









Primary Health Care Nurses' Perceptions of Risk During COVID-19: A Qualitative Study

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Key words

community nursing, family practice, nursing workforce, pandemic, primary health care, risk

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Accepted July 12, 2021

doi:10.1111/jnu.12698

Abstract

Purpose: COVID-19 has presented health care professionals with unprecedented challenges. Significant risks have emerged as nurses have continued to work in delivering frontline health care during the pandemic. Feeling “at risk” has significant deleterious effects on nurses. The study sought to explore the perceptions of risk by Australian primary health care nurses (PHC) during COVID-19.

Methods: Twenty-five Australian PHC nurses were purposively recruited from survey respondents who indicated a willingness to be interviewed. Phone interviews were undertaken between June and August 2020. Audio-recordings were transcribed and analyzed thematically.

Findings: Participants shared concerns about risks in the workplace that emerged during COVID-19 and described the strategies used to mitigate these identified risks. Three themes were identified: (a) Professional concerns, (b) Personal/family concerns, and (c) Patient needs.

Conclusions: Understanding PHC nurses' perceptions of risk during COVID-19 provides an important insight into how they can be better supported to manage the risks that they face and feel safer in their workplace. Ensuring that PHC nurses are well-supported is important to optimize job satisfaction, reduce burnout and improve patient care.

Clinical Relevance: There is a need to ensure that nurses feel safe during crises such as pandemics to protect both individual nurses and the broader workforce. Protecting the health workforce is essential to optimizing service delivery and promoting health outcomes.

COVID-19 has placed global health systems, and the nurses who work in them, under significant strain. High global infection and mortality rates in both the general population and healthcare professionals (Koh, 2020) highlight the far reaching pandemic impact. As reported during previous respiratory pandemics (Koh et al., 2012; Person et al., 2004), nurses hold real fears of heightened risk (Ho et al., 2005; Sperling, 2021) in terms of contracting disease, spreading the infection to others and fear of stigmatization by the community (Koh, 2020; Taylor et al., 2020). Exposure to infectious disease is a real risk for nurses which is heightened during a pandemic (Cawcutt et al., 2020).

There is a demonstrated relationship between perceived risks and mental health issues such as anxiety and depression in nurses (Gorini et al., 2020; Labrague & De Los Santos, 2020; Lam et al., 2020; Sperling, 2021), as well as attrition from nursing (Halcomb et al., 2020a, 2020b). During COVID-19, mass media and its spreading of misinformation about transmission and symptom management have contributed to what has been termed an “infodemic,” heightening risk perceptions (Cinelli et al., 2020; Pickles et al., 2021).

Despite evidence-based infection control strategies informing clinical practice, reports of insufficient or inappropriate personal protection equipment (PPE)

supplies impacted nurses' early risk perceptions (Halcomb et al., 2020a, 2020b; Ho et al., 2005; Koh, 2020). Limited supplies of PPE have been reported to be a particular concern in primary health care (PHC) settings where supplies are much more limited than in acute care (Halcomb et al., 2020a, 2020b). While previous literature has focused on acute care nurses (Fernandez et al., 2020), less is known about the perceptions of risk by PHC nurses (Halcomb et al., 2020a, 2020b). Yet PHC nurses play a vital role in the public health response, promoting infection control within the community and facilitating ongoing access to community-based essential healthcare (Shaw et al., 2006).

In Australia, most PHC nurses have completed a baccalaureate program (or equivalent) and are Registered Nurses (RN) (Australian Health Practitioner Regulation Agency, 2018). A smaller number of nurses are diploma prepared Enrolled Nurses (EN) or Masters' prepared Nurse Practitioners (NP). While PHC nursing is well established in countries such as the United Kingdom and New Zealand, these nurses have a much smaller profile in Australia (Halcomb & Ashley, 2017). Despite the Australian federal government shifting funding to community-based healthcare, lower wages and poorly defined career pathways have each impacted the growth of Australian PHC nursing (Calma et al., 2019; Halcomb & Ashley, 2017). Future increases in attrition from the Australian PHC workforce due to perceived risks will challenge its ability to meet the health needs of local communities. Given that responses to future pandemics are known to be influenced by previous experiences (Koh et al., 2012), it is important to build a robust body of knowledge about nurses' perceived risks during COVID-19. Therefore, this paper seeks to explore PHC nurses perceptions of risk during COVID-19.

METHODS

Design

This paper reports a qualitative descriptive study (Sandelowski, 2010) undertaken within a mixed-methods project, exploring Australian PHC nurses' experiences during COVID-19. This paper reports specifically on interview data that emerged about

perceptions of risk associated with the pandemic. Other disparate aspects of data from the project are reported elsewhere (Halcomb et al., 2020a, 2020b; James et al., 2021).

Participants

Primary health care nurses who indicated an interest in participating through an initial survey, were recruited (Halcomb et al., 2020a, 2020b). Of the 141 respondents willing to be interviewed, 25 were sampled purposively based on qualifications, age, location, and employment. Potential participants were telephoned by a researcher to provide information and seek consent.

Data Collection

Due to geographical dispersion and COVID-19 restrictions, individual semi-structured telephone interviews were conducted between June and August 2020. An interview schedule was developed from survey data (Table 1). Two experienced female PHC nurse researchers (SJ & CA) conducted the interviews and made field notes. While data saturation was thought to have occurred after 21 interviews, a further four interviews provided confirmation. All interviews were audio-recorded and transcribed verbatim by professional transcriptionists.

Data Analysis

Thematic analysis was undertaken as described by Braun and Clarke (2006). Data immersion occurred by two authors (SJ & CA) reading transcripts and field notes and listening to audio recordings. Data were uploaded into Microsoft Word for manual coding. The two authors collated codes, developed these into themes and cross-checked themes with transcripts. Emerging codes and themes were discussed in detail by the whole research team, including exploring discrepancies, until final themes were confirmed.

Rigour

Rigour was established as described by Lincoln and Guba (1985). Credibility was established through the verbatim transcription, peer review and data saturation.

TABLE 1. Interview schedule excerpt

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- How at risk did you feel in terms of contracting COVID-19?
 - What personal concerns did you have?
 - What thoughts, if any, did you have about resigning as a result of COVID-19?
 - Did you have sufficient PPE? If not, how willing were you to care for patients with or suspected COVID-19? What are your reasons for this?
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The use of field notes and thick descriptions within the results section ensured transferability. To support dependability and confirmability, an audit trail was maintained.

Ethical Issues

Ethics approval was granted by the Human Research Ethics Committee at the University of Wollongong (Approval number HE2020/161). Prior to the interview, participants were provided written information sheets and completed a consent form.

RESULTS

Participant Characteristics

Interviews ranged from 19.0 to 59.0 min (mean 38.5 min). Thirteen (52%) participants worked as a general practice nurse (GPN) with the remainder employed in community-based nursing (CHN) roles. Demographics are outlined in Table 2.

Three themes emerged from the interviews and are described below.

Table 2. Participant Demographics

| Demographics | <i>n</i> | % |
|---------------------------------------|----------|----|
| Gender | | |
| Female | 24 | 96 |
| Male | 1 | 4 |
| Age mean 45.1 years | | |
| State of residence | | |
| New South Wales | 9 | 36 |
| Victoria | 7 | 28 |
| Queensland | 4 | 16 |
| Western Australia | 3 | 12 |
| South Australia | 2 | 8 |
| Nurse type | | |
| Registered nurse | 20 | 80 |
| Nurse practitioner | 3 | 12 |
| Enrolled nurse | 2 | 8 |
| Employment type | | |
| Part time | 12 | 48 |
| Full time | 11 | 44 |
| Casual | 2 | 8 |
| Years practising, mean 22.8 years | | |
| Years as a PHC nurse, mean 12.5 years | | |
| Employment location | | |
| General practice | 13 | 52 |
| Community health | 12 | 48 |

Abbreviation: PHC, primary health care.

Professional Concerns

During the height of the pandemic, participants described the impact COVID-19 had on their perception of workplace safety. This particularly related to PPE issues and workplace layouts incompatible with social distancing. Difficulties in accessing PPE led to some participants feeling scared about the risks of working without adequate protection.

I was terrified because we didn't have the right PPE. I went on TV begging for it.... And nothing came.... Nothing. They didn't have anything.... You couldn't get it. And then you ask within a nursing forum what are people doing if you can't get a surgical mask and then other people jump in and say, "Well, that's not best practice." I know it's not f***ing best practice, but it's better than nothing, right? A fabric mask is better than none. What are we doing when we have nothing? (GPN10-RN)

For one participant, refusing to work without adequate PPE was met with threatened termination of employment which increased their fear.

We had no wipes, no gloves, no gowns, no masks, no sanitizer, and I just thought – and we're going into people's homes, we're sharing equipment, I've got people coughing in my face... and we had nothing to keep ourselves safe.... we were threatened with dismissal... that was very fearful. (CHN11-RN)

Several participants voiced concerns about directives that suggested a reduced need for PPE use in PHC due to the perception of low community risk.

I think there was a lot of assumption that it didn't really apply to us because we didn't really deal with sick people when in actual fact, we're probably dealing with super-spreaders. (CHN08-RN)

it didn't help us feel confident. It didn't help us to push that confidence on to our clients either... It was just, well, sh**, we've just got to work on. We were given packs [of PPE] in the cars to use but, again, there

was that attitude of only use them if they're symptomatic. (CHN03-RN)

One approach taken by participants to minimize risk to themselves was to reduce patient access to the clinical setting:

...our waiting room was closed so we would only bring people into the building if we absolutely had to. A lot of things we ended up doing in the carpark... we would screen them before we either went out to see them in the carpark or before we brought them into the building. (GPN01-RN)

Another risk minimization approach described was to reduce the time spent with the patient, where possible.

I think we've also been feeling a bit vulnerable, so I know that I was pretty conscious of that need to keep the amount of time that I was actually close to the patient. (GPN13-RN)

I had as minimal contact as I could... I reduced my time in people's homes. (CHN01-RN)

Ongoing feelings of risk made some nurses resign from their employment due to fear.

We had a lot of staff leave from fear, not only contracting the virus but their job security. (GPN10-RN)

Oh, I'm going to [resign]. I'm out of here next year. I thought, no, this is just the icing on the cake.... I can't do it any more. (CHN05-RN)

However, others reported being unable to resign because they needed ongoing employment or were unwilling to leave as they were a committed and proud nurse.

I never considered resigning, no... Because I need a job!. (GPN03-RN)

It's my job... I'm over 30 years of working as a nurse... I don't want to be like a martyr

but I signed on for it. It's my job. I'm a carer and I'm proud of it and I'll do my best. (CHN03-RN)

Despite the concerns expressed by many participants, others indicated that as they were "*doing all the right things*" (GPN12-RN) and they were not concerned about potential risks associated related to their work.

I didn't feel at risk at all. I was following all the procedures that there are to follow, but I didn't personally feel at risk. I'm quite well and healthy, otherwise I wouldn't be working, and I didn't feel at risk. (CHN12-RN)

I felt pretty safe actually. I'm immunocompromised so for me to feel safe... I was fairly confident because I know my patients so well and know their movements in the community and contact with other people. So, I did feel safe because of the screening and the PPE, and social distancing. (CHN01-RN)

A few participants described feeling safer at work than they did in the wider community because of the precautions within the workplace.

To be honest, I felt like there was more chance of getting it at [grocery store] than I did at work. (GPN07-RN)

We're probably maybe a little bit better because we do wear it [masks] whereas I think if you go to the shops or if you go out and come into contact with it, you know, the likelihood in the clinic is hopefully fairly low. (CHN05-RN)

Personal and Family Concerns

Several participants expressed concerns that being exposed to COVID-19 at work could affect their own health, or that of family members.

Probably more concerned about family members. I'm more concerned about me being an asymptomatic carrier and giving it to grandparents and parents. (GPN07-RN)

the other thing that really worried me during the whole COVID thing was that my work car is my family car. And so, if I've been in a COVID household all day... I then have to pick my kids up in that car and I felt that was really cruel and really mean.

(CHN11-RN)

Participants also described how family members expressed concern about risks to their health while participants were continuing to work.

My kids weren't very happy because they wanted me to stay home, and my family, brother and sister were quite concerned 'cause I'm a nurse and they all worry... they were all more concerned than I was... My brother offered to pay me my weekly wage just to keep me at home, that's how worried he was.

(GPN08-RN)

it was more family who are concerned about me working as a nurse than I actually was.

(CHN07-RN)

These perceived risks to family prompted some to adjust the home environment to minimize transmission risk.

I'm just being really, really careful about what I do when I get home in terms of getting changed and washing all of that sort of thing straightaway.

(GPN13-RN)

...trying to minimize a bit of risk we sleep in different rooms at the moment... I found it very challenging.

(CHN03-RN)

Patient needs

Most participants mentioned heightened fear and anxiety among their patients, primarily due to the extensive pandemic media coverage.

I think what's made me more mad is the bloody media... it's just repeat, repeat, repeat... it's just fearmongering. It's creating more disease and more anxiety.

(CHN02-NP)

the media has made everybody panic. A lot of our phone calls, especially from our

elderly, they're just so worried about it... the media has made patients very, very scared.

(GPN02-EN)

Participants felt that their patients required additional education and reassurance about managing perceived risks to their health during the pandemic. This included explaining how risks were being minimized for people attending health services through infection control procedures and changes in service delivery.

People just need the facts and they need to be reassured... These are the strategies we have in place to keep you safe... you would get these people who were so anxious and fearful, had run out of their medicines... [They] come in and you'd calm them down, you'd let them debrief, all their tears. You'd rationalize with them, inform them, give them strategies, get them their medicines and they go away almost 20 years younger.

(CHN02-NP)

a lot of patients decided that they didn't think it was safe to come in, in the practice... that was a huge shift in chronic diseases management.

(GPN07-RN)

There was concern that some patients were so scared of the risks associated with COVID-19 that they were ignoring their own health needs:

it's just so wrong and then you create so much fear... people [are] scared to get their medicines, people then start rationing their medicines... I'll only take my blood pressure medicine. I've probably got enough here for so long, I'll take that every three days and then my diuretic if I take that on the day inbetween, and then my antihypertensive, I'll see if I can maybe take that alternate days. People start making up their own strategies...

(CHN02-NP)

they're [patients] staying away even though they've got symptoms. They might have bleeding or maybe symptoms of an ovarian problem, or a breast lump, or something like that, and they're not coming because of fear.

(CHN09-NP)

Participants acknowledged the important role they have in public education about managing risks and infection control at home.

[The] community needs a better education program. People do not know how to put on a mask, they do not know how to wash their hands. (GPN05-EN)

...my daughter was working in a bakery and I was just saying to her, 'I want you to come home and take your clothes off, and pop them in the bag, leave your shoes outside', and do all these clean things and have a shower straightaway and she thought, 'Mum, that's so over the top'. (CN08-RN)

Some participants described the complacency they had witnessed among some patients and the risks that this raised.

I think people have got complacent— because we've had low numbers for a while, but now all of a sudden, we're getting the high numbers. I think complacency has really set in, and that don't care attitude... I think it's just about the whole anxiety issue around getting testing. (CHN09-NP)

However, it's bizarrely interesting how many patients would sit in the chair in my room and say, 'Well, I've had this cough.' And you think, Didn't you just go through screening? Oh, I didn't think it was worth telling them that because they'd send me away [to] the COVID clinic. (GPN11-NP)

People are fatigued from COVID already.... I've heard people swear at the girls at the front desk "I'm not wearing a mask..." and take it really personally. It's not personal, at all. (GPN05-EN)

DISCUSSION

From PHC nurses' perceptions of risks during COVID-19, key themes emerged around the impact on the workplace and service delivery, risks to the health of the nurse and their family and the impact on patients. This study reveals how these risks caused participants at times to be fearful, scared, anxious and for some to consider leaving nursing. These

emotional responses were evident despite COVID-19 case numbers and mortality being significantly lower in Australia than elsewhere (International Council of Nurses, 2021). This is consistent with Dryhurst et al. (2020), who found a high uniform risk perception across 10 countries, including Australia, despite differences in pandemic severity. Given the need to maintain a sustainable PHC nursing workforce, the impact of these perceptions of risk requires consideration.

The most obvious risk identified by participants was lack of PPE. When faced with high infection risk and limited PPE supply, health professionals frequently experience symptoms such as fear, anxiety, frustration, isolation, insomnia, and anger (Kang et al., 2020; Simione & Gnagnarella, 2020). Inadequate PPE supply during COVID-19 has been documented internationally (Livingston et al., 2020; Ranney et al., 2020). While the rapid supply of adequate PPE remains a key challenge in pandemics (Huang et al., 2020), consideration about how PHC nurses were supported could have optimized the experience. The perceived lack of support from employers, the public and policy-makers intensified the concerns of participants. Evidence-based protocols for PPE use in specific settings need to be clearly and consistently communicated to provide confidence that risks are appropriately being minimized and promote responsible PPE use (Verbeek et al., 2020).

Participants described how care delivery was modified to maintain social distancing. Minimization of face-to-face care, telehealth options, PPE use, and enhanced cleaning practices were implemented to reduce risks to patients and professionals (Australian Government Department of Health, 2020; New South Wales Government Clinical Excellence Commission, 2020). Despite these efforts, some patients remained reluctant to attend health services. This highlights the need to balance communication about risks minimization with the need for ongoing health care. Ensuring that key PHC service users (Australian Primary Health Care Nurses Association, 2017), such as the elderly and those with chronic conditions, continue to receive regular care is vital to maintaining their health. Health professionals need to balance media reports that highlight the risk to reinforce how risk minimization has promoted safety in accessing health care. Concurrently, media outlets have an ethical responsibility to ensure that reporting is unambiguous, and limits sensationalism with a focus on delivering timely information while minimizing fear in the community (Mertens et al., 2020).

While study participants spoke of concerns about transmitting COVID-19 to family members, they also described family members expressing nervousness about them continuing to work. Other studies have shown that the concerns of family and friends can have a significant impact on an individual's perception of risks (Dryhurst et al., 2020). The risk of contracting COVID-19 is increased for healthcare workers and their household contacts compared to the general population (Shah et al., 2020). Unlike acute care nurses, who are often portrayed wearing full PPE and working in isolation rooms, PHC nurses are more likely to be wearing only a mask and perhaps an apron in a community setting (Halcomb et al., 2020a, 2020b). Communicating infection control strategies that consider workers in a range of settings and encompass principles for reducing transmission upon leaving the workplace may increase confidence in minimizing the risk of transmission to the home environment.

This study was drawn from a larger mixed methods project about PHC nurses experiences during COVID-19. As such, the recruitment of participants from various locations, settings, and roles was a strength. Interviews occurred via telephone to overcome COVID-19 restrictions and the geographical dispersion of participants. The researchers' experience interviewing this group mitigates concerns about the data quality.

CONCLUSIONS

Findings demonstrate that concern about risks associated with the pandemic was a significant issue. Feeling at risk in the workplace and being concerned about transmitting COVID-19 to the home environment have the potential to have significant psychological impacts. Understanding PHC nurses' perceptions of risk can inform nurse leaders, policy-makers, and primary health care organizations in supporting this workforce. Addressing concerns about risk has the potential to enhance job satisfaction, reduce burnout and improve patient care.

ACKNOWLEDGMENTS

Approval for the conduct of the study was gained from the University of Wollongong prior to study commencement (Approval no. HE2020/161). This study was funded jointly by the Australian College of Nursing & the Faculty of Science, Medicine and Health, University of Wollongong. The data underlying this article will be shared in a deidentified form on reasonable request to the corresponding author.

Clinical Resources

- Australian College of Nursing COVID-19 Resources <https://www.acn.edu.au/covid-19>
- Australian Primary Health Care Nurses Association. <https://www.apna.asn.au/>
- A critical moment, NHS staffing trends, retention and attrition. <https://www.health.org.uk/publications/reports/a-critical-moment>
- General Practice – Developing confidence, capability and capacity: A 10-point action plan for GPN Nursing. <https://www.england.nhs.uk/wp-content/uploads/2018/01/general-practice-nursing-ten-point-plan-v17.pdf>

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