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Research Article

Exploring The Experiences of Redeployed Nurses During the Covid-19 Pandemic: A Mixed Method Study

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Abstract:

Aims & Objectives: This study aims to investigate the experiences of nurses redeployed during the COVID-19 pandemic.

Background: The COVID-19 pandemic prompted the redeployment of healthcare staff to address surging cases and staff shortages.

Design: Cross-sectional, mixed methods study.

Methods: Data was collected via survey and semi-structured interviews. Validated tools were incorporated into the survey, to measure symptoms of anxiety (Generalised Anxiety Disorder-7), depression (Patient health questionnaire-9) and burnout (Copenhagen burnout inventory-19). Quantitative data from the surveys were analysed descriptively using SPSS software. Qualitative data was analysed using a thematic analysis approach.

Results: Thirty-one nurses responded to the online survey. Around 24% of the participants reported experiencing moderate to severe symptoms of depression, 10% anxiety and 29.4% burnout during redeployment. The prevalence of work-related burnout was 53.25%, followed by personal (49.4%) and client-related burnout (32%). Data obtained from the open-ended survey questions reflect similar themes as semi-structured interviews. Participants reported a mix of positive and negative redeployment experience. Following themes emerged from their response: Initial feelings and thoughts of redeployment, positive experience, negative experience, impact on mental health and wellbeing, changes since the first redeployment and suggestions for improvement to future placements.

Conclusion: The study outcome provides insight into the nurses' redeployment experience during pandemic and highlights the areas for improvement when preparing for future global and/or local disasters and enhance the overall experience of redeployment.

Relevance to clinical practice: This study offers a baseline understanding of nurses' redeployment experiences during the pandemic, informing policymakers and healthcare sectors to enhance redeployment strategies for future crises.

Reporting method: This study used the Mixed Methods Article Reporting Standards (MMARS).

Keywords: Anxiety, Burnout, COVID-19, Nurses, Redeployment, Stress

Introduction

The COVID-19 pandemic has brought unprecedented challenges to healthcare systems worldwide, necessitating the redeployment of healthcare

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workers, particularly nurses, to address critical needs and staffing shortages. The redeployment to an unfamiliar environment during the challenging and unusual circumstances is reported to have a significant psychological impact on the healthcare workers (Li et al., 2022; Roberts et al., 2021). Evaluating redeployment experiences during the pandemic is essential to inform and support preparedness of healthcare workers for future global as well as local disasters.

Several studies have been conducted to explore the redeployment experiences of nurses during pandemic. However, it is reported to vary globally with a blend of positive and negative experiences (Ballantyne & Achour, 2022; Gamble et al., 2022; Kennedy et al., 2022; Kissel et al., 2023; Li et al., 2022; Schulz-Quach et al., 2022; Scott et al., 2023). Mostly the positive experience was associated with feeling motivated to make a meaningful contribution to the society and perceiving this as an opportunity for professional growth. Some of the key factors identified to create a positive experience for the staff were familiarity and recency of experience, adequate patient allocation, adequate training and orientation, ongoing education, support from colleagues, optimized scheduling, clear communication about their redeployment and role (Ballantyne & Achour, 2022; Chu et al., 2023; Evans et al., 2023; Kissel et al., 2023; Mhawish et al., 2022; Schulz-Quach et al., 2022; Scott et al., 2023). The negative experience could have resulted due to various barriers and challenges encountered during the redeployment. The main factors contributing to negative experience identified in many studies are physical burnout, high infection risk, working in unfamiliar environment, lack of training and support, long working hours, heavy workload, lack of support and communication (Gamble et al., 2022; Kennedy et al., 2022; Vera San Juan et al., 2022; Walker & Gerakios, 2021).

Background

Most of the evaluations have been done primarily in the UK and USA (Schulz-Quach et al., 2022). A few studies have been conducted in Australia. In a recent study designed to explore healthcare workers' experience of redeployment to a regional COVID-19 contact tracing and monitoring team in Victoria, participants reported experiencing a sense of collaboration, the opportunity for professional growth, and the perception of making a meaningful contribution to the pandemic. However, they felt that the redeployment took a personal toll on them (Evans et al., 2023). In a study in New South Wales, a mix of positive (43%, n=40) and negative (57%, n=53) redeployment experiences were reported. Key themes emerging from qualitative feedback showed that feeling welcomed/supported and having adequate orientation and patient allocation were important elements to create a positive experience (Chu et al., 2022; Chu et al., 2023). Another study describing the experiences and perspectives of haemodialysis nurses redeployed across five haemodialysis units highlighted a number of barriers to redeployment that need to be addressed to improve the experience of redeployed nurses (Zimbudzi & Fraginal, 2023).

The comparative analysis of changes in health care workers experiences over the course of a pandemic are advised, which in turn may inform the development of suitable policy level interventions accounting for healthcare workers experiences at different pandemic stages (Chemali et al., 2022).). In South Western Sydney Local Health District (SWSLHD), the nurses during COVID-19 were redeployed to different services and specialities, which included frontline clinical, administrative, logistic and strategic positions, in order to resource COVID-19 efforts and cover staff shortages. This study seeks to explore the experiences of nurses redeployed to support the SWSLHD, between 2020 and 2021.

Methods

Aim

This study aims to explore the experiences of redeployed nurses during the COVID-19 pandemic.

Study Setting & Design

This study was undertaken in the SWSLHD. A mixed methods research design (Creswell & Creswell, 2017) was used consisting of both quantitative and qualitative methods: (1) A cross-sectional survey to measure symptoms of psychological distress amongst nurses as a result of redeployment during the COVID-19 pandemic; and (2) semi-structured interviews (ethnographic approach) to explore the attitudes and experiences of nurses towards redeployment during the COVID-19 pandemic.

Ethical Considerations

Ethics approval for the study was granted from the Human Research Ethics Committee. A participant information sheet (PIS) and consent form (CF) was included in the survey email invitation which included information about the study's purpose and that the participation was voluntary. The survey data was de-identified and coded to ensure the confidentiality of the survey responses. In the qualitative phase, participants gave written informed consent and their responses were analyses and reported anonymously. The interviews were audio-recorded and saved as password-protected audio files to which only the research investigators had access.

Participants and Recruitment

Participants in the study were nurses redeployed to support the SWSLHD during the COVID-19 pandemic in 2020 and 2021. Prospective participants were recruited through the staff database of the SWSLHD COVID-10 Incident Response Management Team. The online survey was created via REDCap and distributed. Invitation to complete the survey was sent via group email. The invitation email included a brief description of the survey and a link to access the survey. A reminder email to complete the survey was sent approximately two weeks after the initial invitation. The survey remained open for 2 x three-month data collection periods. Participants were advised that submission of the survey indicated consent to participate. An expression of interest was included in the survey, inviting respondents to participate in a semi-structured interview to explore their experience of redeployment. Participants who expressed interest in participating in semi-structured interviews post-initial survey, were sent a separate recruitment email with PIS and CF.

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Data Collection
Quantitative Data Collection

A cross-sectional survey was administered to collect the demographic details of the redeployed nurses. Demographic variables included age, sex, occupation, department, experience in clinical practice (years), and area and role of redeployment. The survey also contained three open-ended questions regarding redeployment during pandemic (i) How did you feel about being asked to redeploy during the COVID-19 pandemic? (ii) How did you find your redeployment? (iii) In what ways has your redeployment impacted your life?

Validated tools were also incorporated into the survey, to measure symptoms of anxiety (Generalised Anxiety Disorder-7), depression (Patient health questionnaire-9) and burnout (Copenhagen burnout inventory-19).

Generalized Anxiety Disorder-7 items (GAD-7)

The GAD-7 tool is utilized for measuring the severity of anxiety symptoms (Spitzer et al., 2006). Each of these items are individually scored on a 4- point Likert scale (0 = not at all, 1 = several days, 2 = more than half the days, 3 = nearly every day), and the total scores range from 0 to 21 [0 to 4 = minimal anxiety, 5 to 9 = mild anxiety, 10 to 14 = moderate anxiety, 15 to 21 = severe anxiety], with increasing scores indicating the severity of symptoms.

Patient Health Questionnaire-9 items (PHQ-9)

The PHQ-9 is utilized for measuring the severity of depression (Kiely & Butterworth, 2015). Each of the 9 items are scored on a 4-point Likert scale (from 0 = not at all, to 3 = nearly every day), and the total score ranges from 0 to 27 (0 to 4 = minimal depression, 5 to 9 = mild depression, 10 to 14 = moderate depression, 15 to 19 = moderately severe depression, and ≥ 20 = severe depression), higher score indicates greater symptom severity.

Copenhagen burnout inventory (CBI-19)

CBI-19 is a standardized tool used for measuring burnout (Kristensen et al., 2005) and includes three subscales. i) Personal burnout scale to measure the degree of physical and psychological exhaustion (6 items). ii) Work related burnout scale to measure the degree of physical and psychological exhaustion perceived by the individual related to their work (7 items). iii) Client related burnout scale measures the degree of physical and psychological exhaustion related to the patients/clients (6 items). Each item is rated on a 5-point Likert scale and the response options are "always, often, sometimes, rarely, and never/almost never" or "to a very high degree, to a high degree, somewhat, to a low degree and to a very low degree." The responses were converted to scores ranging from 0 to 100 [always/To a Very High Degree = 100, often/to a high degree = 75, sometimes/somewhat = 50, seldom/ to a low degree = 25, never/almost never/To a Very Low Degree = 0]. Scores of 25 to 49 are considered mild, 50 to 74 - moderate, 75 to 99 - high, and a score of 100 is considered severe burnout.

Qualitative Data Collection

Data were collected through semi-structured interviews. Participants who indicated in the initial survey that they were willing to be interviewed were invited to participate in an individual semi-structured interview to share their experience during the redeployment. Participants were sent an invitation email detailing the aims of the semi-structure interview along with PIS and CF. Those who consented were further contacted to arrange a suitable time to conduct a virtual interview. The interviews were conducted by an independent experienced researcher. Interviews were audio-recorded and transcribed for thematic analysis.

An interview guide was used to facilitate the interview. The guide was developed by the research team taking into consideration already existing literature. The question comprised of (i) what your initial thoughts and feelings were, when approached for redeployment? (ii) Did you feel adequately trained or confident working in the redeployed area? (iii) How was your experience during redeployment? (iv) Did you feel well supported during the redeployment? (v) How do you think SWSLHD handled the allocation of staff and recruitment process for redeployment in response to the COVID-19 pandemic?

Data Analysis

Quantitative data from the surveys were analysed descriptively using IBM Statistical Package for the Social Sciences (SPSS), Version 29. The qualitative data was analysed using a thematic analysis approach, informed by Braun and Clarke's suggested six step-by-step guide (Braun & Clarke, 2006), within QSR NVivo software.

Results

Quantitative data findings

Thirty-one nurses responded to the online survey, predominantly females (87%). Detailed demographic profile in Table 1. For the tools GAD-7, PHQ-9 and CBI-19, the Cronbach's alpha was calculated to measure the internal consistency of the items. The Cronbach's alpha value obtained for all the validated tools was > 0.90 indicating a high level of internal consistency [PHQ was 0.95, GAD – 0.91, CBI – 0.92]. The median score for all the tools was 2, indicating minimal depression, anxiety, and burnout symptoms. No significant difference was observed between different levels of depression, anxiety, or burnout (Table 2).

PHQ – (range 0-17), 62% of the participants reported experiencing minimal depression symptoms, 13.8% mild symptoms and 24% moderate to severe symptoms.
GAD – (range 0-15), 60% of the participants experienced minimal anxiety, 30% experienced mild symptoms and 10% experience moderate to severe symptoms.
CBI – For analysis the responses to Likert scale were converted to scores ranging from 0 to 100. Out of 27 responses, 29.6% reported moderate to high burnout. The mean scores of the personal, work-related, and Client-related burnout domains of the questionnaire were 49.4%, 53.25% and 32% respectively.

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Table 1: Demographic characteristics (N=31)

Demographic characteristics	Total N (%)
Age-range	
31-40	3 (9.7)
41-50	14(45.2)
51-60	9(29.0)
>60	5(16.1)
Sex	
Male	4(12.9)
Female	27(87.1)
Designation	
Registered Nurse	9(29.0)
Clinical Nurse Consultant	6(19.4)
Clinical Nurse Specialist	10(32.3)
Nursing Unit Manager	1(3.2)
Others	5(16.1)
Department	
Medical-related	10(32.3)
Theatres+ anaesthetics	2(6.5)
ICU	1(3.2)
Emergency Department	1(3.2)
Community	5(16.1)
Administration	2(6.5)
Others	10(32.3)
Employment	
Full-time	17(54.8)
Part-time	14(45.2)
Clinical Work Experience (years)	
0 -10	5(17.2)
11-20	8(27.6)
21-30	7(24.1)
31-40	7(24.1)
41-50	2(6.9)
Currently redeployed	
Yes	8(25.8)
No	23(74.2)
Area of redeployment	
ICU	2(6.5)
COVID-19 testing facility	1(3.2)
COVID-19 vaccination hub	2(6.5)
Contact-tracing	3(9.7)
Management	4(12.9)
Non-COVID-19-related ward/department	2(6.5)
Others	17(54.8)

ICU – Intensive care unit

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Table 2: Comparing means based on the redeployment status

Scale	N	Mean	SD	Median	95% CI	*p-value*
PHQ -9						
Normal	18	1.61	0.50	2	(1.36-1.86)	0.689
Mild	4	1.75	0.50	2	(0.95-2.55)	
Moderate	4	1.75	0.50	2	(0.95-2.55)	
Severe	3	1.33	0.58	1	(-0.10-2.77)	
Total	29	1.62	0.09	2	(1.43-1.81)	
GAD-9						
Minimal	18	1.67	0.49	2	(1.43-1.91)	0.393
Mild	9	1.56	0.53	2	(1.15-1.96)	
Moderate	2	2.00	0	2	(2.00-2.00)	
Severe	1	1.00	0	-	-	
Total	30	1.63	0.09	2	(1.45-1.82)	
CBI						
Normal	19	1.63	0.50	2	(1.39-1.87)	0.447
Mild	-	-	-	-	-	
Moderate	5	1.80	0.48	2	(1.24-2.36)	
High	3	1.33	0.58	1	(-0.10-2.77)	
Total	27	1.63	0.50	2	(1.43-1.82)	

*One-way ANOVA was used for analysis

Table 3: Core themes and sub themes from qualitative data

Core Themes	Subthemes (Second order categories)
Initial feelings and thoughts of redeployment	• Felt happy and valued. • Stressed and anxious • Neutral
Positive experience	• Adequate training and support • Professional growth • Support from the management
Negative experience	• Indefinite timeframe of redeployment • Lack of support and recognition • Lack of communication • Long working hours • Inadequate training and orientation • Staff shortage
Impact on mental health and physical wellbeing	
Changes since the first redeployment	
Suggestions for improvement to future placements	

Qualitative Results

Seven participants expressed interest in participating in semi-structured interview. Data obtained from the open-ended survey question reflect similar themes as semi-structured interviews, described in the following paragraphs.

When participants were asked about their initial feelings when they were approached for redeployment and their experience during the redeployment, following themes emerged from their response 'initial feelings and thoughts of redeployment', 'positive experience', 'negative experience', 'impact on mental health and wellbeing', 'changes since the first redeployment' and 'suggestions for improvement to future placements.'

1. Initial feelings and thoughts of redeployment

When asked about how they were approached for the redeployment? Some participants mentioned they volunteered,

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while others said they felt forced and had no choice, as being a nurse, they were expected to do so.

'But you could see that the number of covid cases were escalating, you could see something needs to be done so it just makes sense to, it was logical to help out in the clinical area, because my current position is nonclinical, so it made sense to help out clinically.'

'I didn't feel there was a lot of choice, it felt like being told to go and that was that.'

Felt happy and valued

In response to their initial thoughts and feelings, when they were approached for redeployment during the COVID-19 pandemic? Most of the participants stated they were happy as they felt valued. They believed it was important and their responsibility to contribute to the organisation. Some participants also perceived this as an opportunity to work in an unprecedented event. They wanted to make a difference and help and support their community during the pandemic.

"I felt it was my duty to help out and serve my community as well as support my colleagues in the health district to ensure services run safely and patient experience is not affected too greatly. I was doing my bit for NSW health."

"Being asked to assist in the pandemic response was something that I will be grateful for until the end of my time. I felt like I was doing my part to help the community."

Stressed and anxious

A number of the participants were also stressed and anxious with the thought of being redeployed as they felt unprepared and not advised accurately about the deployment. They were concerned as the COVID-19 was new and there was not much awareness. They were also worried because of increasing COVID-19 numbers and afraid of getting infected and transmitting infection to their family. They were also stressed as they were redeployed to unfamiliar areas or units where they had limited recency of practice.

'everyone was anxious and the biggest one of the things for me was that even though I'm a nurse, but you know, the pandemic was new, and everyone, I'm like everyone else, you know, watching TV, worrying myself for me, for my family, and suddenly I'm forced.'

Neutral

Only a few participants reported being neutral as they felt they had to do their job and they did what was required during pandemic.

"My feelings were neutral as I knew this time what I was meant to be doing."

2. Positive experiences

Mostly participants reported their redeployment experience as positive, fulfilling, and rewarding as they were able to help and provide support to the community in such a critical time.
'Very positive contributing to something that we have not experienced, from testing clinics to vaccination centres, to COVID inpatients and the community needing help. It was a time for people to step up and really assist our community.'

The key factors contributing to positive experience were adequate training and support, opportunity for professional growth and support from the management.

Adequate training and support

Initially some participants were unsure of their ability to undertake the role out of their practice area. However, they reported that with adequate training and support from the team they were able to execute their role. They were well informed and aware of the role and expectations.

'Yeah, it was like working for community health, but just calling people at home who had already been diagnosed with COVID and just checking in on their symptoms and making sure they weren't deteriorating. I did that for four weeks. I had some pretty good training for that, so I felt sort of well-equipped and it was very easy.'

'my first week in the emergency operation centre was very structured, very tailored, very this is how you do it, this is how you set up new drive through clinic, this is the process, processes and procedures were explained to me'

Opportunity for Professional growth

Participants had the opportunity to learn new skills and work in distinct unit/area of their expertise, thus giving them the opportunity to gain new experience. Staff came out of their comfort zone and performed role that they had never done before or had not been formally trained.

'Given me further skill to be able to pivot and bounce with change as the situation evolved. Shame it was at the end of my nursing career, was an absolute privilege that I will always be grateful for and cherish the memories of all the things that occurred during the two years , swabbing, vaccinating, responding to constant changes of policy and procedure and being part of the EOC team. It was the best'

'W*e had dentists injecting vaccine into people, so everybody stepped up and contributed and there's a lot of people deployed and in the scheme of things, I didn't hear a regular rumbling that people were winging, most people were pretty happy to contribute.'* They managed to meet and work with people from different areas of health. Some of the staff members also utilized this opportunity to excel in their career.

'*I must tell and we actually identified some fantastic talent out of redeployment and pandemic and the pandemic we've got some fantastic new staff that we've just seen rise and really shine who*

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have now gone onto more senior appointments, got great positions out, because they have one stepped up, we know how good they are and I've seen them work under pressure and they've got some great job.'

Support from the management

Participants stated that the management was very supportive, and people were appreciative of their efforts. There was a constant check in from the managers to make sure they were alright. There were regular COVID-19 update meetings and debriefs. A lot of forums were available for the staff to obtain COVID-19 related information and ask questions, such as skype and Teams.

'So, I got an email today just around you know some of those long days that we worked, you know, just checking on the staff for making sure that, are you sure you're OK, you gotta get going, I know with the public you know just checking on them and making sure that they okay, thanking them as well that's another big thing, obviously we did some big hours and everybody contributed, but you know just making sure those little things are done, thanking staff for their efforts I think that was really important.'

3. Negative Experience

There were participants who reported their experience as negative. The negative experience could be due to various challenges they encountered during the redeployment period such as: Indefinite timeframe of redeployment, lack of support and recognition, lack of communication, long working hours, inadequate training and orientation and staff shortage.

Indefinite timeframe of redeployment

The duration for the deployment was indefinite, there was no clarity around how long the redeployment will last and when they can go back to their original role, which made them stressed.

'The no end date for deployment made it feel like a very long dark tunnel with no light at the end. I did feel it went on for to long, being asked to leave your role for nearly 5 months was really a challenge.'

Lack of support and recognition

Some participants felt there was lack of emotional and practical support for the redeployed staff. During redeployment, nil consideration was taken by the district regarding access to hospital, travel timing and parking. Staff who were carers for their family were struggling to work and maintain work-life balance. There was lack of flexibility with respect to choosing shifts or hours of work.

'No, there wasn't and there wasn't really any support at all. I think a lot of people were struggling and they were also struggling with family members who weren't well…..no, I don't think there was a lot of support, I think that was one area that was definitely missing, and I think it's generally missing in nursing. Anyway, I think emotional support in in the nursing profession, It's not great, yeah'

During the transition or when they were back from deployment, they were not given enough time to settle in. They were expected to instantly get back to work. Participants anticipated getting few days off before they resume their original role.

But what I found a bit of of, Oh you're done with deployment, OK bye, go back. And then you get a thank you email. Later on, not not even a personal thank you email like a thank you email that's sent to all the staff who have been deployed and not even like it's not about money. It's about give me time to at least settle, figure out what happened to me before I go back to my job. Is that OK? You're done. Go back to your job and you go back to your Job the next day and it's like you continue from where you left off.

They also felt that they did not get that respect and recognition despite playing an important part in the crises.

'I just feel there should have been some, not compensation, just something to recognise that we did go out of our comfort zone to assist this process and I'm not sure how, You know, I suppose it could be money, but it's just, yeah, some recognition. Because I think the actual treatment made me feel like I was back as a student nurse, you know.'

Lack of communication

One of the major factors contributing to negative experience was lack of communication between the managers and the staff. Participants felt the redeployment process was not organized well and mostly things happened on short notice. There was no discussion or communication with regards to their interest or suitability of redeployment, no clarity around their role, rosters were not ready or up to date.

'It was disorganised, and I actually didn't get the details of where I'd be redeployed to before I was being redeployed there. Yeah, there was times when I'd be going home on a Friday and I didn't have a roster for the next week or I might just have a day or two roster in front of me and that happened repeatedly and it was quite stressful.

There was no communication or check in from the manager or the organization in relation to their wellbeing, on how they are coping with the new role, do they need any support? They felt that they were just thrown into the situation, and no one cared about them.

'but I feel like a little bit more contact from our home organisation would have helped us feel like we weren't just cut like adrift, a lot of people just felt like, oh, we're not cared about anymore by our NUM or our manager or anyone else in the organisation, so we kind of felt really detached and I think a bit of communication from someone in that organisation would have been really good and helped us feel a bit like, don't worry, you'll come home at some point.'

Due to high changing environment, there were rapid and frequent changes in the rules and policies related to the management of COVID-19 cases, which was challenging. There was no clarity around point of contact with regards to queries on changing

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policies and guidelines. The public had expectations that the clinicians had all the information. At times it led to circumstances where they had to face the frustration and anger from the public. Some participants recommended having a team leader to advise on updates.

'As I was working part time every day I would join in for 'huddle' prior to starting the day, things had changed & there was an assumption that people should know they had changed. Changing systems for documenting from eMR, many layers to make sure people who needed would get another call or appropriate referral. Then changing criteria when triaging daily, plus no clear people to contact if you had a query or the NUM's you were supposed to contact were too busy to answer non urgent questions.

Long working hours

Long shift hour was also identified as one of challenges by many participants. The participants had to work for longer hours as compared to their regular working hours, leading to more stress and less work life balance. Some of them had to work in shifts and also over the weekends.

'Added some extra stress for a while. it did have a personal impact in terms of the hours worked. Increased hours of work - above 40 hrs a week. Having to work on weekends and having split rosters to enable another staff member and myself having every second weekend off.'

'My original job was business hours. In deployment I was asked to do shit work, mainly rostered to pm shift which was 11am to 8pm. But we never finished at 8pm, most of the time we finished at 9 or 10, as we couldn't leave before all cases were complete. This shift was bad as it ate day hours and night hours.'

Few participants felt doing the same tasks over a period of time made it monotonous and boring.

'I knew that I would get bored very easily and I did. It's it's pretty monotonous work I guess just vaccinating people, more than one every 5 minutes, hundred a day, something like that.'

Participants also found their job physically demanding. There was a lot of pressure at times. They were expected to vaccinate or follow up a certain number of people in a day due to overwhelming cases. Sometimes they didn't even get time to take breaks between work.

'And we were given some KPI's at one stage which like we couldn't meet of how many phone calls to make in a day. So it really was just, OK finish this patient off type in the notes, move on to the next one and go again. Often waiting for phone calls and things so you didn't leave the office for lunch or anything. You just hung around.'

Inadequate training and orientation

Majority of the participants felt inadequately prepared and supported to care for patients with complex needs when redeployed to an area outside their own specialty experience. Participants were finding their role stressful as it was new and they were struggling as they had never done it before or they've never been formally educated.

'then they sent me off to do the AEFIs for the COVID vaccination. All these people call in and say that they've had reactions, to do the assessments for that, any preparation, no I've never done. Contact tracing. I've never done AEFIs in my life. It was pretty much one person showing you what they were shown. And you just continue doing that?

The participants mentioned that there was limited to no orientation or education/training provided prior to deployment especially when looking after COVID-19 patient. They were not comfortable to work in their new role as they were not confident in doing their task. They were frightened and frustrated as there was no proper handover or education to prepare before they started their new role. They were also scared of making mistakes which restricted and impacted their delivering capability.

' We were told that the people that we could talk to or get orientation and that didn't happen or we got really minimal orientation. Very minimal on the first one and everyone was really busy. You know, like you felt really awful asking those really, you know what we, what you think of those really dumb questions. But it's because you don't know, you're on a learning curve and you need to kind of, you know, get those sort of basic skills to be able to, you know.'

'When I have first time ,its covid ward and feeling frustrated because there is no explanation from the CNE for PPE, orientated the ward and the staff bombarded me with many task without given handover. After I stated I would not take care patient without handover, they gave me handover. I was trying to do carefully about PPE.'

Staff shortage

Participants noted staff shortage to be an ongoing and constant challenge throughout the pandemic. They were concerned as the sick staff went on leave, putting extra work pressure on the other staff. They felt that rather than addressing the issue and recruiting new staff, the hospitals were just redeploying the existing staff. They felt it was unfair to them and they were just utilized to fill the gap.

'The structures we currently have in place has not enough staffing, like as healthcare professionals I think, we all knew that when this started, we were going to be in for a pretty long haul and there was going to be a lot of cranky traumatised nurses.'

4. Impact on mental health and physical well being

Some participants found their redeployment physically and emotionally exhausting. They reported being stressed and worried throughout their redeployment which impacted their mental health and physical wellbeing. It took a substantial toll on the health of some participants, with some going off sick and others having

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sleepless nights. The stress was mostly related to getting infected or transmitting the disease to their family members, working in high stress environment, no clarity around logistics of redeployment, work pressure and extra workload leading to lack of work life balance. They also stated that irrespective of their unsuitability they were redeployed to unfamiliar areas with minimal or no training and support and as a health professional they were expected to do their task which led to lot of dissatisfaction.

'There was no life. My sleep was greatly disturbed, I had to take Valium just to shut my brain so I can sleep and calm my nervous system. My GP was greatly concerned for my mental wellbeing.'–

'You'll get orientation, you'll get this and it doesn't happen or or you get the bare minimum. And I just thought. I'm going to be shoved into. I'll be in an antenatal ward and then they'll suddenly say, you know, labour is really busy, you know, and I'll be in an area where I feel, you know, compromised in my, you know, my skills and things like that. So I just said, I don't want to do that, I've kind of you sort of said yes and then I went home and I was so anxious about it. Can I just say, I don't have a mental, I'm going mental self problems. But it's just each of these times were really anxiety provoking'.

Participants also reported lack of mental health support during or after the redeployment. One participant reported being unable to cope up with the stress related to redeployment and therefore had to resign from the job.

'No body checked to see if a staff member had the mental and emotional capacity to be deployed into a high stress area.'

'I had to resign from a position, and I don't think that's what I know. There's a little line at the end of our contract somewhere that says we I can be deployed here and there, but to actually make it to a to push it so much that I, as a staff member, actually have to leave my original job, the job that I actually applied for and I was happy to do, just so I can get out of deployment. I don't know what it tells you, but to me that tells me how bad things were. And I don't think any staff member should be forced to resign from the position just to avoid deployment.

5. Changes since the first redeployment

Some of the participants who were redeployed few times mentioned about the positive changes they observed and experienced during the course of their redeployment. They mentioned about the appointment of redeployment coordinator, which made their deployment experience far better than before. The redeployment coordinator appointed in different hospitals was central point of contact and answered to all the queries related to the redeployment. Participants eventually received orientation packs prior to redeployment and had more clarity around their role and end dates. They could discuss their concerns and worries and also seek advice.

'Now there's an education officer or redeployment officer who they've got now at the Bankstown Hospital, which is a really pivotal role to communicate while you're still in your current role, waiting to come into redeployment. And I've been really grateful of her and I think someone who is like a delegate person who can kind of net all of the people who are redeployed, be a quart of contact for them and give them the information like I had an orientation pack before I went on this current redeployment and it was a lot better. Yeah. And this time around, so I think that's probably a new role. I don't know if […] hospital created it and that's really helped. So yeah, I think that that's a someone to go to who is kind of navigating that whole redeployment for you and you can go to with any issues. You know, she's just giving me her mobile number, said text me If there's anything going on, call me. So that's been really helpful.'

Suggestions

Some of the suggestion to improve the redeployment experience were:

- Preparedness and communication regarding the logistics of redeployment
- More transparency & flexibility with regards to shifts and hours of work
- Expression of Interest for redeployment
- Training casual staff
- Recruiting new graduates
- Constant communication between the managers and the staff who have been redeployed to check in with regards to their health and wellbeing during and after the redeployment.

Discussion

This study was conducted to explore the nurse's redeployment experiences during COVID-19 pandemic. The findings from survey data shows that around 24% of the participants experienced moderate to severe symptoms of depression, 10% anxiety and 29.4% burnout during redeployment. Data obtained from the open-ended survey questions reflect similar themes as semi-structured interviews. Key themes identified were; 'Initial feelings and thoughts of redeployment', 'positive experience', 'Negative experience', 'Impact on mental health and wellbeing', 'changes since the first redeployment' and 'suggestions for improvement to future placements.'

Our findings are consistent with the previous studies exploring nurses' redeployment experiences, where participants reported a mix of positive and negative redeployment experience (Chu et al., 2022; Evans et al., 2023; Kennedy et al., 2022; Zimbudzi & Fraginal, 2023). Alike other studies sense of duty was the predominating factor that impelled nurses to work during the challenging circumstances (Evans et al., 2023; Khasne et al., 2020; Li et al., 2022; Veerapen & McKeown, 2021). Participants believed it was their responsibility to contribute to the community and the organisation during crises. Similarly, getting infected or transmitting the disease to their family members were the primary concerns of the nurses when approached for the redeployment (Khasne et al., 2020; Veerapen & McKeown, 2021) and during redeployment. The feeling of stress and anxiety were mainly due to redeployment to unfamiliar areas with minimal or no training

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and support and no clarity around the logistics of redeployment. Participants mentioned that in order to reduce the level of stress and prepare the staff for redeployment, the communication between the manager and staff in relation to the logistics of redeployment should be clearer and more transparent, such as when and where they will be redeployed? What is the duration of redeployment? What is their role and what are the expectation? Availability of orientation and training prior to joining?

The participants who reported their experience as negative were mostly encountered one or the other challenges during their redeployment period such as: Indefinite timeframe of redeployment, staff shortage, lack of support and recognition, lack of communication, long working hours, and, inadequate training and orientation. These challenges have been previously reported to impact the mental health and physical wellbeing of the healthcare staff (Ballantyne & Achour, 2022; Kissel et al., 2023; Ménard et al., 2023; Schulz-Quach et al., 2022; Zimbudzi & Fraginal, 2023). Mental health support during the redeployment is essential as inadequacy of support may contribute to future challenges in staff retention.

Inconsistent and unclear communication between the staff and the mangers is reported to have a significant negative impact on the redeployment experience (Gamble et al., 2022; Walker & Gerakios, 2021). Regular and supportive communication from the managers with their staff regarding the suitability and logistics of redeployment is reported to minimise the psychological risk and enhance the health and wellbeing of the staff (Montgomery & Clark, 2022; Walker & Gerakios, 2021). The participants in our study suggested a constant check-in from the managers with regards to the health and wellbeing of the redeployed staff during and post redeployment and debriefing to get staff feedback on their redeployment experiences and share with other staff to help in their redeployment journey.

Similar to the previous studies, participants in our study reported lack of support (Ballantyne & Achour, 2022; Kissel et al., 2023) and recognition from the organization. Support from the organization and employee recognition are highly correlated with employee engagement as it impacts their morale, productivity and retention (Rivers., 2023; Zimbudzi & Fraginal, 2023). It is essential for the organization to acknowledge employees' efforts to adapt and work in an unfamiliar environment during the challenging and unusual circumstances. Some participants recommended offering more transparency and flexibility with regards to choosing area of redeployment considering their expertise, days and hours of work and shifts. They expressed need for abundant time to settle in during the transition or when they are back from redeployment and additionally a regular check in from the managers with regards to their wellbeing.

As opposed to the existing literature (Ballantyne & Achour, 2022; Martinez et al., 2022), most of the participants in our study reported experiencing minimal depression, anxiety, and burnout symptoms during their redeployment. Among 29.6% who reported moderate to high burnout, the highest score was observed for work-related burnout (53.25%). Workload and job demand have been identified as the drivers of burnout (Gomez et al., 2020; Kissel et al., 2023). Staff shortage and long working hours were identified amongst challenges in our study. Due to overwhelming cases and shortage of staff there was more workload and work pressure on the staff causing work-related burnout. Some participants recommended training casual staff and recruiting new graduates to accommodate the shortage of the staff and preventing staff burnouts.

Strengths in specialized clinical areas is essential to providing quality care and improving patient outcomes. Challenges related to working in an unfamiliar environment with limited orientation or training have previously been reported (Kennedy et al., 2022; Li et al., 2022; Zimbudzi & Fraginal, 2023). Prior to redeployment, health systems must assess the suitability of the nurses for redeployment and ensure that the nurses attain adequate orientation and training to provide safe patient care. To improve redeployment experience some studies have recommended redeployment on a voluntary basis and ability to choose redeployment area (Kennedy et al., 2022; Kissel et al., 2023). Similarly, most of the participants in our study highlighted the need for an expression of interest. They stated that instead of forced redeployment, the hospitals should put out an expression of Interest, which will create opportunity for people who have that sort of skill and are willing to work during such events. It will also enable, especially those who are at the beginning of their career to up skill, which can further help them escalate in their career.

Regardless of various challenges, a number of participants reported their redeployment experience as positive and perceived this as an opportunity to work in an unprecedented event. The key factors contributing to positive experience were adequate training and support from the management. Training and adequate support have been identified as the main facilitators of a seamless redeployment and promote staff well-being during COVID-19 in various studies (Sykes & Pandit, 2021; Veerapen & McKeown, 2021; Zimbudzi & Fraginal, 2023).

During the initial stage of the pandemic the redeployment seemed more disorganized, however improvements were reported during the later stages. The appointment of Redeployment Coordinator, in different hospitals, as a central point of contact for redeployment related queries enhanced participants redeployment experience.

Strength and limitations

The feedback from nurses redeployed to different services and specialities, including frontline clinical, administrative, logistic and strategic positions provides insight into their redeployment experiences. However, our findings need to be considered in the context of some potential limitations. One of the limitations was low response rate. Also, capturing the other staff feedback beside nurses would provide wider perspective in relation to the redeployment during pandemic.

Conclusion

This study provides a valuable and much needed insight into the experience and attitudes of nurses redeployed during the COVID-19 pandemic. It also highlights the reasons for hesitancy towards

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redeployment, and unique perspectives on resourcing COVID-19 efforts. The results from this study can be used to highlight areas for improvement when preparing for future global and/or local disasters, and enhance the overall experience of redeployment.

AUTHOR CONTRIBUTIONS

JSFC, SF, SM and KS participated in the design of the study. NM (Qualitative) & SPN (Quantitative) analysed and interpreted the data. NM & JC were the major contributor in writing the manuscript. All authors read and approved the final manuscript.

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CONFLICT OF INTEREST STATEMENT

The authors declare there was no potential conflict of interest.

DATA AVAILAB ILITY STATEMENT

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

References

1. Ballantyne, H., & Achour, N. (2022). The Challenges of Nurse Redeployment and Opportunities for Leadership During COVID-19 Pandemic. *Disaster Med Public Health Prep*, *17*, e134.
2. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101.
3. Chemali, S., Mari-Sáez, A., El Bcheraoui, C., & Weishaar, H. (2022). Health care workers' experiences during the COVID-19 pandemic: a scoping review. *Hum Resour Health*, *20*(1), 27.
4. Chu, G., Connelly, K., Mexon, A., Britton, B., Tait, J., Pitt, V., & Inder, K. (2022). Nurses' satisfaction and experiences of redeployment during COVID-19-A cross-sectional survey.
5. Chu, G., Connelly, K., Mexon, A., Britton, B., Tait, J., Pitt, V., & Inder, K. J. (2023). Australian nurses' satisfaction and experiences of redeployment during COVID-19: A cross-sectional study. *TheAustralian Journal of Advanced Nursing*, *40*(3), 20-27.
6. Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
7. Evans, S., Shaw, N., Veitch, R., & Layton, M. (2023). Making a meaningful difference through collaboration: The experiences of healthcare staff redeployed to a contact tracing and monitoring team as part of the COVID-19 response. *J Interprof Care*, *37*(3), 383-391.
8. Gamble, K., Murthy, S., Silverberg, S. L., Gobat, N., & Puchalski Ritchie, L. M. (2022). Canadian critical care nurses experiences on the front lines of the COVID-19 pandemic: a qualitative descriptive study. *BMC Nurs*, *21*(1), 330.
9. Gomez, S., Anderson, B. J., Yu, H., Gutsche, J., Jablonski, J., Martin, N., Kerlin, M. P., & Mikkelsen, M. E. (2020). Benchmarking Critical Care Well-Being: Before and After the Coronavirus Disease 2019 Pandemic. *Crit Care Explor*, *2*(10), e0233.
10. Kennedy, E., Kennedy, P., Hernandez, J., Shakoor, K., & Munyan, K. (2022). Understanding Redeployment During the COVID-19 Pandemic: A Qualitative Analysis of Nurse Reported Experiences. *SAGE Open Nurs*, *8*, 23779608221114985.
11. Khasne, R. W., Dhakulkar, B. S., Mahajan, H. C., & Kulkarni, A. P. (2020). Burnout among Healthcare Workers during COVID-19 Pandemic in India: Results of a Questionnaire-based Survey. *Indian J Crit Care Med*, *24*(8), 664-671.
12. Kiely, K. M., & Butterworth, P. (2015). Validation of four measures of mental health against depression and generalized anxiety in a community based sample. *Psychiatry Res*, *225*(3), 291-298.
13. Kissel, K. A., Filipek, C., Folz, E., & Jenkins, J. (2023). The impact of a three-tiered model of nursing redeployment during the COVID-19 pandemic: A cross-sectional study. *Intensive Crit Care Nurs*, *77*, 103431.
14. Kristensen, T. S., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work & stress*, *19*(3), 192-207.
15. Li, H., Cui, Y., Efstathiou, N., Li, B., & Guo, P. (2022). Experiences of redeployed healthcare workers in the fight against COVID-19 in China: A qualitative study. *PLoS One*, *17*(8), e0273429.
16. Martinez, M., Stewart, N. H., Koza, A. L., Dhaon, S., Shoushtari, C., & Arora, V. M. (2022). The Effect of Redeployment During the COVID-19 Pandemic on Development of Anxiety, Depression, and Insomnia in Healthcare Workers. *J Gen Intern Med*, *37*(4), 1003-1005.
17. Ménard, A. D., Soucie, K., Ralph, J., Chang, Y. Y., Morassutti, O., Foulon, A., Jones, M., Desjardins, L., & Freeman, L. (2023). One-year follow-up of hospital nurses' work experiences during the COVID-19 pandemic: A qualitative study. *J Adv Nurs*, *79*(7), 2502-2513.
18. Mhawish, H. A., Alaklobi, F. A., Alodat, M., Aseere, A. A., Alshammari, B., Alshehri, B., Almuabbadi, B. H., Odchigue, K. L., Marasigan, B. R., & Aldamaeen, A. S. (2022). Experiences of Non-ICU Nurses' Redeployment in ICU during Covid-19 Pandemic. *Pakistan Journal of Medical & Health Sciences*, *16*(05), 319-319.
19. Montgomery, C., & Clark, A. (2022). Redeployment-can we make it less stressful? *Kai Tiaki: Nursing New Zealand*, 1-3.
20. Rivers., M. J. (2023). *Why Employee Recognition & Appreciation Matters in a Post-Pandemic Environment.* . Linkedin. Retrieved 04/03/2024.

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21. Roberts, N. J., McAloney-Kocaman, K., Lippiett, K., Ray, E., Welch, L., & Kelly, C. (2021). Levels of resilience, anxiety and depression in nurses working in respiratory clinical areas during the COVID pandemic. *Respir Med*, *176*, 106219.
22. Schulz-Quach, C., Lyver, B., & Li, M. (2022). Healthcare provider experiences during COVID-19 redeployment. *Curr Opin Support Palliat Care*, *16*(3), 144-150.
23. Scott, M., Wade, R., Tucker, G., & Unsworth, J. (2023). Redeployment to critical care during the COVID-19 pandemic: A phenomenological study. *Nurs Crit Care*.
24. Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: the GAD-7. *Arch Intern Med*, *166*(10), 1092-1097.
25. Sykes, A., & Pandit, M. (2021). Experiences, challenges and lessons learnt in medical staff redeployment during response to COVID-19. *BMJ Lead*, *5*(2), 98-101.
26. Veerapen, J. D., & McKeown, E. (2021). Exploration of the views and experiences of research healthcare professionals during their redeployment to clinical roles during the COVID-19 pandemic. *J Adv Nurs*, *77*(12), 4862-4875.
27. Vera San Juan, N., Clark, S. E., Camilleri, M., Jeans, J. P., Monkhouse, A., Chisnall, G., & Vindrola-Padros, C. (2022). Training and redeployment of healthcare workers to intensive care units (ICUs) during the COVID-19 pandemic: a systematic review. *BMJ Open*, *12*(1), e050038.
28. Walker, K. L., & Gerakios, F. (2021). Redeployment during the first wave of the COVID-19 pandemic: implications for a clinical research workforce. *Br J Nurs*, *30*(12), 734-741.
29. Zimbudzi, E., & Fraginal, D. (2023). Experiences of redeployment by haemodialysis nurses during the COVID-19 pandemic: a hermeneutic phenomenological approach. *Contemp Nurse*, *59*(4-5), 377-391.

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