' and midwives' workplace experiences during a pandemic, such as COVID-19, may enable better preparation and targeted support for future pandemics at an individual, organisational, and policy level.
Aim: The aim of this study was to explore nurses' and midwives' workplace experiences during the COVID-19 pandemic response.
Methods: A cross-sectional online survey consisting of open-ended questions was conducted with a convenience sample of nurses and midwives (n = 1003) working in New South Wales Health hospital settings, in Australia. Open-ended questions were analysed using content analysis.
Results: Five themes were identified; *'organisational communication', 'workplace support', 'availability of personal protective equipment', 'flexible working'*, and *'new ways of working'*. Nurses' and midwives' workplace experiences during COVID-19 were influenced by leaders who were perceived to be adaptive, authentic, responsive, transparent, and visible. While many expressed a number of workplace challenges, including access to personal protective equipment, there was opportunity to explore, develop, and evaluate new and alternate models of care and working arrangements.
Conclusion: It is important that nurses and midwives are supported and well prepared to cope during pandemics in the workplace. Organisational leadership and timely dissemination of transparent pandemic plans may support nurses' adaptive workplace experiences.

Summary of relevance

Problem

COVID-19 has resulted in unexpected workplace challenges for nurses and midwives. New protocols and work practices, changing information and guidelines, redeployment, and increased workloads have impacted nurses' and midwives' mental health. There is a paucity of research exploring the workplace experiences of nurses and midwives working in the acute care sector during COVID-19 in Australia.

What is already known

A number of recent systematic reviews and meta-analyses globally have reported nurses' poor mental health, burnout, and sleep disturbance due to workplace stress and stigmatisation. It is important that nurses and midwives are supported and well prepared to cope during pandemics particularly in relation to the provision of patient care and care for themselves.

What this paper adds

While workplace challenges such as availability of PPE and visible leadership were evident, this research has also shown that nurses and midwives had the opportunity to explore different models of care and working arrangements. Organisational leadership and timely dissemination of transparent

* Corresponding author.
E-mail address: nicola.whiteing@scu.edu.au (N. Whiteing).

https://doi.org/10.1016/j.colegn.2022.06.007
1322-7696/

pandemic plans may support nurses' and midwives' adaptive experiences.

1. Introduction

Globally, COVID-19 has resulted in unexpected workplace challenges for nurses and midwives. New protocols and work practices, changing information and guidelines, redeployment and increased workloads have impacted nurses' and midwives' mental health (Davis, Cher, Friese, & Bynum, 2021; Vizheh et al., 2020). Nurses' status of 'essential worker' and their strong sense of responsibility is weighed by their professional and personal concerns during a pandemic (Yin & Zeng, 2020). A strong sense of conflict between duty of care and professional obligations to report to work (Khodaveisi et al., 2021; Kleemola, Leino-Kilpi, & Numminen, 2020), and concern for one's own safety and that of their family and loved ones, is also evidenced (Joo & Liu, 2021).

Factors that have influenced nurses' and midwives' willingness to attend work during disasters include disaster preparedness and education (Said & Chiang, 2020), adequate PPE supply, self-care plans, and a plan of care for family members (Hofmeyer & Taylor, 2021; Salari et al., 2020). Organisational leadership is particularly essential to work environments and pandemic impact, especially in times of crisis and significant change (Raso, Fitzpatrick, Masick, Giordano-Mulligan, & Sweeney, 2021) which will ultimately influence organisational culture (Spicer, 2020). Working as a front-line worker during a pandemic is a unique situation that requires a supportive work environment, including good team work, sharing of information and social cohesion (Goldfarb et al., 2021).

Nurses and midwives comprise the largest workforce within healthcare systems, and as such they are crucial to the system's ability to respond in a disaster (Australian Institute of Health and Welfare [AIHW], 2020). Research reports estimate between 30% and 80% of nurses do not wish to attend work during disasters, further highlighting the need to understand nurses' and midwives' workplace experiences during a pandemic event (Labrague et al., 2018). While the majority of the COVID-19 nursing and midwifery research has been carried out overseas the limited nursing and midwifery research conducted in Australia is consistent with the international findings (Fernandez, Lord, Moxham, Middleton, & Halcomb, 2021; Halcomb et al., 2020; Hammond et al., 2021; Homer, Davies-Tuck, Dahlen, & Scarf, 2021; Ion et al., 2021; Middleton et al., 2021; Rasmussen et al., 2022; Wynter et al., 2021). Nurses and midwives have reported poor mental health (Al Maqbali, Al Sinani, & Al-Lenjawi, 2021; Jarden et al., 2021; Middleton et al., 2021; Varghese et al., 2021), burnout (Galanis, Vraka, Fragkou, Bilali, & Kaitelidou, 2021), and sleep disturbance (Al Maqbali et al., 2021) due to workplace stress and stigmatisation during COVID-19 (Schubert et al., 2021). It is important that nurses are supported and well prepared to cope during pandemics particularly in relation to the provision of patient care and care for themselves (Salari et al., 2020).

This paper reports the qualitative evaluation of a larger study which aimed to evaluate the impact of the COVID-19 pandemic related stress experienced by Australian nurses and midwives employed in New South Wales (NSW) Health hospital settings across the state (Aggar et al., 2022). An exploration of nurses' and midwives' workplace experiences during the COVID-19 pandemic response was explored using open ended questions. Having a more informed understanding of nurses' and midwives' workplace experiences across a variety of departments and roles, may enable better preparation and targeted support for future pandemics at an individual, organisational and policy level.

At the time of writing this paper, there have been 29,886 COVID-19 infections in Australia, 29,649 have recovered and 910 people have died from the disease (Department of Health, 2021). It is estimated that approximately 3%–35% of COVID-19 infections worldwide will be healthcare workers (World Health Organisation [WHO], 2020a). In Australia, 6% of infections have been reported among healthcare workers (Quigley, Stone, Nguyen, Chughtai, & MacIntyre, 2021). While the number of global COVID-19-related deaths among healthcare workers has not yet been quantified, it is expected to be high, with nurses representing the majority of COVID-19-related deaths (Chiarella & Stewart, 2020).

The aim of this study was to explore the workplace experiences of hospital employed nurses and midwives during the COVID-19 pandemic response.

1.1. Research questions

1 *What do Registered Nurses and Midwives perceive to be the workplace challenges and opportunities during the COVID-19 pandemic?*
2 *Do Registered Nurses and Midwives perceive that their workplace has benefited in any way as a result of the COVID-19 pandemic?*

2. Methods

A cross-sectional online survey was used with a convenience sample of nurses and midwives working in NSW Health hospital settings (including hospitals in correctional facilities), in Australia. Information about the study was presented at a NSW Health meeting for executive nursing and midwifery leaders, those indicating an interest in the study were provided with a link to the online survey for distribution in their respective hospital settings. Investigators also utilised their extended nursing and midwifery contacts across NSW Health to invite nurses to complete the survey, and snowball sampling further supported recruitment. Figures provided by the Nursing and Midwifery Board of Australia indicated that there were approximately 120,000 practising nurses and midwives across NSW in 2020 (Nursing & Midwifery Board of Australia NMBA, 2020). This figure, however, includes those nurses working in both in-patient and community settings of which the latter were not eligible for this study. The survey was available via the online platform Qualtrics from September to November 2020. All nurses and midwives, registered with the Australian Health Practitioner Regulation Agency (AHPRA) and nursing and midwifery students working in the hospital setting in NSW were eligible for inclusion in the study. Anyone not registered as a nurse or midwife with AHPRA, or a nursing or midwifery student, and did not work in the hospital settings in NSW were not eligible to participate in the study.

The survey consisted of demographic information including age, gender, role, and years of experience. A total of six open-ended questions were developed in consultation with nurses and midwives working in the hospital setting in NSW during COVID-19 (Table 1). The questions were based on any challenges and opportunities the nurses and midwives experienced in their workplace during the COVID-19 pandemic, particularly in the areas of communication and support. Participants were also asked to identify any positive changes or ways in which their workplace had grown since the COVID-19 pandemic.

3. Data analysis

Descriptive statistics for participant demographic characteristics were calculated using SPSS V26 (IBM Corp, 2019) and presented as

Table 1
Open-ended questions.

Q1	During the COVID-19 pandemic response, what types of support has your workplace made available to you?
Q2	What would help you feel more supported in your work during the COVID-19 pandemic response?
Q3	How could communication be improved during the COVID-19 pandemic response? (Please clearly indicate at what level of leadership improvement could be made, e.g., line manager, executive level, etc.)
Q4	Sometimes there can be benefits or positive changes that we can identify from events like the COVID-19 pandemic. Have you found any benefits, positive changes, or ways *you* have grown professionally since the COVID-19 pandemic? Please briefly describe the benefits, positive changes, or ways you have grown professionally since the COVID-19 pandemic.
Q5	Have you found any benefits, positive changes, or ways *your workplace* has grown since the COVID-19 pandemic? If yes please *briefly* describe the benefits, positive changes or ways your workplace has grown *as part of their response* to the COVID 19 pandemic
Q6	Please think about what has been the most stressful or upsetting event or experience for you in the context of your work during the *COVID-19 pandemic*. There are no right or wrong answers, and it is typically the first thing that comes to your mind. If you can, please briefly describe this event or experience.

means for continuous variables and frequencies and percentages for categorical variables.

Individual responses were loaded into NVivo 12 software (QSR International, 2018), to assist analysis. The responses to the open-ended questions were collated and a deductive content analysis (Graneheim & Lundman, 2004) was conducted to identify major themes. This process included: (i) becoming familiar with transcribed data through immersion and reading to identify primary ideas; (ii) generating initial codes in the transcription by reviewing line by line; (iii) searching for and identifying categories; (iv) reviewing categories to identify relationships between categories and subcategories; and (v) aligning with existing schema describing the phenomenon and subcategories; and producing the final report from the analysis. Two researchers (N.W. and D.M.) independently undertook iterative theme development and alignment and then reached agreement by consensus. Any differences were discussed and determined at this time (DeSantis & Ugarriza, 2000). Similar methodologies have been employed by other researchers to holistically capture the rich data offered by open ended questions in surveys (Cooke et al., 2009; McKenna, Brooks, & Vanderheide, 2017).

Table 2
Participant demographics.

Characteristic	*M* (SD), x-x
Age (n = 885)	46.32 (11.86), 21-74
Years of experience (n = 972)	21.28 (12.92), 0-56
Gender (n = 996)	*n* (%)
Female	894 (89.76)
Male	96 (9.64)
Nonbinary	3 (0.30)
Other	3 (0.30)
Role (n = 992)	
Registered nurse	888 (89.00)
Registered midwife	63 (6.31)
Enrolled nurse	41 (4.11)
A COVID-19 patient attended the service (n = 1001)	
Yes	673 (67.23)
No	322 (32.17)
Provided care for a COVID-19 patient (n = 997)	
Yes	487 (48.85)
No	510 (51.15)
Redeployed due to the COVID-19 response (n = 999)	
Yes	223 (22.32)
No	776 (77.68)

4. Rigour

Qualitative rigor was fulfilled using Lincoln and Guba's (1985) criteria as a guide. Credibility was achieved by both coders being highly familiar with the data by reading through the responses multiple times in order to achieve accurate coding. Transferability, analogous to external validity, was assured by using direct quotes to illustrate the results. Dependability was achieved by using one coder who was not involved in the development of the themes. All coders analysed the verbatim responses, then validated findings amongst themselves. Source triangulation was also used, as responses were collected from nurses in a variety of settings (confirmability).

5. Results

Survey responses were received from 1265 participants working in hospital settings across NSW. Grossly incomplete data (i.e., participants who had not answered any of the open-ended questions) were excluded from the analysis. After the removal of incomplete data, a total of 1003 participants were included in the study.

Participants ranged in age from 21 to 74 years old (M = 46.32, SD = 11.86), with between 0 and 56 years of experience (M = 21.28, SD = 12.92). Most participants were female (90.30%), and were Registered Nurses (89.00%). More than two-thirds (67.23%) of participants reported that a COVID-19 patient had attended their service and 48.85% reported providing direct care to COVID-19 patients. More than one-fifth (22.32%) of participants were redeployed due to COVID-19 (Table 2). Table 2 does not include details of students working as AINs and were not included in the data analysis due to low numbers.

Participants were generous in the written explanations of their workplace experiences during COVID-19 providing a large amount of data to support the final five themes:

1 *Organisational communication*
2 *Workplace support*
3 *Availability of Personal Protective Equipment (PPE)*
4 *Flexible working*
5 *New ways of working*

5.1. Organisational communication

Participants were asked how leadership could have been improved during the pandemic. Participants reported mixed opinions of their experience of leadership during COVID-19. With some, perceiving poor leadership to be a major contributory factor to the stress they experienced. The importance of visibility, openness, and authenticity were identified as key attributes of effective leadership. Participants identified that executive levels should possess understanding and empathy about the challenges faced by front-line staff and the importance of demonstrating appreciation for their roles:

"There is scope for improvement at executive level. Whilst teleconference meetings ensure issues are raised amongst this group of clinicians [executive], I think there is a lack of similar support at ward-level. Executive could make themselves more available by attending the ward areas … Front-line staff are, generally, not able to attend

pre-arranged meetings due to workloads - the meetings need to come to them!" (P-137)

A number of participants felt that this visible presence was specifically needed at the Executive Director and Director of Nursing/Midwifery level because this would more clearly demonstrate their interest in staff well-being and safety:

"EDON and DON should have taken a stronger role communicating with staff and advocating for their wellbeing and safety. I felt like they were completely absent during an awful time." (P-260)

The lack of visible leadership was exacerbated when executives worked from home, and this led to a divisive 'them and us' culture:

"When COVID first came our entire floor management jumped ship. A NUM was put in place who was just qualified [as an] RN, she was running blind. Our NUM, GM and DON all walked out and started to work from home. Most staff didn't even know at first." (P-190)

"I found it somewhat insulting that management worked from home … It would have been more supportive to come into the centres … It was pretty insulting to ring up your manager in the middle of the pandemic knowing that they were working from home … It still upsets me that as a NUM I was running around frantic while upper management kept safe at home and never came in to assist." (P-692)

Participants felt that they were not well informed of the details that affected them as frontline staff including when staff within their facility were diagnosed with COVID-19:

"They [Executive] had heaps of discussions … but they did not convey what they had planned till just about when the first patient had arrived. People were extremely scared, they could see what was happening overseas and we seemed to have no plan in place." (P-236)

When communication was perceived to lack transparency, participants lost trust in their organisational leaders:

"Senior executive to focus on transparency … Trust in executive is eroded if the truth is not adhered to. Staff can tell if there is an attempt to cover up a lack of knowledge or no information about a specific issue." (P-418)

Participants reported a wealth of information being sent at various times and through various channels, often with conflicting information. Participants identified they wanted information from one consistent source that they could trust, to keep their practice current and them safe:

"We did not seem to get enough communication through the right lines. We were getting information from [sic] all over despite it being a state of emergency and information only supposed to be coming from one source. There was conflicting information especially around PPE from the media (federal and state govt) and our managers." (P-48)

It appeared that there was a fine balance of ensuring staff received sufficient information but not overloading them. In particular, staff working in clinical areas commented on their inability to access and spend time reading the large number of emails received each day:

"Filtering of important emails, what directly affects us immediately as Emergency/Acute nurses we don't have time to sit in front of a computer to read 'Bulk' emails every shift." (P-441)

Multiple channels of communication and speed at which information was relayed often meant that information for clinical staff was not timely, and quickly became outdated, leading to high levels of stress among staff:

"The district added another layer of communication that was unnecessary, often conflicting information and was quickly outdated. The panic was evident and there was a lot of mixed messages … This led to enormous stress and was unnecessary and inappropriate. " (P-128)

While there were many examples of poor communication from participants, some did praise organisational leaders for their open, honest and transparent communication strategies. The praise was, however, predominantly focussed at the ward level of management rather than executive level:

"Communication overall was very good. I had very clear communication from my direct line manager" (P-104).

"My line manager has been wonderful. In my area we have had no communication from the network manager or executives at all. Even a generic e-mail that is sent via line managers would be appreciated." (P-171)

"Communication has been very good, and management has responded as best they could with the constantly changing advice/restrictions." (P-225)

5.2. Workplace support

Throughout data analysis the support mechanisms offered to staff were seen to be similar across all participating organisations. As a result of COVID-19, staff were offered a variety of existing resources including access to counselling, mindfulness, safety and support huddles, and increased opportunities for education. The most commonly cited support mechanism was the Employee Assistance Programme (EAP). However, while participants stated that organisations reminded staff to access the EAP, there were a number of challenges in this:

"EAP is only part time and you have to go in your own time. I have seen them before, and they are not helpful." (P-191)

"EAP but have you ever tried to contact them? 2 weeks minimum to get a return call and otherwise call Lifeline." (P-389)

There were some participants however, that reported not receiving any additional support or minimal support during the pandemic:

"Not much in terms of emotional support. A lady came in once and spoke to us about looking after our mental and physical health for about 15 mins but very surface level stuff." (P-154)

Others reported a reluctance to access support due to the ramifications that may have:

"Emails stating go see this person or self-care suggestions ... but if one was actually struggling or had time off for testing one was not given support, rather treated as a number that was missing and created a problem for the work group." (P-123)

It was evident that the support that team members offered each other during this time was considered as important as the additional support mechanisms put in place by their organisations:

"We generally vent to each other, but working in the healthcare setting has been worrying and stressful. I'm not sure what other resources are available?" (P-106)

Despite participants identifying that they were offered emotional support in the form of workplace resources such as the EAP, they reported that additional support would have helped to support them during the COVID-19 pandemic response. There were some clear areas of additional support which participants felt strongly about, particularly related to structural and workplace issues. These form the next two themes *'availability of PPE'* and *'flexible working'*.

5.3. Availability of PPE

Feeling safe at work and having access to adequate and readily available PPE was important for participants. Staff frequently reported experiencing stress as a result of PPE availability. This was particularly so during the early stages of COVID-19:

"Having to come to work in the same manner with increased and additional risk looking after COVID-19 suspect [ed] patients without any guidance and substandard PPE equipment. If we really DID have COVID-19 patients the facility was not equipped to deal with it." (P-241)

The availability of PPE also appeared to be dependent on participants' area of work and how distribution of PPE was managed

with PPE being perceived to be prioritised to particular areas. This is evidenced in the following excerpt:

"Being unable to access PPE in order to perform my job and doubts regarding effectiveness of supplies ... I felt like I was not valued … I may not be caring for people in ICU. However, I am no less at risk" (P-85).

"Feeling like we weren't protected with PPE … This made me feel unsafe to go to work. Especially seeing what other clinical settings were being given." (P-765)

"Shortages of PPE and Renal not being considered a high-risk area." (P-801)

The distribution of PPE was also reported to be dependent on role; however, detail regarding the context of this example was not shared on the survey. Thus, the circumstances may have deemed this decision entirely appropriate:

"Anaesthetists telling staff the priority of N95 and high-end PPE would be prioritised to doctors /Surgeons. This was very isolating initially, at a time of high anxiety for staff, leaving them feeling insignificant." (P-853)

5.4. Flexible working

There was mixed feedback regarding flexible working practices. Some participants held roles that were not clinical such as Nurse Managers, while others held roles which comprised a proportion of clinical work. Participants in these roles appeared to perceive that roles such as these would allow them the opportunity to work from home during nonclinical times. These included Clinical Nurse Consultants, Educators and Nurse/Midwife Specialists. A small number of participants did report that they felt that their organisation was doing their best to look for ways to be more flexible to accommodate those in a position where they did not always need to be working in the clinical area. Such flexibility was reported as improving their overall well-being:

"Working from home has been successful and it would be fantastic if this remains an option for service delivery - it improves work life balance and makes for happier employees" (P-119).

However, in the main, participants reported a greater need for consistency of flexible working practices. Participants raised concerns over not being able to work from home even when not working directly with patients and/or in the clinical area:

"I would have liked to have worked from home … I have worked almost entirely in the office for months and at times there was more risk just coming into the hospital when there was known positive cases. So, I don't understand the reasoning why I wasn't allowed to." (P-78)

Participants portrayed a very real fear of catching COVID-19 through working in close contact with patients. The need for a flexible approach to work was particularly important in contributing to alleviating these fears especially when participants reported pre-existing medical conditions:

"Wondering if I can safely provide [direct] care for patients, given I have a pre-existing health concern that may increase my chance of a negative outcome if I was to contract COVID-19." (P-350)

More common than the fear of contracting COVID-19 personally, was the fear of infecting others, particularly family members. This was a constant source of anxiety as depicted in the following excerpt:

"The most stressful experience was facing the potential to become infected every day. The thought of bringing it home to my husband and children dominated my thoughts and anxieties." (P-223)

"Fear of contracting the disease from a patient and then infecting [my] family." (P-372)

Another challenge identified by participants was the amount of time that staff had to take as annual, sick or carers leave due to COVID-19 testing and subsequent isolation for themselves or their children. This impacted on ability to take leave for the remainder of the year and participants identified that sick leave for staff during this time should be increased:

"More sick days to allow for the mandatory isolation after being swabbed. My sick days have been taken up due to pending results." (P-146)

Whether flexible working practices were in place or not, participants portrayed managing family life and other commitments alongside their work during COVID-19 to be stressful both for them and their children. Participants spoke of the difficult decision of whether or not to send their children to school and feeling that they had little choice, as they were unable to work from home or take any time off:

"Being worried about my kids being left at home. I know that school was available for frontline workers but at the start of the pandemic before there was any research or information, I felt that my kids should also be isolating … This was the most upsetting thing for me, feeling like I had no other option." (P-519)

"My children at school were ridiculed for their parents being 'nurses' and that they could have COVID-19. This mentality was also present with the teacher cohort asking what we are doing to ensure the kids safety, eluding [sic] to the fact we should isolate from our children." (P-440)

5.5. New ways of working

Despite the stresses associated with living and working throughout the pandemic, participants identified real and tangible benefits provided by their COVID-19 experiences. These benefits are discussed under the final theme *'new ways of* working'.

Participants provided a number of examples demonstrating how the COVID-19 situation had provided opportunities to look at previous ways of working, make changes and introduce new models of care.

"We have utilised new delivery methods, to minimise families having to access the hospital unnecessarily. The organisation has been proactive in looking at new/alternate ways of working." (P-539).

"We have changed the way we distribute ICU patients throughout the unit (from all together to more spread out) and have found that this has benefited the unit by redistributing our senior staff and allowing them to be more supportive of the junior staff." (P-319)

In response to questions regarding COVID-19 positive outcomes, participants reported the positive impact that restricted visiting had on their role in delivering care.

A key area in which restricted visiting was seen to be positive was in maternity services. The restricted visitor numbers, while not always appreciated by the mothers themselves, were seen by maternity staff as allowing more time to support and educate new mothers, particularly with breastfeeding. Participants appeared to perceive that quieter environments enabled mothers time to rest and bond with newborns.

"The change to visiting for maternity patients has allowed the ward area to become calmer and has benefited both staff and patients. Mothers now can concentrate on their babies and not the visitors … better learning opportunities." (P-195)

"Women are tending to go home earlier. They are having better rest while an inpatient as visitor numbers are reduced - this is improving the breast-feeding successes." (P-619)

Similarly, the ability to focus on patients was evident in acute clinical units inside correctional facilities:

"Working in the correctional environment I have found patients become more settled and calmer during the Quarantine period. This has enabled us to seek a better patient history and better meet their healthcare needs." (P-685)

Despite the positive aspects of visitor restrictions experienced by some participants, this was reported as being the most stressful

experience associated with COVID-19 for others. The following excerpt from a paediatric nurse highlights the stress associated with the one parent per sick child rule:

"Having to tell a father that he was not allowed in the department to be with his critically ill child as only one parent was allowed in. The mother was distressed and needed the support of her husband, but … [this] was not possible." (P-325)

Enforcing visitor restrictions was reported as often resulting in participants being verbally abused due to visitors' increased frustration and anger over the rules:

"Being abused by parents as they are not both allowed to be at the bedside of their baby due to restrictions … I have been diagnosed with depression and anxiety during the pandemic." (P-181)

The increased uptake and use of technology were overwhelmingly reported as a positive outcome of COVID-19. The use of technology included an increased use of telehealth and a greater ability to attend meetings and educational opportunities due to their virtual delivery. This was seen in a positive light, enabling greater attendance by staff that previously may have found it difficult to attend in person. This was particularly so for those participants working in rural and remote areas that would normally be required to travel long distances to attend:

"Increased use of technology such as zoom, Microsoft teams, PEXIP to provide other ways of connecting and working together without the need for travel, especially for rural areas." (P-391)

"I was able to attend a conference in Europe and sit in on all the sessions because they were all virtual. Normally I would miss out!" (P-185)

Participants' responses indicated telehealth use increased significantly with patients during this time, which opened up new ways of working and a realisation of benefits to both nurse and patient:

"More use of telehealth to provide educational opportunities to pregnant women … has meant that women who traditionally would not have accessed childbirth education due to geographical isolation have been able to access it." (P-332)

"We have been proactive in establishing telehealth in departments that hadn't previously used same. We have utilised new delivery methods, to minimise families having to access the hospital unnecessarily. The organisation has been proactive in looking at new/ alternate ways of working." (P-539)

"The art of reaching out to clients via telehealth increased and the phone consults prevented a lot of representations to ED. The ability to adapt to telehealth has opened a new door to continue this line of follow ups to allow reaching out to more people in a day." (P-809)

Despite the majority of participants sharing positive experiences with telehealth, in some areas the use of telehealth was viewed as a hindrance to practice. This was particularly so when participants were relying on patients being able to clearly articulate details such as during initial consultations:

"I don't feel telehealth is good for all patient groups. Elderly patients are unable to sometimes fully explain and in our area its very high in CALD [culturally and linguistically diverse] patients that benefit more from 1-on-1 face-to-face care. This is something that I feel is being overlooked." (P-1029)

COVID-19 provided an opportunity for participants to work in different areas, learn new skills or refresh old ones, meet new colleagues, and take on greater responsibility. There appeared to be a greater appreciation for the work of others and a consideration of where they wanted to remain working following deployment:

"I refreshed my ward nursing skills. I got to know other nurses in my hospital during redeployment." (P-260)

"I have taken on more responsibility and adapted to the change … it has created a new opportunity for me as an acting NUM and got me into leadership" (P-504).

"I was redeployed to clinical care. It was fantastic to reconnect with patients." (P-793)

"I now realise that there is a serious shortage of nurses on the wards … that is a major concern and a huge eye opener for me … If I didn't work in the perioperative area, I certainly would have left this profession!" (P-67)

The constant changes to practice were highlighted by participants as causing high levels of stress and an area that could be improved upon. Despite this, participants demonstrated resilience and flexibility, including stepping up to take on leadership roles, in a positive way:

"Adapted to changing demands of COVID-19 daily, and quickly changed priorities as matters arose, identified strengths within team and identified champions who took leads giving staff purpose in the early days." (P-326)

Aside from workplace benefits, COVID-19 also provided an opportunity for participants to reflect on their own personal situation. Participants reported a change in priorities with a shift in focus from work to home or family life:

"I have made my focus on my family not my work, which has made me look at the reasons why we work. My focus is now on working to live not living to work." (P-782)

"Not attending work when have a mild cold - standing strong in the face of negative reactions to calling in sick." (P-443)

6. Discussion

The results of this study identified a number of key themes; Organisational communication, Workplace support, Availability of Personal Protective Equipment (PPE), Flexible working and New ways of working. Nurses' and midwives' workplace experiences during COVID-19 were influenced by organisational leaders who were perceived to be adaptive, authentic, responsive, transparent and visible. While many participants expressed a number of workplace challenges, including access to personal protective equipment, there was opportunity to explore, develop and evaluate new and alternate models of care and working arrangements.

The participants in this study indicated that the workplace experiences during COVID-19 were heavily influenced by organisational leaders who were adaptive, authentic, responsive and transparent. Participants reported feeling less stressed and supported when leaders were visible. Because of its unpredictability COVID-19 requires an adaptive leadership response (Kuluski, Reid, & Baker, 2021) to ensure a positive organisational culture remains (Spicer, 2020). The importance of adaptive and authentic leadership during COVID -19 has been reported previously by other researchers (Aquilia et al., 2020; Ion et al., 2021; Spicer, 2020). As healthcare organisations internationally adjust and adapt to challenges created by COVID-19, it will be important that effective leadership training and education be identified as one of the key priority areas for future planning. We argue that this training and education should focus on adaptative leadership behaviours which will in turn help to develop preparation strategies and ensure adequate support for nurses and midwives during pandemics.

Consistent with other studies, participants in this study highlighted that workplace experiences during COVID-19 were challenging, particularly access to personal protective equipment (Arnetz, Goetz, Arnetz, & Arble, 2020; Halcomb et al., 2020). Access to information and education on how to correctly use PPE and clear acknowledgment of the challenges and difficulties of caring for patients when wearing PPE have also been reported (Arnetz et al., 2020; Halcomb et al., 2020). Although, 2020 was welcomed as the Year of the Nurse and Midwife (WHO, 2020b), it will long be remembered as the year of COVID-19 when many nurses and midwives died, mainly due to a lack of PPE (Bandyopadhyay et al., 2020). While not reported in this study, internationally, nurses and midwives have identified working in clinical situations where access to essential equipment is limited

or denied, they have been exposed to heavy COVID-19 viral loads and have worked long hours, and in some instances with sub-optimal nurse–patient ratios to manage the surge in healthcare demand (Fernandez et al., 2020). Overall, nurses and midwives have responded to COVID-19 challenges with maturity, responsiveness, and agility (Stokes-Parish, Elliott, Rolls, & Massey, 2020; Wynter et al., 2021). Despite this responsiveness, nurses and midwives have reported ongoing challenges in adapting to COVID-19 because of a lack of preparedness (Fernandez et al., 2020; Ion et al., 2021). Organisational pandemic plans need be to be clear, transparent and constantly reviewed and evaluated to ensure nurses and midwives working during pandemics have access to relevant safety equipment and are appropriately educated to enable safe use (Wynter et al., 2021).

The nurses and midwives in this study reported the opportunity to explore, develop and evaluate new and alternate models of care and working arrangements. One of the major factors identified by Fernandez et al. (2020) in their systematic review was nurses and midwives' ability to cope with the demanding workload during the pandemic, particularly as a result of staffing shortages and skill mix. The true impact on patient outcomes in relation to a diluted skill mix or staff ratios is still unclear. However, lack of adequate staffing, increasing patient acuity and frequently changing models of care during COVID-19 has demanded nurses and midwives develop new skills and knowledge (Almomani, Sullivan, Hajjieh, & Leighton, 2021). This has required many nurses and midwives to simultaneously upskill and develop new ways of working (Almomani et al., 2021; Jarden et al., 2021; Williams, Gunn, & Sweeny, 2021; Wynter et al. 2021). Developing and implementing new models of care gave participants access to education, developed and expanded their scope of practice, knowledge and skills and offered more flexible care models, all of which were viewed as positive outcomes. We argue that the use of telehealth and understanding how technologies can be used in healthcare to improve patient care and experiences (Franzosa et al., 2021; Kord et al., 2021) are examples of this important finding.

7. Limitations

While we offer some insight into nurses' experiences during COVID-19, some study limitations are acknowledged. First, only 1,003 participants were included in this study representing only a small proportion of nurses working in the hospital setting in NSW. Our results may not be generalisable to all nurses in NSW, nurses in other states and territories in Australia or other countries. Second, nurses who completed our survey worked in hospital settings, again the findings may not be generalisable to other healthcare settings like aged care and private hospital settings which may face additional or different challenges. While we did collect data on the number of nurses redeployed as a result of the pandemic, we did not ask where they were redeployed to. This is a limitation of the study as redeployment to some areas may have been more stressful than others. This study did not analyse differences between participants based on their professional designation. While the use of open-ended questions from a survey offered access to a large data set there was no opportunity to seek clarification about the responses. Thus, data presented in this study may lack the richness of other qualitative data.

8. Conclusion

The benefits of considering the perceptions and concerns of nurses and midwives working in hospital during a pandemic have been illustrated in this study. Participants in our study were able to clearly identify their positive workplace experiences that occurred during the pandemic. They also acknowledged the importance of organisational leadership and timely dissemination of transparent pandemic plans. Our findings provide clear directions about the opportunities COVID-19 might provide to nurses and midwives. These include opportunities to explore different models of care and working arrangements. Informed understanding of nurses' and midwives' workplace experiences may enable better preparation and targeted support at an individual, organisational and policy level.

Funding

This research did not receive any specific grant from funding agencies in the public, no commercial or not-for-profit sectors.

Ethical statement

The submitted manuscript involved human research. Ethical approval was obtained from the Human Research Ethics Committee at Southern Cross University (approval number 2020/063). Completion of the online survey implied consent.

Research protocol

The research protocol has been approved by the Human Research Ethics Committee at Southern Cross University (approval number 2020/063).

Conflict of interest

None.

CRediT authorship contribution statement

Nicola Whiteing: Conceptualization, Investigation, Formal analysis, Writing – review & editing. **Deb Massey:** Conceptualization, Formal analysis, Writing – review & editing. **Rae Rafferty:** Conceptualization, Formal analysis, Writing – review & editing. **Olivia Penman:** Project administration, Writing – review & editing. **Christina Samios:** Conceptualization, Writing – review & editing. **Karen Bowen:** Conceptualization, Writing – review & editing. **Alexandre Stephens:** Conceptualization, Writing – review & editing. **Christina Aggar:** Conceptualization, Investigation, Project administration, Writing – review & editing.

Acknowledgements

We would like to acknowledge all of the nurses and midwives who provided their valuable time to participate in this study.

References

Aggar, C., Samios, C., Penman, O., Whiteing, N., Massey, D., Rafferty, R., et al., (2022). The impact of COVID-19 pandemic-related stress experienced by Australian nurses. *International Journal of Mental Health Nursing, 31*(1), 91–103. https://doi.org/10.1111/inm.12938.

Al Maqbali, M., Al Sinani, M., & Al-Lenjawi, B (2021). Prevalence of stress, depression, anxiety and sleep disturbance among nurses during the COVID-19 pandemic: a systematic review and meta-analysis. *Journal of Psychosomatic Research, 141*, Article 110343. https://doi.org/10.1016/j.jpsychores.2020.110343.

Almomani, E., Sullivan, J., Hajjieh, M., & Leighton, K. (2021). Simulation-based education programme for upskilling non-critical care nurses for COVID-19 deployment. *BMJ Simulation & Technology Enhanced Learning, 7*(3), 319–322. https://doi.org/10.1136/bmjstel-2020-000711.

Aquilia, A., Grimley, K., Jacobs, B., Kosturko, M., Mansfield, J., Mathers, C., et al., (2020). Nursing leadership during COVID-19: enhancing patient, family and workforce experience. *Patient Experience Journal, 7*(2), 136–143. https://doi.org/10.35680/2372-0247.1482.

Arnetz, J. E., Goetz, C. M., Arnetz, B. B., & Arble, E. (2020). Nurse reports of stressful situations during the COVID-19 pandemic: qualitative analysis of survey responses. *International Journal of Environmental Research and Public Health, 17*(21), 8126. https://doi.org/10.3390/ijerph17218126.

Australian Institute of Health and Welfare. (2020). Health workforce. AIHW. https://www.aihw.gov.au/reports/australias-health/health-workforce

Bandyopadhyay, S., Baticulon, R. E., Kadhum, M., Alser, M., Ojuka, D. K., Badereddin, Y., et al., (2020). Infection and mortality of healthcare workers worldwide from COVID-19: a systematic review. *BMJ Global Health, 5*(12), Article e003097. https://doi.org/10.1136/bmjgh-2020-003097.

Chiarella, E. M., & Stewart, D. (2020). Recency of practice and emergency registration: preparing for surge capacity in the time of covid-19. *Australian Journal of Advanced Nursing, 37*(4), 4–6. 10.37464/2020.374.307.

Cooke, M., Cantrill, R. M., & Creedy, D. K. (2009). Midwives' reported practice supporting the first breastfeed. *Maternal & Child Nutrition, 5*, 334–346. https://doi.org/10.1111/j.1740-8709.2008.00173.x.

Davis, M. A., Cher, B., Friese, C. R., & Bynum, J. (2021). Association of US nurse and physician occupation with risk of suicide. *JAMA Psychiatry, 78*, 651–658. https://doi.org/10.1001/jamapsychiatry.2021.0154.

Department of Health. (2021). Coronavirus (COVID-19) current situation and case numbers. Australian Government. https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert/coronavirus-covid-19-current-situation-and-case-numbers#covid19-summary-statistics

DeSantis, L., & Ugarriza, D. N. (2000). The concept of theme as used in qualitative nursing research. *Western Journal of Nursing Research, 22*(3), 351–372. https://doi.org/10.1177/019394590002200308.

Fernandez, R., Lord, H., Halcomb, E., Moxham, L., Middleton, R., Alananzeh, I., et al., (2020). Implications for COVID-19: a systematic review of nurses' experiences of working in acute care hospital settings during a respiratory pandemic. *International Journal of Nursing Studies, 111*, Article 103637. https://doi.org/10.1016/j.ijnurstu.2020.103637.

Fernandez, R., Lord, H., Moxham, L., Middleton, R., & Halcomb, E. (2021). Anxiety among Australian nurses during COVID-19. *Collegian, 28*(4), 357–358. https://doi.org/10.1016/j.colegn.2021.05.002.

Franzosa, E., Gorbenko, K., Brody, A. A., Leff, B., Ritchie, C. S., Kinosian, B., et al., (2021). "There is something very personal about seeing someone's face": provider perceptions of video visits in home-based primary care during COVID-19. *Journal of Applied Gerontology, 40*(11), 1417–1424. https://doi.org/10.1177/07334648211028393.

Galanis, P., Vraka, I., Fragkou, D., Bilali, A., & Kaitelidou, D. (2021). Nurses' burnout and associated risk factors during the COVID-19 pandemic: a systematic review and meta-analysis. *Journal of Advanced Nursing, 77*(8), 3286–3302. https://doi.org/10.1111/jan.14839.

Goldfarb, N., Grinstein-Cohen, O., Shamian, J., Schwartz, D., Zilber, R., Hazan-Hazoref, R., et al., (2021). Nurses' perceptions of the role of health organisations in building professional commitment: insights from an Israeli cross-sectional study during the COVID-19 pandemic. *Journal of Nursing Management, 29*(5), 1102–1110. https://doi.org/10.1111/jonm.13248.

Graneheim, UH, & Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ Today, 24*(2), 105–112 PMID: 14769454. https://doi.org/10.1016/j.nedt.2003.10.001.

Halcomb, E., Williams, A., Ashley, C., McInnes, S., Stephen, C., Calma, K., et al., (2020). The support needs of Australian primary health care nurses during the COVID-19 pandemic. *Journal of Nursing Management, 28*(7), 1553–1560. https://doi.org/10.1111/jonm.13108.

Hammond, N. E., Crowe, L., Abbenbroek, B., Elliott, R., Tian, D. H., Donaldson, L. H., et al., (2021). Impact of the coronavirus disease 2019 pandemic on critical care healthcare workers' depression, anxiety, and stress levels. *Australian Critical Care, 34*(2), 146–154. https://doi.org/10.1016/j.aucc.2020.12.004.

Hofmeyer, A., & Ruth, T. (2021). Strategies and resources for nurse leaders to use to lead with empathy and prudence so they understand and address sources of anxiety among nurses practising in the era of COVID-19. *Journal of Clinical Nursing, 30*(1-2), 298–305. https://doi.org/10.1111/jocn.15520.

Homer, C. S. E., Davies-Tuck, M., Dahlen, H. G., & Scarf, V. L. (2021). The impact of planning for COVID-19 on private practising midwives in Australia. *Women and Birth: Journal of the Australian College of Midwives, 34*(1), e32–e37. https://doi.org/10.1016/j.wombi.2020.09.013.

IBM Corp. (2019). *IBM SPSS statistics for windows, Version 26.0*. Armonk, NY: IBM Corp.

Ion, R., Craswell, A., Hughes, L., Johnston, A., Kilbride, L., Hubbard-Murdoch, N., et al., (2021). International nurse education leaders' experiences of responding to the COVID-19 pandemic: a qualitative study. *Journal of Advanced Nursing, 77*(9), 3797–3805. https://doi.org/10.1111/jan.14892.

Jarden, R. J., Jarden, A. J., Weiland, T. J., Taylor, G., Brockenshire, N., Rutherford, M., et al., (2021). Nurse wellbeing during the coronavirus (2019) pandemic: a qualitative descriptive study. *Collegian, 28*(6), 709–719. https://doi.org/10.1016/j.colegn.2021.06.002.

Joo, J. Y., & Liu, M. F. (2021). Nurses' barriers to caring for patients with COVID-19: a qualitative systematic review. *International Nursing Review, 68*(2), 202–213. https://doi.org/10.1111/inr.12648.

Khodaveisi, M., Bashirian, S., khazaei, S., Gillespie, M., Masoumi, S. Z., & Mohammadi, F. (2021). Moral courage, moral sensitivity and safe nursing care in nurses caring of patients with COVID-19. *Nursing Open, 8*(6), 3538–3546. https://doi.org/10.1002/nop2.903.

Kleemola, E., Leino-Kilpi, H., & Numminen, O. (2020). Care situations demanding moral courage: content analysis of nurses' experiences. *Nursing Ethics, 27*(3), 714–725. https://doi.org/10.1177/0969733019897780.

Kord, Z., Fereidouni, Z., Mirzaee, M. S., Alizadeh, Z., Behnammoghadam, M., Rezaei, M., et al., (2021). Telenursing home care and COVID-19: a qualitative study. *BMJ Supportive & Palliative Care*. https://doi.org/10.1136/bmjspcare-2021-003001.

Kuluski, K., Reid, R. J., & Baker, G. R. (2021). Applying the principles of adaptive leadership to person-centred care for people with complex care needs: considerations for care providers, patients, caregivers and organizations. *Health Expectations, 24*(2), 175–181. https://doi.org/10.1111/hex.13174.

Labrague, L. J., Hammad, K., Gloe, D. S., McEnroe-Petitte, D. M., Fronda, D. C., Obeidat, A. A., et al., (2018). Disaster preparedness among nurses: a systematic review of literature. *International Nursing Review, 65*(1), 41–53. https://doi.org/10.1111/inr.12369.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE Publications.

Middleton, R., Loveday, C., Hobbs, C., Almasi, E., Moxham, L., Green, H., et al., (2021). The COVID-19 pandemic—a focus on nurse managers' mental health, coping behaviours and organisational commitment. *Collegian, 28*(6), 703–708. https://doi.org/10.1016/j.colegn.2021.10.006.

McKenna, L., Brooks, I., & Vanderheide, R. (2017). Graduate entry nurses' initial perspectives on nursing: content analysis of open-ended survey questions. *Nurse Education Today, 49*, 22–26. https://doi.org/10.1016/j.nedt.2016.11.004.

Nursing & Midwifery Board of Australia [NMBA]. (2020). Registrant Data 01 October 2020 to 31 December 2020. Retrieved from: https://www.nursingmidwiferyboard.gov.au/search.aspx?q=registrant=data. Accessed 04.07.22.

QSR International. (2018). NVivo qualitative data analysis software *(Version 12)*. QSR International Pty Ltd. https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home.

Quigley, A. L., Stone, H., Nguyen, P. Y., Chughtai, A. A., & MacIntyre, C. R. (2021). Estimating the burden of COVID-19 on the Australian healthcare workers and health system during the first six months of the pandemic. *International Journal of Nursing Studies, 114*, Article 103811. https://doi.org/10.1016/j.ijnurstu.2020.103811.

Raso, R., Fitzpatrick, J. J., Masick, K., Giordano-Mulligan, M., & Sweeney, C. D. (2021). Perceptions of authentic nurse leadership and work environment and the pandemic impact for nurse leaders and clinical nurses. *The Journal of Nursing Administration*, (5), 51. https://doi.org/10.1097/NNA.0000000000001010.

Rasmussen, B., Hutchinson, A., Lowe, G., Wynter, K., Redley, B., Holton, S., et al., (2022). The impact of covid-19 on psychosocial well-being and learning for australian nursing and midwifery undergraduate students: a cross-sectional survey. *Nurse Education in Practice, 58*, Article 103275. https://doi.org/10.1016/j.nepr.2021.103275.

Said, N. B., & Chiang, V. C. L. (2020). The knowledge, skill competencies, and psychological preparedness of nurses for disasters: a systematic review. *International Emergency Nursing, 48*, Article 100806. https://doi.org/10.1016/j.ienj.2019.100806.

Salari, N., Khazaie, H., Hosseinian-Far, A., Ghasemi, H., Mohammadi, M., Shohaimi, S., et al., (2020). The prevalence of sleep disturbances among physicians and nurses facing the COVID-19 patients: a systematic review and meta-analysis. *Globalization & Health, 16*(1), 92. https://doi.org/10.1186/s12992-020-00620-0.

Schubert, M., Ludwig, J., Freiberg, A., Hahne, T. M., Romero Starke, K., Girbig, M., et al., (2021). Stigmatization from work-related COVID-19 exposure: a systematic review with meta-analysis. *International Journal of Environmental Research and Public Health, 18*(12), 6183. https://doi.org/10.3390/ijerph18126183.

Spicer, A. (2020). Organizational culture and COVID-19. *Journal of Management Studies, 57*(8), 1737–1740. https://doi.org/10.1111/joms.12625.

Stokes-Parish, J., Elliott, R., Rolls, K., & Massey, D. (2020). Angels and heroes: the unintended consequence of the hero narrative. *Journal of Nursing Scholarship, 52*(5), 462–466. https://doi.org/10.1111/jnu.12591.

Varghese, A., George, G., Kondaguli, S. V., Naser, A. Y., Khakha, D. C., & Chatterji, R. (2021). Decline in the mental health of nurses across the globe during COVID-19: a systematic review and meta-analysis. *Journal of Global Health, 11*, 05009. https://doi.org/10.7189/jogh.11.05009.

Vizheh, M., Qorbani, M., Arzaghi, S. M., Muhidin, S., Javanmard, Z., & Esmaeili, M. (2020). The mental health of healthcare workers in the COID-19 pandemic: a systematic review. *Journal of Diabetes and Metabolic Disorders, 19*, 1–12. https://doi.org/10.1007/s40200-020-00643-9.

Williams, G., Gunn, A., & Sweeny, A. (2021). Nursing in the time of COVID-19: exploring nurse preparedness early in a global pandemic. *Australian Journal of Advanced Nursing, 38*(3), 59–65. https://doi.org/10.37464/2020.383.238.

World Health Organization (2020a) Keep health workers safe to keep patients safe. https://www.who.int/news/item/17-09-2020-keep-health-workers-safe-to-keep-patients-safe-who

World Health Organization. (2020b). The year of the nurse and midwife. https://www.who.int/news-room/campaigns/year-of-the-nurse-and-the-midwife-2020

Wynter, K., Holton, S., Considine, J., Hutchinson, A. M., Munt, R., Balson, J., et al., (2021). The impact of the COVID-19 pandemic on Australian hospital-based nursing and midwifery educators. *Collegian, 29*(3), 271–280. https://doi.org/10.1016/j.colegn.2021.10.007.

Yin, X., & Zeng, L. (2020). A study on the psychological needs of nurses caring for patients with coronavirus disease 2019 from the perspective of the existence, relatedness, and growth theory. *International Journal of Nursing Sciences, 7*(2), 157–160. https://doi.org/10.1016/j.ijnss.2020.04.002.