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The psychological well-being of primary healthcare nurses during COVID-19: A qualitative study

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Funding information
This project was jointly funded by the Australian College of Nursing and the University of Wollongong.

Abstract

Aim: To explore primary healthcare nurses' psychological well-being related to the COVID-19 pandemic.

Design: Qualitative descriptive study.

Methods: Semi-structured interviews were conducted with 25 participants between June and August 2020 who indicated their willingness to participate in an interview following a national survey. Interviews were audio-recorded and transcribed verbatim by professional transcribers. Data were analysed using thematic analysis.

Results: The importance of professional and public support and acknowledgement of the nurses' role during the pandemic positively influenced feelings of being valued. The psychological impact of negative experiences increased anxiety and stress levels. Participants reported a range of self-care strategies, including increased vigilance with infection control at home and work and attention to physical exercise and diet. Most participants remained positive about their roles and career decisions, although some indicated that the negative psychological impacts prompted re-evaluation of their career.

Conclusions: Primary healthcare nurses have been exposed to a range of personal and professional stressors during the pandemic that have impacted their psychological well-being. Awareness of stressors and an understanding of what has helped and what has impacted well-being are important in guiding future workplace support systems. Further work to explore the long-term impact of these stressors and the effectiveness of coping strategies employed by primary healthcare nurses is warranted.

Impact: Managers and professional organisations need to consider the personal and professional stressors that have impacted on primary healthcare nurses' psychological well-being to promote health and well-being among nurses following COVID-19.

KEYWORDS
community nursing, nursing workforce, pandemic, primary healthcare, psychological, stressors, support

1 | INTRODUCTION

The emergence and spread of COVID-19 has resulted in the world experiencing an unprecedented public health emergency. Millions of lives have been lost, and COVID-19 has caused widespread disruption to communities globally (World Health Organization, 2020a). While social distancing, mask wearing and citywide lockdowns have precipitated social and economic disruption, health systems have been stretched to cope with changing demands. Health professionals in many countries are not only overworked due to the high volume of healthcare needs, but are also concerned about the risks to themselves and their families by working to deliver frontline services (Fernandez et al., 2020; Halcomb, McInnes, et al., 2020; Halcomb, Williams, et al., 2020). Although countries such as Australia and New Zealand may have been somewhat less affected by COVID-19 than Europe or America, there have still been significant changes in the demands on the health system and its workforce (Kidd, 2020).

Nurses are the largest group of health professionals (World Health Organization, 2020b). They deliver direct patient care in close physical proximity to patients, thus placing them at very high risk of exposure to pathogens and developing infectious disease during a pandemic. During COVID-19, a large number of nurses have been infected. In December 2020, over 2262 nurses had died, and many more are experiencing long COVID-19 complications (Jackson et al., 2020). At the same time, health systems rely on nurses to support the management of COVID-19 and public health strategies to reduce risk and to continue to provide healthcare for other conditions. Despite their professional obligations, nurses are human and as such experience psychological impacts from their work. In crises, such as the COVID-19 pandemic, these impacts are likely to be accentuated (Hong et al., 2020; Huang et al., 2020; Lorente et al., 2021; Lusher et al., 2020).

Early reports describe psychological distress and increased levels of anxiety and depression among acute care nurses working on the COVID-19 frontline (Lorente et al., 2021; Mo et al., 2020; Sampaio et al., 2020). The psychological impacts experienced by nurses have been attributed to increased levels of abuse from patients, suboptimal communication of infection control guidelines, high patient mortality, inadequate supplies of personal protectibe equipment (PPE) and a fear of transmitting COVID-19 to family members (Halcomb, McInnes, et al., 2020; Halcomb, Williams, et al., 2020; Labrague & de Los Santos, 2020; Lusher et al., 2020). Other research suggests that frontline nurses who have not been provided COVID-19-related training and those working part-time experience higher levels of anxiety and attrition (Labrague & de Los Santos, 2020) and have poorer coping mechanisms (Lorente et al., 2021). Such findings are consistent with previous literature about the impact of respiratory pandemics on acute care nurses (Fernandez et al., 2020). This paper does not seek to quantify levels of mental ill health; rather, it seeks to explore psychological well-being among primary healthcare (PHC) nurses. Psychological well-being is used as a broad term that encompasses the impacts of COVID-19 on the psychological functioning and mental health of PHC nurses (Ryff, 1989).

2 | BACKGROUND

PHC in Australia is a complex combination of non-government not-for-profit organisations and general practices operated as small businesses or corporate chains, combined with government-funded community-health services (Australian Institute of Health & Welfare, 2016). Nurses are key health professionals in PHC who provide a diverse range of specialist and generalist patient care under a combination of funding models to meet health needs in the community. Though nurses have worked in the Australian community for many years, in settings such as general practice, the nursing role has only evolved significantly in the past 20 years (Halcomb et al., 2014). This has created a range of opportunities and challenges as nurses have become embedded in multidisciplinary teams.

PHC nurses play an important role during pandemics. They assist in the public health response, provide education around infection control and risk management and enable ongoing access to health services to address ongoing or acute health issues unrelated to the pandemic (Halcomb, McInnes, et al., 2020; Halcomb, Williams, et al., 2020; Yi et al., 2020). This role has the potential to reduce infection rates and diminish morbidity and mortality secondary to health service disruption. In their study on pandemic influenza, Shaw et al. (2006) highlighted that although general practice plays an important role in a pandemic, there is the potential for the primary care workforce to become overwhelmed. Indeed, a survey of Australian PHC nurses during COVID-19 has reported stressful work environments, job insecurity and inadequate resources as key triggers impacting the mental health and well-being of nurses (Halcomb, McInnes, et al., 2020; Halcomb, Williams, et al., 2020). To ensure that the PHC nursing workforce is supported and resilient to the psychological impacts of the pandemic, this study sought to explore PHC nurses' psychological well-being related to the COVID-19 pandemic. Understanding these has the potential to inform support strategies to reduce psychological sequelae, promote well-being and minimise loss of nurses to the profession due to these impacts.

3 | THE STUDY

3.1 | Aim

This study aimed to explore PHC nurses' psychological well-being related to the COVID-19 pandemic.

3.2 | Design

This paper reports findings of a qualitative descriptive study embedded within a sequential explanatory mixed methods project. The first phase of the project comprised an online national survey of diploma-prepared enrolled nurses, baccalaureate-prepared (or equivalent) registered nurses or master's-prepared nurse practitioners employed in Australian PHC (Halcomb, McInnes, et al., 2020;

Halcomb, Williams, et al., 2020) (Conducted in April 2020). This paper reports on one theme from the second phase, semi-structured interviews with a purposively selected group of survey respondents who volunteered to participate. Due to the range and depth of data, other themes are reported separately. Using a qualitative descriptive approach, a detailed yet straightforward description of participants' experiences was provided, which enables the findings to be 'data-near' and allows greater comprehension of the phenomena being investigated (Sandelowski, 2010).

3.3 | Participants

One hundred and forty-one PHC nurses who responded to the survey indicated a willingness to be contacted for interview. Potential participants were stratified based on their demographic and employment characteristics. Nurses from each stratum were then telephoned by the research team to provide study information and seek their consent to participate. If the nurse was willing, an interview time and date were arranged.

The participant group comprised 24 females (96%) and 1 male (4%) (range 26–66 years; mean 45.1 years; SD 11.2). Most participants were employed as registered nurses (*n* = 20; 80%), with fewer nurse practitioner (*n* = 3; 12%), and enrolled nurse (*n* = 2; 8%) participants. Thirteen (52%) participants were employed as general practice nurses (GPNs) and 12 (48%) participants were community-based nurses (CNs) from settings such as women's health, maternal and child health, mental health and Aboriginal medical services.

3.4 | Data collection

The researchers developed a semi-structured interview schedule following survey data analysis and review of the literature (Fernandez et al., 2020; Halcomb, McInnes, et al., 2020; Halcomb, Williams, et al., 2020). The interview schedule included broad items that explored participants' perceptions of pandemic preparedness, the impact of COVID-19 on the workplace and patient care, participants' health and well-being and reflections on what could be done differently in the future. Although the same interview schedule was used throughout the interviews, prompts and probes were used to explore issues raised by individual participants. All interviews were conducted via telephone by two authors (CS, SJ) (June to August 2020) due to participants' geographical dispersion and COVID-19 restrictions. Although all researchers were female nurses with expertise in PHC and nursing research, none had a previous relationship with any participants. Interviews were conducted after the first wave of COVID-19 had settled, although a second wave, resulting in strict lockdowns, was in progress in one state (Victoria) at the time of data collection.

Interviews were audio-recorded, and field notes were made by interviewers to capture their perceptions. Data saturation was thought to have occurred at 21 interviews, however, four further interviews were undertaken to confirm this. Each participant was interviewed once. Audio recordings were transcribed verbatim by a professional transcription company. Interview duration ranged from 19 to 59 min (mean 38.5 min; SD 11.45 min).

3.5 | Ethical considerations

Ethical approval was granted by the Human Research Ethics Committee at the University of Wollongong (HE2020/161) and approved by the University of Notre Dame, Australia (2020-056S). The information sheet outlined the study purpose, researchers, potential risks and participants' rights. All participants provided written informed consent. Information about support services was provided following each interview to ensure that participants were aware of their availability. Although participants could choose to cease the interview at any time, none did so. To protect confidentiality, participant codes are used in reporting.

3.6 | Data analysis

The interviews were analysed using an inductive thematic analysis framework (Braun & Clarke, 2006). The researchers firstly familiarised themselves with the data by reading and rereading the transcribed interviews, listening to audio recordings and writing initial ideas. This was followed by the identification of preliminary codes and meanings, which were manually and independently coded by two authors (SJ and CA). These codes were then collated into potential themes and discussed within the team (Braun & Clarke, 2006). Developing themes were reviewed by cross-checking the coding framework against the transcripts. In doing so, the consistency in the patterns developing was established and ensured that the themes reflected the meanings within the data (Braun & Clarke, 2006). Discussions within the team about the name and meaning of each theme occurred until consensus was achieved. Participants were not engaged during the analysis due to the competing demands on their time and potential burden of revisiting the data.

3.7 | Rigour

Lincoln and Gubas' (1985) criteria for trustworthiness were used to establish rigour. Authors CS and SJ, who led the analysis, engaged in peer-debriefing, exploring perspectives and independent interpretations throughout the analysis to establish credibility (Lincoln & Guba, 1985). Transferability of the findings was ensured by through thick description and verbatim quotes (Lincoln & Guba, 1985). Maintaining an audit trail of the study processes established dependability and confirmability (Lincoln & Guba, 1985).

4 | FINDINGS

4.1 | Feeling valued

How participants felt their role was respected during the pandemic varied across different settings. CNs described feeling empowered by the community appreciation displayed:

> "I don't think high school nurses have ever been truly valued… Yet in those weeks when we were shutting down, my phone was ringing [non-stop] because parents just wanted emotional support for the choices they were making for their kids. And I think that was the biggest thing that's made me realise that we are valued as nurses… just by the support and the health promotion they give clients out in the community". CN11, RN

> "The community was very good. They're very grateful for any support they can get. They probably over-value… what we do. I feel like we could do a lot more for them." CN06, RN

However, negative behaviours displayed by some community members were also articulated, including abuse, intimidation and deliberate coughing on nurses. These experiences were reported to significantly impact on the participants' psychological well-being.

> "I had a patient deliberately cough on me and then of course four days later I developed a cough. I had to be tested, I didn't feel that I got a great deal of support from the practice. I live very close to work, so I was walking home from work in my scrubs and I had someone, just random, person scream out the window "You f*** nurse sl** giving us all the germ!"… It was devastating. I worked my entire career for this community–they were two incidents but they happened within 24 hours of each other. I was absolutely gutted." GPN05, EN

> "Yeah. It's been quite trying. Some of my nurses – one of my nurses particularly has got quite a bit of anxiety from being out the front triaging people because people get abusive. So we've copped quite a bit of abuse out the front and she's just not used to that sort of thing." GPN09, RN

In general practice, some participants perceived that their role was not always valued by their employers. This lack of acknowledgement was accentuated during the pandemic due to poor remuneration for GPN care and lack of capacity to generate income for COVID-19 specific nursing work such as developing and implementing infection control procedures.

> "I haven't – never felt quite as undervalued." GPN09, RN

> "I feel like nurses have very little power over that in general practice… at the end of the day, it's a financial decision by the practice owners, isn't it? If your idea is not sustainable, they're not gonna do it. And it's so disheartening." GPN10, RN

> "I had rewritten infection control policies for the centre. I set up a car park consultation system. I'd been writing the triage thing up on my own that week and printing it out for the doctors and the nurses, but none of that was mentioned… So, I don't think it was very valued, no." GPN09, RN

For some GPNs, workplace management did not value their professional judgement about infection control or include them in decision-making or development of practice policies.

> "… we get a lot of negativity from them [from management], … us nurses, we wanted to… cross out every second seat so people don't sit next to each other, but then the owner, he refuses to do it …" GPN12, RN

> "I was certainly left out … even though I'm listed as the infection control person, I was left out of all the management decisions about what happened." GPN11, NP

However, other participants felt valued and supported in their workplace during the pandemic because they had received direct verbal or other signs of appreciation were involved in making policy decisions for the practice or the practice instigated measures aimed at keeping the nurses safe.

> …I think [being valued] not just [by] the clients, but – well, certainly by our directors, by our whole senior leadership team. We have a very good relationship. It's a small company that I work for, so we have a very good relationship with the senior leadership team and they're always telling us we're amazing before COVID, so let alone after COVID." CN12, RN

> "We felt very valued, actually. Yeah, definitely our work made sure they thank us, and they made sure that we were valued… We didn't just have the general public saying "thank you" all the time… We have an end of year bonus, end of financial year bonus, and say, "Thank you for the hard work," ordered cupcakes and just generally said thank you all the time." GPN07, RN

The financial realities of general practices being able to afford to maintain employment of GPNs during the pandemic significantly

impacted on the psychological well-being of some participants. Stress was created as government funding of telehealth initially excluded nurses and government job support did not extend to some employers. These participants described feeling as though they were expendable rather than valued and were frightened of losing their jobs.

> "… whilst we were being told that we were valued, when there were concerns about the costs versus the income of the business… it became clear that the nurses were the ones that they felt were the most expendable of the staff, that they needed reception staff to field calls and they needed doctors to see patients." GPN13, RN

> "… there's four nurses that work here and we all were thinking 'Any tick of the clock now, we're going to be seen as luxury item and we're going to lose our jobs.' And it was only that the government brought in … Telehealth item numbers that saved us. … I did think that we would all lose our jobs. And three of the four of us are the major breadwinner for our household. So that was really frightening." GPN05, EN

The uncertainty associated with a lack of job security caused some participants to feel vulnerable, triggered significant stress. In addition, some participants queried the long-term viability of a career in general practice.

> "So I actually thought I'd be unemployed. My hours have been reduced greatly. My pay is about half of what it was. So, initially, I thought I'd be unemployed. It was a horrible hit to the ego. I spent a lot of time emotionally very concerned about my career choice and should I go back to the hospital… is the risk of that in terms of stress and pressure on my family worth it." GPN10, RN

> "But it made me realise, well maybe I've been a bit silly putting all my eggs in the primary care basket really and I should be keeping my hand in elsewhere because that's really, really risky. … it did make me very disheartened with the vulnerability I guess of working in the private sector…" GPN01, RN

4.2 | Psychological impacts

Most participants described how psychological sequelae from the pandemic had impacted on them both professionally and personally. Several participants discussed experiencing feelings of anxiety or stress. Some participants acknowledged increased anxiety levels that related to their nursing role during the pandemic, but also broader community concerns about COVID-19.

> "I think it's impacted everybody's mental health and then everybody feeds off each other… There's an increased anxiety in the world. So, I've noticed my anxiety levels have gone up. But my patients come in and you can tell there's an increased anxiety. And half of my appointments are people who are just anxious and just need to talk these days." GPN11, NP

> "Yes, I think that constant anxiety that, you know, trying to help manage other people's anxiety that's in your work and outside of work, people are constantly asking whether they should do this, or what do I think about that?" GPN13, RN

Several participants described high stress levels as a result of the pandemic and its impact on their workplace and hours of work.

> "… I've never felt this stressed about work, I don't think." GPN09, RN

> "I was struggling psychologically. I found it very hard and very stressful… I was doing lots more than my contracted hours." CN01, RN

Participants also reflected on how the mental health and well-being of team members impacted their own psychological well-being.

> "I feel I'm grumpy every day, because I come home from just a completely stressful workplace… everybody's on edge. Everybody's got this baseline anxiety. The doctors, the nurses." GPN04, RN

> "There was significant impact and stress and anxiety across from all of the team that work in the practice room, the receptionist being the first point of call, through to the doctors… so it sort of fluctuated from week to week, but it certainly had an impact on how we managed." GPN06, RN

Others noted that the stress associated with working during COVID-19 could have been better managed.

> "Some of the other members of the team have probably had far more anxiety associated with this than myself…, there might have been perhaps some better considerations and support provided for that mental health aspect to the team… A little bit more clear company advice out and offered better." GPN06, RN

> "This is the beginning, it's not anywhere near the end. And I think it – I must admit I don't get that level of support from my line [manager]… I'm having to manage upwards all the time… I get the by-line to please take

more care of yourself and EAS [employee assistance] support is there 24/7 for you and your family, ... but it's becoming really tokenistic." CN10, RN

In addition to concerns related to their workplace, some participants expressed being worried about transmitting COVID-19 to their family and loved ones, particularly those who were vulnerable.

"I think for me there was a heightened anxiety because I was getting all this information from work but my wife had been through a very major medical health issue two and a half years ago ...so I was a bridge between the public life to her. Although she's well ...I don't want to test her with COVID-19 either." CN03, RN

"That is always in the back of my mind, not so much for me, ... I should be self protective but ... a little story is my daughter was unwell at the height of COVID and I had her tested. All I kept thinking about was am I asymptomatic and has she got it?" CN04, RN

4.3 | Engagement in self-care

Overall, participants described various strategies associated with engaging in self-care. These ranged from increased vigilance in infection control precautions both at work and at home, to exercising regularly and eating well, reducing social media use, accessing leave and seeking and providing professional, collegial and family support. Some described how hobbies had been important aspects of self-care, whereas others described how their level of anxiety had made it difficult to focus on their own psychological well-being.

"I've been exercising at home and my partner has been forcing me to run - even though I hate running... I've been eating well and healthy, but that's something I always do. And then we've also been doing some yoga at home and then just normal routines at work – wash my hands, eat well, have my breaks, have good head space." GPN12, RN

"Well, obviously when I was pretty hysterical in the start, I felt – well, I can't go to work like this. I'm too stressed. My sleep was affected and everything. I think it was the fear and talking to the family in Italy and all that sort of stuff. So taking [that] time off was really beneficial. My husband and the kids and I just spend a lot of time together. We're used to that where we do a lot around the home... So I think that was really important – have that time at home – just the cooking, and the cleaning, and being there for them. I felt very safe at home." CN11, RN

Several participants mentioned how peer support had been a key factor in helping them cope during the pandemic.

"I've got lots of practice nurse friends, we're all pretty tight and we keep in very, very close contact with each other... you know, if someone's having a rough day, the others support them.... So they've been a great source of somewhere to go to debrief, to just get support in general, really." GPN05, EN

"So we – at the beginning of COVID, we did some fun things like having code lavenders where we had this box of resources and things that – someone can call the code lavender when they're feeling really overwhelmed and that was – it was a whole process and it was there to break the tension, give people something to laugh at." CN10, RN

Despite concerns regarding the potential risks that their work as a PHC nurse created for them during the pandemic, many participants described an ongoing commitment to working as a nurse and the positive aspects of a PHC career.

"And my principal doctor at the very beginning of this said as healthcare professionals, doctors and nurses we run towards the fire. You never see a car accident and a nurse not stopping or a doctor not stopping. You don't see, if something happens the doctors and nurses run towards it. Whether it's bushfires, whether it's emergencies, whether it's whatever, you won't see any people rushing away from this, because this is what we do, this is our job. We prepare for this, every day we come to work not knowing what we get, and we deal with it every day. And I thought that was a really good analogy, you know, we run towards the fire. And I feel exactly like that's what I've been doing this whole last four or five months, is just running towards the fire constantly, trying to stem my anxiety." GPN04, RN

5 | DISCUSSION

This study is the first qualitative study to explore the psychological well-being of Australian PHC nurses during the COVID-19 pandemic. International studies regarding the impact of the COVID-19 pandemic, and indeed previous respiratory pandemics, on the psychological health and coping mechanisms of nurses have largely focused on nurses working in acute hospitals (Fernandez et al., 2020; Huang et al., 2020; Kackin et al., 2020). Whereas acute care nurses may be faced with somewhat different challenges in dealing with those with more acute and critical illness, those working in PHC play an important role in healthcare delivery in the community (Halcomb, McInnes, et al., 2020; Halcomb, Williams,

et al., 2020). This study highlights the importance of considering the impact of COVID-19 on nurses working outside the acute hospital. Australia has experienced a significantly lower impact of COVID-19 compared with other countries internationally in terms of infection and death rates. However, the effect on the psychological well-being of Australian PHC nurses demonstrated in this study underscores the importance of identifying the needs of PHC nurses internationally and developing clear strategies to support their psychological well-being as the world emerges from the pandemic.

It is well established that frontline workers suffer psychological sequelae when providing healthcare services during a pandemic (Fernandez et al., 2020; Labrague & de Los Santos, 2020). Participants in our study highlighted that feeling valued was an important contributor to their psychological well-being. Those who felt valued and supported described their experiences more positively than those who did not feel valued and supported. In particular, those who reported being intimidated by patients and suffering physical abuse including being "coughed on" described negative psychological responses as a result. Previous studies have similarly reported stigmatising attitudes to nurses during COVID-19 and the negative impact of this on psychological well-being (Kackin et al., 2020; McKay et al., 2020). This highlights the importance of positive public health messaging to promote the role of healthcare workers and the challenges that they face in delivering care.

In addition to feeling valued by the community, this study revealed the importance of PHC nurses being involved in decision-making in their workplace. Nurses have the potential to make a significant contribution during a pandemic in areas such as infection control, establishing clinics, patient education and developing policies (Halcomb, McInnes, et al., 2020; Halcomb, Williams, et al., 2020). However, nurses' ability to participate in decision-making is impacted by other factors including doctor–nurse collaboration and nursing management (Krairiksh & Anthony, 2001). Both of these factors can create challenges in PHC nursing, where many workplaces have limited nurse management structures and doctors often have a dual role as employers and clinical colleagues (McInnes et al., 2017). A lack of consistency across the multitude of employers and organisations that comprise the PHC sector compounds this challenge. Despite the challenges, involvement in organisational decision-making can increase staff satisfaction and retention (Smith et al., 2021). Therefore, there is a need to promote PHC nurse engagement in decision-making in the future.

Participants in this study reported high stress levels associated with their employment conditions, including a reduction in work hours per week and lack of job security. Reduced hours of work and job security are known psychological stressors because they result in uncertainties regarding social and financial circumstances (Fernandez et al., 2020). Lack of 'billing' and funding for GPN-led activities such as clinics, home visits and chronic disease management in the early stages of the pandemic resulted in nurses not being retained by some practices or being employed on reduced hours

(Halcomb, McInnes, et al., 2020; Halcomb, Williams, et al., 2020). Efforts must be focused on ensuring that health services, such as general practices, are supported financially by the government through employer incentives or relief packages to maintain employment stability and work conditions for nurses during future disasters or pandemics (Halcomb, McInnes, et al., 2020; Halcomb, Williams, et al., 2020). PHC nurses need to have certainties around their employment conditions and feel ownership of not only their choice and conditions of employment but in their role in the PHC team. Such increased control of their job has been linked to reduced nurse burnout and retention of staff (Dall'Ora et al., 2020).

The literature reports differing responses of nurses internationally working in acute care settings with regard to the strategies employed to cope with the previous SARS outbreak and the COVID-19 pandemic. Both positive coping strategies such as engagement in exercise and listening to music (Sun et al., 2020) and negative coping strategies such as self-blame (Maunder et al., 2006) are cited. Choice of strategy is considered to be related to different personalities and the existence of support structures such as family and colleagues (Kackin et al., 2020). Many of participants in this study reported engagement with positive coping strategies, such as exercise and a healthy diet, that are generally health-promoting lifestyle choices. They also reported regularly taking leave and seeking the support of both family and peers. Lack of psychosocial support has been identified as a risk factor for negative psychological outcomes (Naushad et al., 2019). Future research should explore in depth the coping strategies employed by PHC nurses in adjusting to the realities of working during a crisis such as a pandemic. This will allow effective strategies to be supported and areas requiring development to be highlighted. A focus on supporting coping strategies will be important in minimising the psychological impact on PHC nurses and will assist in developing a risk management strategy for future pandemics (Kackin et al., 2020).

5.1 | Limitations

This study has several limitations. Firstly, interview participants were drawn from a national online survey undertaken at the height of the first wave of COVID in Australia. Though every attempt was made to broadly sample and circulate study information via a range of key professional organisations and social media sites, the sample may not be broadly representative of all the target population.

The use of telephone interviews in this study was necessary due to the geographical distances between participants and the social distancing rules at the time of data collection. However, it is possible that face-to-face interviews may have yielded richer information.

In relation to rigour, we acknowledge that taking the findings back to participants may have added an additional layer of credibility. However, given the time-sensitive nature of the data collection and the already significant burden on participants due to COVID, we did not return the data to them for comment.

6 | CONCLUSION

To our knowledge, this is the first study to explore factors impacting on the psychological well-being of Australian PHC nurses during the COVID-19 pandemic. PHC nurses have an important role in providing continuity of acute, chronic illness and preventative healthcare during and beyond the pandemic. It is essential that PHC nurses are supported to maintain their psychological well-being and cope with challenging work conditions to not only meet the needs of the population but also to maintain an effective PHC nursing workforce for the future.

CONFLICT OF INTEREST

The authors declare there are no conflicts of interest.

AUTHOR CONTRIBUTIONS

All authors have agreed on the final version and meet at least one of the following criteria: Substantial contributions to conception and design, acquisition of data or analysis and interpretation of data; drafting the article or revising it critically for important intellectual content.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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