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A cross-case study comparison of Australian metropolitan and regional cancer nurses' experiences of work-related stressors and supports

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Abstract

Background Registered nurses are the largest single professional group working in the field of cancer care and support one of the most vulnerable patient cohorts in the healthcare system. Cancer nurses are known to experience high rates of burnout, but there are significant limitations to current research on the unique stressors experienced by this group of nurses, particularly since the emergence of COVID-19.

Methods This study employs the Job Demands Resource Model (JD-R model) to better understand the experiences of Victorian cancer nurses' work and describe factors which ameliorate burnout and work-related stress. A multiple case study research design was used in this study, with two groups of cancer nurses making up a total of 30 participants, allocated to separate cases bounded by geographical location. A two-phase study of Victorian cancer nurses in metropolitan and regional healthcare services was conducted from 2019 to 2021. Data included field notes and in-depth interviews. Data analysis used a process of elaborative coding, with a pre-conceived coding framework based on the JD-R model. A combination of thematic analysis and storyline analysis was employed to analyse the data.

Results A cross-case analysis of similarities and differences identified the job demands affecting cancer nurses, and conversely, any positive job resources which may buffer these demands. Job demands identified in both cases appeared to have similar causes but were more explicitly linked to poor resourcing in the regional case. Job resources identified in both cases were similar, but it was noted how few job resources were available to buffer the many demands inherent in cancer nurses' work. This multiple case study found that the work of cancer nurses is high in demands and low in resources.

Conclusions Despite challenging work conditions, findings identified a highly engaged workforce. The job resources identified in this study suggest there are modifiable strategies to cultivate a supportive work environment for cancer nurses.

Keywords Cancer, Nurse, Burnout, Job-demands resource model, Regional, Leadership, Psychological safety

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A cancer nurse is defined as a registered nurse who provides specialised, holistic care for patients receiving any treatment for a diagnosis of cancer [1]. Cancer nurses are the largest single profession providing care to people with cancer [2] with key responsibilities including cancer prevention and detection, cancer treatment delivery, and end-of-life care [3]. With improved survival rates for many cancers [4], along with the significant impact that COVID-19 has placed on cancer services [5, 6], in the context of population growth and increasing overall lifespans it is likely the demand for a cancer nurse workforce will increase.

Cancer nurses provide highly specialised care and are faced with the difficulties intrinsic to all cancer care professions, in addition to the broader challenges plaguing the nursing profession, such as high workloads and unsupportive working environments [7]. Cancer nurses are regularly exposed to intense job strain in their daily work due to their constant exposure to suffering and death, coupled with heavy workloads and a requirement to provide a high level of psychosocial care to patients [8]. The existing literature strongly suggests that the high prevalence of burnout in cancer nurses can be attributed to the unique work stressors faced by cancer nurses [9–12]. A recent rapid review has further highlighted the increasing urgency to address burnout in cancer nurses since the emergence of the COVID-19 pandemic, identifying this as a priority area for cancer nursing research [13], particularly in an Australian cancer nursing context [14].

Background

As the result of the COVID-19 pandemic, cancer care services globally experienced additional challenges, including staff redeployment, nursing workflow revision, rapid need for upskilling of nurses, along with constantly changing infection control and risk mitigation strategies [15]. Increasing delays and cancellations of cancer treatments, and higher levels of anxiety and depression in cancer patients were also identified as an outcome of the pandemic [16]. Global oncology nursing workforce shortages, recruitment barriers, burnout, and additional COVID-19-related pressures are considered key obstacles to achieving and maintaining a sustainable cancer nurse workforce [10].

Similarly, cancer nurses' burnout and staff shortages have been identified as a major threat to nurse-led models of care, at a time where cancer nurses are called to lead in an over-burdened healthcare system [13]. A recent Australian cancer nursing national workforce survey exploring the determinants of job satisfaction, revealed a range of workforce issues contributing to low job satisfaction among Australian cancer nurses, such as high workloads, unsupportive peers and leaders and a lack of opportunity for career development [14]. Concerningly, this national survey found that up to 60% of Australian cancer nurses intend to exit the profession in the next decade, particularly those who were less satisfied with their work [14]. However, a limitation of the survey design was that it did not require participants to rate their intention to remain in the profession. The authors of this national survey acknowledge the limitations of this cross-sectional study design, and the need to understand some of these workforce issues in greater depth in order to retain this critical workforce [14].

The present study therefore builds on this existing evidence and offers a more nuanced analysis of some of the job demands experienced by cancer nurses which might lead to burnout. Conversely, this study also reports on positive job factors as described by cancer nurses, to understand important job factors which might protect against burnout.

Methods

Aim

The aim of the study was to understand Victorian cancer nurses' job demands and resources across different geographical locations, before recommending strategies to increase retention and job satisfaction, and reduce burnout.

Research questions

The study investigates the following research questions:

1. For nurses providing care to people with cancer, what are common job demands?
2. For nurses providing care to people with cancer, what are the specific job resources which may act as a buffer to job demands?
3. How do common job demands, and specific job resources intersect to mitigate burnout in nurses providing care to people with cancer?
4. What is the impact of geographical location on the experience of nurses providing care to people with cancer?

To answer these questions, a qualitative multiple case study design was employed to enable a cross-case analysis of similarities and differences between cancer nurses working in metropolitan areas (case one) and cancer nurses working in regional areas (case two) of Victoria, Australia. The multiple case study approach resulted in a comprehensive description and analysis of a bounded phenomenon [17], in this case of the job demands impacting on cancer nurses that could lead to burnout, and the job resources that act to mitigate burnout.

Theoretical framework

The Job-Demands Resource model (JD-R) [18] provided a theoretical framework to guide two phases of empirical inquiry across both cases. The JD-R model allows for the study of a range of concepts, where the aim is to understand job demands and resources, and how each influence employee health, well-being, and motivation [19]. Fundamental to the JD-R model, is the proposition that any occupation has contextual risk and protective factors that can be classified as job demands or resources [20]. Job demands, defined as the physical and psychological stressors inherent in a work role, can trigger a process where employees experience sustained psychological and physiological drain, leading to energy depletion, explicitly linked to the health impairment process [21]. Conversely, job resources are physical, organisational or social work related factors, which can be associated with a motivational process that leads to work engagement in employees [21]. Determining job demands and resources can be confounding, as while some job demands involve sustained mental effort of an individual, this effort can simultaneously result in personal growth and development [22]. Despite the need to tease out this distinction, existing studies applying the JD-R model to nurses are dominated by cross-sectional, quantitative survey designs employing pre-determined measures [23, 24]. Hence, this in-depth qualitative analysis affords a deeper and contextualised understanding of the job demands and resources uniquely associated with cancer nursing.

Study setting and recruitment

For this study, multiple case study design was used. Stratified, purposive sampling was employed to focus the recruitment of nurses across a range of roles that specialise in providing care to patient with cancer. Participants from multiple hospitals in each case which included three large major metropolitan healthcare services, one metropolitan specialist cancer service, and one large regional healthcare service, were recruited to ensure a better understanding of job demands and resources cancer nurses experience across different work settings and contexts. Focusing recruitment on cancer nurses employed at either metropolitan or regional sites in a range of roles facilitated the collection of high-quality data, with findings that may be transferable to similar cancer treatment centres internationally.

Inclusion and/or exclusion criteria

Inclusion criteria included Registered Nurses (RN) providing care to people with cancer with over 12 months of clinical experience in the field, across of range of cancer nursing clinical, education and management roles. Cancer nurses working in full-time, part-time, casual and short-term employment were considered for inclusion in the study. Exclusion criteria included non-registered assistants in nursing and graduate RNs. Graduate RNs were excluded as there were unique support structures in place for graduate nurses at each of the study sites that create a different working environment in this first year of practice. A Qualtrics link was used to collect demographic data and determine eligibility for participation in the study for both phases of data collection as described below. Participants opted to provide their contact details, and the lead author contacted each participant and provided a consent form electronically. All participants provided consent prior to each interview.

Data collection

A total of 30 cancer nurses participated in this study, across two distinct phases of data collection, as described in Table 1. Overall, the sample was an experienced group of nurses, with the majority holding post-graduate qualifications. These participant characteristics align with Bradford et al.'s [14] recent national cancer nursing workforce survey, demonstrating the representatives of this sample. In the first phase of the study, participants were recruited from five public hospitals which provide cancer care in Victoria, Australia. Four were metropolitan hospitals and one was a regional hospital with a large regional catchment. Case One included the lead public metropolitan healthcare service providing cancer care, as well as three further metropolitan healthcare services with cancer care facilities. Case Two included a regional healthcare service proving cancer care to a large geographical area of Victoria, Australia. A total of 16 nurses providing cancer care, were recruited in phase one.

Phase one individual interviews was completed between February and May 2019, with all interviews conducted in a private space at the participant's workplaces. At the commencement of each interview, the researcher disclosed their previous experience as a cancer nurse, which built rapport and trust with the participants, and reassured participants that any discipline-specific language used in the interview would be understood. Semi-structured interviews were conducted using a schedule framed by the JD-R model. Interviews ranged from one to two hours in duration. Data collected included audio recorded interviews which were transcribed manually verbatim. Transcripts were reviewed independently by the lead author to ensure accuracy. Additionally, field notes were taken during each interview, along with participant demographics, geographical information, and any notable observations about the nature of each workplace such as behaviours, communication styles, and environmental factors.

In the second phase of data collection, a COVID-19 related pause on non-essential research at each healthcare service necessitated an alternative means of

Table 1 Study sample

Participant	Gender	Years of RN experience	Highest qualification	Job Title	Clinical setting	Hours worked per week
Phase One						
1	F	7	Masters	RN	Inpatient	40
2	F	4	PG	RN	Inpatient	40
3	F	15	Master's	NUM	Inpatient	40
4	F	10	BN	RN	Outpatient	32
5	F	11	PG	RN	Inpatient	24
6	F	20	PG	RN	Outpatient	32
7	M	11	PG	NUM	Inpatient	40
Phase Two						
8	M	3	BN	RN	Inpatient	40
9	F	8	PG	NUM	Inpatient	40
10	F	5	PG	ANUM	Inpatient	40
11	F	19	PG	CNC	Outpatient	40
12	M	13	PG	NUM	Inpatient	40
13	F	28	PG	RN	Community	32
14	F	2	BN	RN	Inpatient	40
15	F	7	BN	CNS	Inpatient	32
16	F	3	BN	RN	Outpatient	40
Case 2: Regional cancer nurses						
Participant	**Gender**	**Years of RN experience**	**Highest qualification**	**Job Title**	**Clinical setting**	**Hours worked per week**
Phase One						
1	F	8	BN	RN	Inpatient	40
2	M	17	Masters	NUM	Inpatient	40
3	F	12	PG	NUM	Outpatient	40
4	F	2	BN	RN	Inpatient	40
5	F	12	PG	CNC	Outpatient	32
6	F	21	BN	RN	Inpatient	40
7	F	5	PG	RN	Inpatient	32
8	M	6	BN	RN	Inpatient	40
Phase Two						
9	F	19	PG	RN	Outpatients	32
10	F	18	PG	CNE	Inpatient	40
11	F	9	PG	CNC	Outpatients	32
12	F	36	PG	CNC	Community	32
13	F	25	PG	CNC	Inpatient	32
14	F	14	PG	CNS	Outpatient	24

Note: Abbreviations: PG, Postgraduate; BN, Bachelor of Nursing; RN, Registered Nurse; NUM, Nurse Unit Manager; ANUM, Associate Nurse Unit Manager; CNC, Clinical Nurse Consultant; CNS, Clinical Nurse Specialist; CNE, Clinical Nurse Educator

recruitment. Additional ethical approval was obtained for phase two data collection, using the same inclusion and exclusion criteria described above. An additional 15 cancer nurses were recruited during this phase. A further eight cancer nurses from the same five healthcare services as in the initial phase of data collection as described above, with one additional participant recruited from a major metropolitan private healthcare service that provides cancer care, were recruited to Case One. A further six cancer nurses were recruited to Case Two, from a wide range of different regional healthcare services across Victoria. A slightly modified interview schedule was used in the second phase of data collection, to include reference to COVID-19. Due to COVID-19 restrictions at the time, interviews were conducted online in a private and quiet space at participants' workplaces between November 2020 and March 2021. In this second phase, these online interviews were recorded by the researcher, and transcribed verbatim by a commercially available paid service, for analysis.

Data analysis

Elaborative coding was used for data analysis, whereby coding is conducted using existing theoretical constructs [25] and with a pre-conceived coding framework (in this case the JD-R model) reflecting the theoretical framework of the study [26]. Consequently, the two categories of job demand and job resources had been

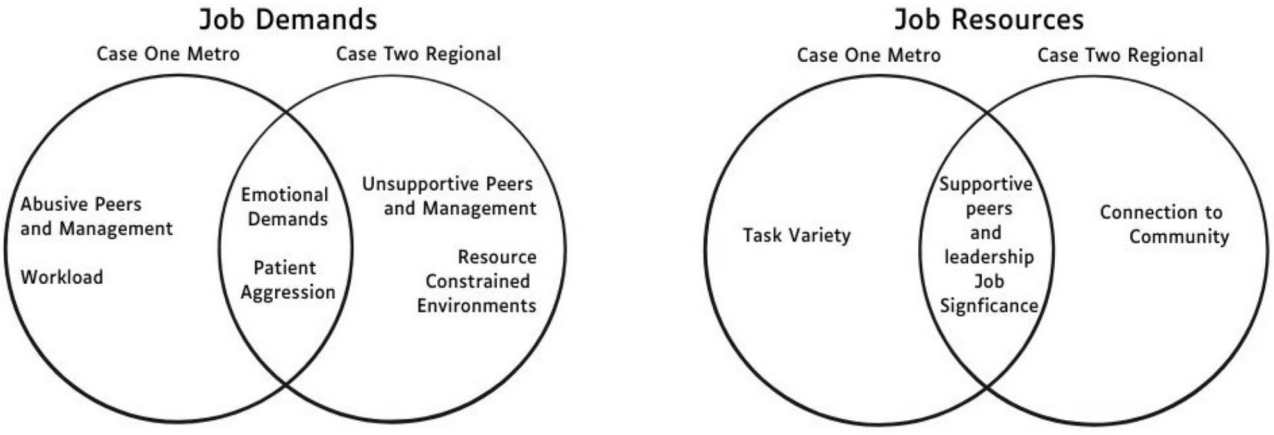

Fig. 1 Job demands and job resources

pre-determined based on the literature, prior to the commencement of data analysis [26]. During both phases of analysis, the lead author LP conducted coding independently, which was followed by detailed, repeated discussions between co-authors, resulting in a refinement of the coding lists. Thematic analysis was used during the process of describing and interpreting meaning from the data [27], and included the following steps: familiarisation with the data; generation of initial codes; searching for themes; review of themes; definition of themes; and reporting. Field notes were also analysed to determine any further contextual data, which could assist with establishing relationships between each theme. The final stage of reporting used storyline as a method to analyse and conceptualise the experience of participants [28].

Ethical considerations

Prior to the initial phase of data collection, Human Research Ethics Committee (HREC) approval was granted by the lead metropolitan public healthcare service involved in the study (HREC # LNR/46353/PMCC-2018) on 18/10/2018, in addition to RMIT University approval (HREC # 21815) on 15/10/2018). HRECs review and approve human research projects in Australia, and are comparable to Institutional Review Boards, which are more common internationally. Additionally, site-specific approval was sought at each healthcare service where the study was conducted. The study was performed in accordance with relevant guidelines and regulation. Study information was disseminated through institutional internal email lists, with a Qualtrics link to determine eligibility for the study. Participants who met the inclusion criteria were invited to contact the researcher to organise a time to conduct a face-to-face interview. Ethical approval was granted for a second phase of data collection by the lead author's university HREC approval #23498 on 15/10/2020. During the second phase of data collection, study information was disseminated through social media and existing professional networks, inviting Victorian cancer nurses to participate in the study. Once again, a Qualtrics link was used to determine eligibility for the study.

Rigor and reflexivity

The 'Big-Tent' criteria for excellence in qualitative research guided the quality assurance of this research study [29]. Criteria include: the importance of a worthy topic; rich rigour; sincerity; credibility; resonance; significant contribution; ethics; and meaningful coherence. While no formal tests of inter-rater reliability were undertaken, independent coding reports were repeatedly discussed by co-authors, particularly when there was disagreement regarding the allocation of codes to specific themes. The close involvement of cross-disciplinary researchers from the initial design phase of the research study through to the data analysis, supported credibility, sincerity, and multivocality in the reporting of this study. To further ensure rigour and reflexivity of this study, the JBI Checklist for Qualitative Research guided quality reporting of the findings [30].

Findings

In both cases, emotional demands and patient aggression were identified as job demands. Metropolitan cancer nurses reported abusive peers and management, along with workload as key job demands. Conversely, regional cancer nurses identified unsupportive peers and resource constrained environments as their job demands. Job resources for both cases were similar, with both cases identifying job significance and supportive peers and leadership as job resources. A key point of difference was the job resource of task variety as described by case one participants, whereas connection to community was only a job resource for case two participants. These similarities and differences are highlighted in Fig. 1.

Job demands

Patient aggression

Patient aggression was described as a job demand by both metropolitan and regional cancer nurses. The causes of patient aggression in both cases were similar, but in the case of nurses working in regional cancer centres both prior to and during the pandemic, nurses more directly linked patient aggression linked to poor resourcing including workforce shortages. In comparison, pre-pandemic, metropolitan participants identified long wait times and miscommunication by and between medical colleagues as the most significant factor contributing to patient aggression.

> *"I had a horrible incident with a patient and had a week of sleepless nights in my first week of leave. Changes were made to a patient's treatment that weren't communicated to him, and the patient directly said to me that I have compromised his care by calling the doctor and holding everything up". (Nurse 1 C1)*

During the pandemic, nurses working in metropolitan centres typically attributed patient aggression to visitor restrictions on metropolitan cancer services, with participants also reporting that incidents of aggression were increasing in frequency. Regional participants attributed patient aggression to similar factors and causes, however in both phases of the study, regional participants explicitly linked patient aggression to poorly resourced services, particularly widespread workforce shortages, which contributed to patient dissatisfaction.

> *"There is also the aggression we seem to get quite frequently from patients and their relatives, and I put most of this down to our unreasonable workload and the amount of pressure we're under, which they just don't understand. I find the push from management makes it very difficult to deliver the type of care that I want for my patients. Sometimes we have patients pass away and the family are still here, and I'm told they have to go, the patient has to go, because we need to get the next patient in – that [is] such a hard situation to manage. It's things like that which cause the aggression". (Nurse 6, C2).*

Workforce shortages in regional cancer services resulted in a highly pressurised environment that made it difficult to deliver the standard of care desired by participants and their patients alike. The environment created by these conditions typically resulted in patients facing long wait times and fragmented care, with their frustration and aggression mostly directed towards nurses.

A lack of security in regional areas during the pandemic was a unique and troublesome feature of this setting, leaving participants to enforce visitor restrictions and screening, in addition to their clinical work, often leading to conflict with visitors and patients.

> *"One person turned up to the front door and went crazy, were stopped at the door, because we had so much security around at the time, but we don't usually. We were expected to do screening at the point of entry in addition to our clinical work". (Nurse 11, C2)*

An important difference between how metropolitan and regional healthcare services managed incidents of patient aggression, as well as how staff were supported following these incidents, was identified. While most nurses working in metropolitan settings reported the presence of robust procedures in place to manage and respond to patient aggression, cancer nurses working in regional settings reported a lack of acknowledgement of the serious risk to nurses' safety posed by recurring incidents of patient aggression. In the regional case, one participant was blamed by their manager for an incident of patient aggression, purportedly due to community connections shared by staff with the perpetrator, highlighting the geographical aspects of this particular job demand. Existing relationships with patients – a common feature of regional cancer care workplaces – seemed to influence the nurse manager's response to patient aggression, where reporting was often not supported or encouraged.

> *"One patient threatened and swore at me. When I reported this to the NUM I was told he was just stressed and he's not normally like this- he's a good bloke". (Nurse 7, C2)*

Emotional demands

Emotional demands were experienced as a job demand by both metropolitan and regional participants but were found to have different dimensions. Cancer nurses in metropolitan areas reported high levels of emotional exhaustion and psychological distress due to the difficult nature of their work and lack of workplace support, which many nurses reported as having a significant impact on their mental health. Similarly, some nurses in regional areas indicated that they experienced significant levels of emotional exhaustion due to the nature of their work, resulting in their own psychological needs often being overlooked at work, despite the availability of workplace supports.

> *"The other difficulty is trying to manage difficult death while also providing care to three other com-*

plex patients. It's so upsetting sometimes I think I just need to take a minute to think about what just happened but I need to keep going to care for the other patients. I go home crying some days, this is definitely the most challenging part of my work." (Nurse 5 C2).

Of note, in regional settings the impact of caring for close community members with a life-limiting illness was felt at a deeply personal level by regional participants, who often had trouble separating their work roles from their personal life. A discernible difference was the formal workplace supports regional participants indicated they had available to mitigate some of these work-related difficulties, with several regional participants discussing the importance of clinical supervision. Close involvement with community members in regional communities appeared to present a unique dimension of this job demand for regional participants. For regional participants, workplace supports aimed at reducing burnout were more commonplace and were consistently reported as having a positive impact on reducing burnout. Conversely, very few metropolitan participants were able to identify any meaningful workplace supports both prior to and during the pandemic. In the pre-pandemic phase of the study, three participants alluded to an absence of any identifiable workplace supports.

There is no reprieve you just having to be so conscious of everything and I've made a couple of mistakes recently where I have felt like that was a direct lack of in-house support because when I worked in the UK for the NHS I was used to having clinical supervision and we would have that once a fortnight. I can't even find with access anything like that at this organisation" (Nurse 6, C1).

For approximately a quarter of metropolitan participants, they described the actions of a supportive manager as more significant than any workplace supports offered by their organisation, particularly those offered in response to the pandemic. There did not appear to be the same focus on wellbeing in metropolitan cancer services, as there was in regional areas.

Unsupportive and abusive peers and management

While unsupportive peers and management were reported as a job demand by cancer nurses we interviewed in both metropolitan and regional settings, the issue of unsupportive colleagues appeared to be more intense for metropolitan participants, where workplace incivility was reported more frequently. Indeed, there were far more examples of abusive behaviour cited by metropolitan participants compared with regional participants. Reports of workplace incivility were widespread among the nurses in metropolitan settings, with difficult working relationships between nursing peers, managers, and other members of the healthcare team being commonplace. In particular, metropolitan participants identified a lack of psychological support from dismissive and inauthentic peers and managers in their workplaces.

"The middle management kind of went missing in action during COVID. They might pop out sometimes and say, 'oh, you're doing a wonderful job with that,' but that's it. They would be working from home while we're here, and there was no support" (Nurse 13, C1).

By contrast, regional participants provided a few examples of uncivil behaviour, there did not appear to be the same degree of abusive behaviour present in their workplaces. While several regional participants indicated how the emotionally difficult work they performed was compounded by a lack of support from peers and managers (who they perceived were similarly over-burdened) the types of incivility reported by metropolitan nurses was not as prevalent in the regional setting. In metropolitan areas, participants commonly referred to the work pressures associated with a less experienced, and more casualised workforce with higher rates of staff turnover, which resulted in more strained working relationships between cancer nurses due to the lack of stability amidst such upheaval. Metropolitan participants reported a lack of senior nursing staff to provide clinical leadership and identified the recruitment of senior staff as difficult due to the high cost of living and transport in metropolitan areas as a challenge.

"Finding any nurses with more than two years' experience are very difficult to recruit, and then many nurses don't want to work in the city as it's so expensive to live near here." (Nurse 3, C1).

Participants in metropolitan areas commonly referred to the large volume of vacant nursing positions, with approximately half of participants reporting that they were actively considering leaving their roles to take up one of many alternative opportunities available elsewhere in the pre-pandemic phase of the study. Conversely, regional participants seemed to experience quite the opposite, with most participants describing close working relationships with their peers with whom they commonly share community connections.

Workload

Cancer nurses working in metropolitan settings we interviewed commonly reported working in modern, digitised, but highly pressurised workplaces with correspondingly heavy workloads. Several nurses we spoke to attributed these heavy workloads to caring for an increasingly acute patient cohort, who frequently presented with other complex, non-cancer related co-morbidities, including mental health challenges. The more experienced metropolitan cancer nurses in this study stressed that heavy workloads were primarily the result of working in an environment largely staffed by an inexperienced and highly casualised workforce with high staff turnover. Workload was cited a job demand more frequently by nurses working in metropolitan centres and appeared to be compounded by a junior and casualised workforce.

> *"It is a very junior workforce, and that makes me feel like I have a very intense burden that I'm carrying, I feel like I am always supervising the other nurses on any given shift because they don't have the experience" (Nurse 5, C1).*

A significant feature of the pandemic phase of the study for nurses working in metropolitan cancer centres were the consistent reports of these cancer nurses being required to work in unfamiliar clinical settings due to a rationalisation of cancer services during times of lockdowns and peak COVID-19 community transmission. The requirement for cancer nurses to work in different clinical areas, with the potential to care for an unfamiliar patient population, appeared to be a particular source of distress for metropolitan nurses. In our interviews, metropolitan participants consistently described feelings of being unprepared and overwhelmed in the face of an unfamiliar patient population to care for, involving the need to adapt rapidly to new clinical protocols and procedures associated with the care of a different patient cohort.

> *"I felt like I was being unreasonable by saying I don't actually want to do this. I hate my job. I don't want to look after these people. I felt like a bad nurse." (Nurse 12, C1).*

At the time of these interviews, community transmission of COVID-19 was far more widespread in metropolitan Melbourne than in regional Victoria, and this marked difference in workload demands, and consequently the emotional and mental wellbeing of participants, between the two cases was evident throughout discussions. Conversely, in the regional group, although heavy workloads were cited by about three quarters of participants, there was not the same emphasis on the intensity of this job demand, particularly during the pandemic phase of the study when community transmission of COVID-19 was much lower in regional areas. Indeed, most regional participants stated they had not encountered a COVID positive patient during this phase, which was in stark contrast to the experiences of metropolitan participants, who were frequently caring for cancer patients with suspected or confirmed COVID-19. Poorly resourced work environments were commonly identified as a job demand by participants in regional areas, an issue that existed prior to the pandemic, but intensified as resources were stretched even further during the pandemic.

Resource constrained work environments

Cancer nurses working in regional cancer centres identified resource constrained work environments as a job demand that was ostensibly unique to regional healthcare services. While metropolitan participants did not specifically identify the job demand of resource constrained environments, workforce shortages were commonly identified as a contributing factor of heavy workloads. However, this was the only similarity noted across metropolitan and regional settings, while the causes of these workforce shortages appeared to differ. Cancer nurses working in regional cancer centres commonly cited workforce shortages due to a lack of skilled healthcare workers in regional areas, but also the absence of a casualised workforce to cover unexpected staff leave. This finding was in stark contrast to nurses in metropolitan settings where a heavily casualised workforce was a commonly cited feature of participants' workplaces. Regional cancer nurses reported widespread human resourcing issues with an insufficient number of suitably qualified cancer nurses available to meet the needs of patients within the regional healthcare environment. A chronic lack of funding in regional and rural areas appeared to be at the heart of these issues.

> *"We have real problems covering sick leave as we don't have agency nurses like they do in the city. There aren't enough chemo trained nurses here, so if someone's sick, the workload is unsafe" (Nurse 1, C2).*

Hazardous work environments caused by ageing and repurposed buildings being used for service locations, and inconsistent digitisation of patient management systems, were also identified as common characteristics of regional cancer nurses' workplaces. Indeed, these nurses spoke at length about how chronic underfunding of regional healthcare services presented significant challenges to the way they practiced. The COVID-19 pandemic only added further pressure on already scarce resources, highlighting deficiencies and disparities in and between regional and metropolitan cancer care

services. A particularly potent source of work-related stress for regional cancer nurses during the pandemic was the absence of security personnel at a time when visitor screening and restrictions needed to be enforced. All regional nurses in the pandemic phase of the study spoke of the additional burden of providing security and screening while still attending to their normal clinical duties.

> *"There's issues around safety for nurses in our small towns especially in particular areas with the increase of course, of drug and alcohol abuse, which has become a problem because of the lockdowns. We just don't have the staff or resources to deal with this". (Nurse 9, C2).*

These reports by regional nurses contrasted with those from metropolitan areas, where a heavy security presence was consistently noted by participants as a key measure that they felt offered some assurance of personal safety while at work. Of further significance, nearly all regional cancer nurses identified chronic underfunding of regional healthcare services as a major concern impacting the level of quality care people with cancer receive.

Job resources

Job significance

Job significance was a key job resource identified by both metropolitan and regional cancer nurses, typically for similar reasons in each case. Metropolitan and regional cancer nurses identified their work as being meaningful, rewarding, and having a positive impact on the lives of people with cancer. Regional nurses more explicitly linked the motivation for their work to the critically important service they provided to their communities, which they felt deeply connected to. In contrast, metropolitan nurses nominated broader societal reasons for why they chose to remain in the profession, with all participants citing a key source of job satisfaction being the opportunity to contribute to advancements in cancer care through working at large research and teaching hospitals. Both regional and metropolitan cancer nurses assigned greater importance to their work during the pandemic, recognising the essential nature of their work and the important role they played providing psychosocial care to patients during times of visitor restrictions.

> *"When we're with a patient, we're in a very privileged position. I think it's just, you can see that, their whole life is turned upside down and to be there to support someone to help navigate that system when they can't have family around, and to try and make that a little bit easier for them, particularly with so many COVID changes, for it all to come together and work out that's rewarding in itself" (Nurse 12, C2).*

Connection to community

Cancer nurses in regional settings identified connection to community as an important job resource, with most identifying the critically important service they provide to their community as a key motivator to remain in their positions. Similarly, these nurses frequently described the close and often established relationships with patients as significant job resource, and source of job satisfaction. Regional nurses often referred to the immense satisfaction gained by supporting fellow community members through their experience of cancer, with several participants emphasising how different these experiences had been compared to their previous experiences working in metropolitan areas. One regional nurse we interviewed reflected on the relative anonymity of providing cancer care in metropolitan areas, and how, in contrast, much more meaningful and authentic relationships were possible with cancer patients in smaller regional areas. These profound connections with patients and their communities were seen to result in a greater sense of commitment to their work.

> *"The sense of commitment to the patients is very different. I'm not saying that city nurses aren't as committed, but it's just because you almost know all these people. Some nurses here, they know every single patient that comes in. They're like, well, he's my auntie's brothers, sisters, nephew, and now in school with her brother. Everybody knows everybody, so there's a difference to the nature of the nursing here". (Nurse 13 C2).*

Regional cancer nurses' connection to community was intensified during the pandemic, during which time government mandates essentially cut off regional communities from metropolitan areas across Victoria. Consequently, the pandemic appeared to reinforce regional nurses' commitment to their communities, with many perceiving this crisis to require increased cohesiveness between community members. Hence, many reported feelings that their roles as cancer nurses were even more important during a time of regional healthcare service disruptions. In this way, participant's close connection to their communities was further validated by their work as cancer nurses within their community and was seen to mitigate some level of the emotional demands inherent in their work.

> *"I think our health service did a quite an incredible job. I think most people in the community, they were very proud of the local healthcare services, and we*

all looked after each other in a way I've never seen before" (Nurse 14, C2).

Metropolitan participants did not identify the important job resource of connection to community and thus, this factor appeared to be a unique job resource associated with geographical location.

Task variety

Cancer nurses in metropolitan settings identified task variety as an important job resource that has a significant impact on burnout. Indeed, several metropolitan nurses indicated that self-initiated changes to their work tasks, schedules, and roles had achieved the most significant impact on decreasing burnout and improving their job satisfaction. As these participants worked in large, well-resourced metropolitan healthcare services, there appeared to be an abundance of opportunities to diversify their work roles, particularly in nursing research roles. In many cases, metropolitan nurses were able to decrease their heavy workloads by taking on alternative roles or projects for all or some of their working time. In most cases, this meant decreasing the amount of work hours spent in direct patient care roles and supplementing these hours with roles in nursing research and other project work. Task variety was also described as having a significant mitigating effect on the emotional demands associated with cancer nursing work, with several participants describing better mental health and renewed enthusiasm because of changes they had made to their work roles or schedules.

"Since doing the research project I feel way more enthusiastic… It encourages a different way of thinking. I was exhausted before, I feel like I have my energy back" (Nurse 6, C1).

Metropolitan cancer nurses described plenty of available opportunities, such as secondments, which could be used to help manage workload pressures. Such opportunities did not appear to be available in regional healthcare services, and so regional nurses did not identify this aspect as a significant job resource.

Supportive peers and leaders

Nurses working in metropolitan and regional cancer centres identified supportive peers and leaders as a key job resource, for similar reasons, but with some subtle differences. For cancer nurses in metropolitan settings, supportive peers and leaders were viewed as the most significant contributor to a psychologically safe workplace, where nurses can thrive at work despite the inherently difficult work they undertake. An example of this type of support was appropriate recognition and managerial and organisational support following incidents of patient aggression. All metropolitan cancer nurses who had experienced instances of patient aggression, described clear processes in place to support nurses, as important mitigating factors. This type of support appeared to be highly dependent on individual managers, and their relationship with participants. In the few instances where metropolitan nurses were provided with opportunities to debrief with leaders and peers, these participants reported feeling valued and supported and committed to remaining in the profession. Cancer nurses in metropolitan settings provided far fewer examples of supportive peers and managers, but in the few cases they did report, these were described as a key job resource which had a direct influence on how they managed the difficulties associated with work.

"She helps me with the difficult parts of this job by always making herself available to debrief…She has an open- door policy, we know we have any issue we can go and talk to her… I know there are nurses on the ward who have struggled with mental health issues, she has been really open with these people [in] openly sharing her experience" (Nurse 4, C1).

Interestingly, far fewer examples of supportive peers and leaders were cited by metropolitan participants in the pandemic phase of the study, as it was commonly reported by participants that cancer nurses at all levels of leadership were collectively working under immense pressure. Indeed, the more widespread outbreak of COVID-19 in metropolitan areas, appeared to take a greater toll on participants in this group, where there was a sense that healthcare services were completely overwhelmed.

Conversely, regional participants provided extensive examples of supportive peers and managers, even more so in the pandemic phase of the study. In the regional case, supportive peers and colleagues were more commonly identified during the pandemic phase of the study, and indeed these participants highlighted a strong sense of cohesive teams working together to get through the pandemic crisis. Within these regional teams, participants indicated that positive nurse leaders strongly advocated for better resourcing and recognised the importance of efforts to support cancer nurses' mental health. This recognition from peers and leaders of the inherently difficult work of regional cancer nursing, whether through informal support or more formalised programs, resulted in participants feeling valued and respected. The emphasis placed on supporting regional cancer nurse's well-being appeared to arise from recognition by managers and organisations that these nurses were often caring for people from their community.

Importantly, supportive peers and leaders were considered critical to mitigating the emotional demands inherent in regional participants' work, particularly in those cases where leaders had argued for, and secured, additional clinical supervision to support staff during the pandemic crisis.

Discussion

This study highlights the significant role that patient aggression poses for cancer nurses working in both metropolitan and regional cancer care settings, and several specific areas of concern related to risk management in this setting. Specifically in regional cancer centres, the requirement for cancer nurses to attend to security and screening procedures in addition to their clinical duties, posed a safety risk to both nursing staff and patients.

While COVID-19 visitor restrictions are no longer consistently being enforced at healthcare services, this study highlights the inequity in regional cancer services, whereby an absence of security at a unique time in our history, posed an unacceptable risk to nurses' safety. Further, concerning reports by regional cancer nurses in this study suggest that instances of patient aggression are often minimised or not believed by management. This finding is supported by a recent review, which found that unsupportive nurse leadership results in under-reporting of patient aggression, whereby nurses perceive that a manager would not support reporting, and that reporting would not lead to a change in outcome [31].

Similarly, a recent systematic review identified management as the most significant factor related to under-reporting of patient aggression, due to nurses perceptions that the incident will not be investigated, or they will be blamed for the incident [32]. We stress that further education of managers and nursing staff in regional cancer services is required to encourage incident reporting, as well as active management and support during situations and instances of patient aggression as they arise. Greater recognition of the impact that patient aggression poses outside "high risk settings", needs careful consideration, given nearly all cancer nurses in this study identified patient aggression as one of the most distressing aspects of their work.

Adding to the complexity of this issue, findings from this current study suggest that patients and their families have increasingly unrealistic expectations about the efficacy of cancer treatment, often hoping for a cure and taking out their frustration on nurses when treatment fails to produce it. In an era where an abundance of information is readily available, a misconception that cancer treatments can offer the hope of cure to all, places cancer nurses in a precarious position when managing expectations of their patients and carers. Cancer nurses need a psychologically safe work environment where they can speak up and feel supported to report these matters. Encouragingly, upcoming changes to Victorian Occupational Health and Safety regulations will better address these risks to the psychological health of cancer nurses [33].

Nurse leadership is recognised as a supportive and inspirational function of nurses, demonstrated by those nurses who provide mentorship, supervision, and clinical excellence [34, 35]. Our study finds that a psychologically safe work environment may be achieved by supportive leadership that values the physical and psychological safety of cancer nurses. These results are supported by a qualitative study, also conducted in Victoria, Australia during the extended period of COVID-19 related stay- at- home orders, which found strong and supportive leadership is a key element of psychologically safe workplace, particularly considering the unprecedented pressures faced by healthcare workers during that time [36]. Further, our research compliments a recent national Australian cancer nursing workforce survey, which found significantly higher scores for job satisfaction in cases where cancer nurses perceived they had adequate peer support [14]. Conversely, this same study found that 39% of Australian cancer nurses who were surveyed, perceived there was a lack of leadership in their workplaces, and hence their low job satisfaction scores [14]. Our study findings provide deeper insights into some of these workforce issues plaguing the cancer nursing workforce in Australia.

The concept of psychological safety in the workplace is well developed in the literature, and refers to work environments where people believe honesty and transparency is expected and possible [37]. A considerable body of research, spanning multiple industries, supports the notion that psychological safety in workplaces facilitates genuine, upward-directed communication [38]. Indeed, many participants in our study discussed the lack of psychological safety in their workplace, resulting in their hesitancy to report concerns. Consequently, the wellbeing of many participants in this study was overlooked, with few discernible workplace supports to manage the abundance of job demands reported by participants.

Our study found a widespread perception, particularly among metropolitan participants, that cancer nurses are routinely expected to cope with traumatic situations, with no consequence. Houck [39] has similarly argued that cancer nurses are often expected to endure unrecognised emotional exhaustion and cumulative grief. Previous strategies aimed at improving nurse wellbeing have ignored the underlying structural aspects of burnout, which occurs because of an imbalance between job resources and demands [23]. As such, scholars have cautioned against attempts to manage burnout through the common response of placing responsibility on individuals to take better care of themselves, develop more resilience,

and manage stressors on their own [40]. Importantly, interventions implemented to improve nurses wellbeing are seldom evaluated for their effectiveness, suggesting that wellbeing-oriented human resource practices need to be more consistently applied in nursing settings [41], in a genuine attempt by organisations to provide structured workplace supports for cancer nurses.

There has been a long-held view that clinical supervision offers immense value in the specific occupational setting of cancer nursing by enabling structured, professional support through feedback and supervisory relationships, allowing cancer nurses to reflect on their practice and any difficulties they might encounter during the course of their work [42–44]. The present study demonstrates, however, that access to clinical supervision for cancer nurses is inconsistent and appears to be absent for many nurses practicing in metropolitan areas. The presence of clinical supervision in some regional cancer care services might be explained by recognition of the difficulties cancer nurses in rural and regional areas face owing to the nature of the complex dual relationships they often experience, where cancer nurses are equally a member of a small rural community, as well as a key clinical service provider [43]. Hence, the authors of this earlier study recommended clinical supervision as a strategy to support the emotional exhaustion described by oncology nurses in rural areas of Victoria. While it is encouraging to know that clinical supervision is available to some cancer nurses in regional areas, it begs the question why it is not commonplace for all cancer nurses.

In Australia, clinical supervision is mostly practiced in mental health settings [45], where it has been consistently identified as a vital resilience-building strategy which increases job resources and reduces burnout among mental health nurses [46], who incidentally like cancer nurses share a similarly high level of emotional labour inherent in their work. There have previously been calls by the Australian College of Nurses to implement clinical supervision for all nurses irrespective of their specific role, area of practice and years of experience [47] yet there has been little action to this end. Regional participants in this study explicitly identified clinical supervision as an effective means of reflecting on their practice and reducing burnout, but concerningly, also noted how it was perceived to be a workplace support which was regularly under threat of budget cuts, and only maintained due to strong advocacy by nurse leaders in management positions. We argue that clinical supervision needs to be prioritised for all cancer nurses if cancer services are going to take the wicked problem of burnout in cancer nurses seriously. In the context of overburdened cancer services plagued by skilled workforce shortages, we call on nurse leaders to take genuine action, and implement evidence-based strategies such as clinical supervision, to tackle burnout and attrition in cancer nurses.

Conclusion

The aim of this study was to consider the specific work-related challenges and difficulties which may act as antecedents to burnout in cancer nurses, as well as exploring positive job factors that enable cancer nurses to manage these difficulties. By employing a multiple case study design with two groups of participants allocated to separate cases bounded by geographical location, a deeper understanding of the job demands, and resources uniquely associated with cancer nursing in the context of the COVID-19 pandemic was achieved. Findings from this study identified key job demands and resources common to both cases, and some job demands, and resources uniquely associated with geographical location. We have highlighted the importance of supportive leadership and peers as job resources which are critical for cultivating a psychologically safe workplace. Clinical supervision also shows potential an important job resources for cancer nurses, which need to be further investigated and advocated for. Although this study found cancer nurses routinely work in an environment where job demands are disproportionate to job resources, there are modifiable strategies nurse leaders can implement to enable cancer nurses to manage their roles in a highly demanding work environment.

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Author contributions

LPZ, CD, JM, and LW contributed to the research design; supported the development of the proposed paper, including writing, conceptual development, and editing/proofreading. LPZ collected most of the data. CD conducted one interview due to a conflict of interest. LPZ undertook data analysis, with coding and thematic analysis support from CD, JM, and LW.

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Data availability

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

Declarations

Ethics approval and consent to participate

In the first phase of this study, ethical approval was granted by Peter Macallum Cancer Centre, reference number LNR/46353/PMCC-2018 along with site specific approvals. In the second phase of this study, ethical approval was granted by RMIT University, reference number EC00237-23498. Informed consent was granted from all research participants in this study.

Consent for publication

Not applicable.

Competing interests
The authors declare no competing interests.

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References

1. Krishnasamy M, Webb UMM, Babos SLC, Duong JTT, Rohde JEN, Ting NYH, Milne D, Koproski T, Mathieson J. Defining expertise in Cancer nursing practice. Cancer Nurs. 2021;44(4):314–22.
2. Charalambous A, Wells M, Campbell P, Torrens C, Östlund U, Oldenmenger W, et al. A scoping review of trials of interventions led or delivered by cancer nurses. Int J Nurs Stud. 2018;86:36–43.
3. Dallred CV, Dains JE, Corrigan G. Nursing workforce issues: strategically positioning nurses to facilitate cancer prevention and control. J Cancer Educ. 2012;27(2 Suppl):S144–8.
4. Goldsbury DE, Yap S, Weber MF, Veerman L, Rankin N, Banks E, et al. Health services costs for cancer care in Australia: estimates from the 45 and up study. PLoS ONE. 2018;13(7):1–15.
5. Cloconi C, Economou M, Charalambous A. Burnout, coping and resilience of the cancer care workforce during the SARS-CoV-2: a multinational cross-sectional study. Eur J Oncol Nurs. 2023;63.
6. te Marvelde L, Wolfe R, McArthur G, Blake LA, Evans SM. Decline in cancer pathology notifications during the 2020 COVID-19-related restrictions in Victoria. Med J Aust. 2021;214(6):281–3.
7. Zeike S, Ansmann L, Lindert L, Samel C, Kowalski C, Pfaff H. Identifying cut-off scores for job demands and job control in nursing professionals: a cross-sectional survey in Germany. BMJ Open. 2018;8(12):e021366.
8. McMillan K, Butow P, Turner J, Yates P, White K, Lambert S, et al. Burnout and the provision of psychosocial care amongst Australian cancer nurses. Eur J Oncol Nurs. 2016;22:37–45.
9. Cañadas-De la Fuente GA, Gómez-Urquiza JL, Ortega-Campos EM, Cañadas GR, Albendín-García L, De la Fuente-Solana EI. Prevalence of burnout syndrome in oncology nursing: a meta-analytic study. Psychooncology. 2018;27(5):1426–33.
10. Challinor JM, Alqudimat MR, Teixeira TOA, Oldenmenger WH. Oncology nursing workforce: challenges, solutions, and future strategies. Lancet Oncol. 2020;21(12):e564–74.
11. Gómez-Urquiza JL, Aneas-López AB, Fuente-Solana EI, Albendín-García L, Díaz-Rodríguez L, Fuente GA, Prevalence. Risk factors, and levels of Burnout among Oncology nurses: a systematic review. Oncol Nurs Forum. 2016;43(3):E104–20.
12. Eche IJ, Eche I, Aronowitz T. Psychological distress and work-related quality of Life among Oncology nurses during the COVID-19 pandemic: a cross-sectional study. Clin J Oncol Nurs. 2022;26(3):268–74.
13. Dowling M, Efstathiou N, Drury A, Semple C, Fernández-Ortega P, Brochstedt Dieperink K, et al. Cancer nursing research priorities: a rapid review. Eur J Oncol Nurs. 2023;63:102272.
14. Bradford N, Moore E, Taylor K, Cook O, Gent L, Beane T, et al. The cancer nursing workforce in Australia: a national survey exploring determinants of job satisfaction. BMC Nurs. 2023;22(1):461.
15. Zeneli A, Altini M, Bragagni M, Gentili N, Prati S, Golinucci M, et al. Mitigating strategies and nursing response for cancer care management during the COVID-19 pandemic: an Italian experience. Int Nurs Rev. 2020;67(4):543–53.
16. Kim SY, Kim S, Do. COVID-19-Related treatment changes influence fear of Cancer recurrence, anxiety, and depression in breast Cancer patients? Cancer Nurs. 2022;45(2):E628–38.
17. Merriam SB. Case Study Research in Education: a qualitative Approach. Jossey-Bass; 1991.
18. Demerouti E, Bakker AB, Nachreiner F, Schaufeli WB. The job demands-resources model of burnout. J Appl Psychol. 2001;86(3):499–512.
19. Schaufeli WB, Taris TW. A critical review of the job demands-resources Model: implications for improving work and health. In: Bauer GF, Hämmig O, editors. Bridging Occupational, Organizational and Public Health: a Transdisciplinary Approach. Dordrecht: Springer Netherlands; 2014. pp. 43–68.
20. Bakker AB, Demerouti E. The job demands-resources model: state of the art. J Managerial Psychol. 2007;22(3):309–28.
21. Schaufeli WB, Bakker AB. Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study. J Organizational Behav. 2004;25(3):293–315.
22. Taris TW, Leisink PLM, Schaufeli WB. Applying occupational health theories to educator stress: contribution of the job demands-resources model. Educator stress: an occupational health perspective. Aligning perspectives on health, safety and well-being. Cham, Switzerland: Springer International Publishing AG; 2017. pp. 237–59.
23. Keyko K, Cummings GG, Yonge O, Wong CA. Work engagement in professional nursing practice: a systematic review. Int J Nurs Stud. 2016;61:142–64.
24. McVicar A. Scoping the common antecedents of job stress and job satisfaction for nurses (2000–2013) using the job demands-resources model of stress. J Nurs Manag. 2016;24(2):E112–36.
25. Auerbach C, Silverstein LB. Qualitative data: an introduction to Coding and Analysis. NYU; 2003.
26. Saldana J. The Coding Manual for qualitative researchers. SAGE; 2021.
27. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative Res Psychol. 2006;3(2):77–101.
28. Birks M, Mills J, Grounded Theory. A Practical Guide: SAGE; 2022.
29. Tracy S. Qualitative quality: eight Big-Tent Criteria for excellent qualitative research. Qualitative Inq. 2010;16:837–51.
30. JBI. Checklist for Qualitative Research2020.
31. Christensen SS, Wilson BL. Why nurses do not report patient aggression: a review and appraisal of the literature. J Nurs Manag. 2022;30(6):1759–67.
32. Spencer C, Sitarz J, Fouse J, DeSanto K. Nurses' rationale for underreporting of patient and visitor perpetrated workplace violence: a systematic review. BMC Nurs. 2023;22(1):134.
33. Victoria W. Occupational Health and Safety Amendment (Psychological Health) Regulations2023.
34. Scully NJ. Leadership in nursing: the importance of recognising inherent values and attributes to secure a positive future for the profession. Collegian. 2015;22(4):439–44.
35. Davidson PM, Elliott D, Daly J. Clinical leadership in contemporary clinical practice: implications for nursing in Australia. J Nurs Manag. 2006;14(3):180–7.
36. Hallam KT, Popovic N, Karimi L. Identifying the key elements of psychologically safe workplaces in Healthcare Settings. Brain Sci. 2023;13(10):1450.
37. Nembhard IM, Edmondson AC. Making it safe: the effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. J Organizational Behavior: Int J Industrial Occup Organizational Psychol Behav. 2006;27(7):941–66.
38. Edmondson AC, Bransby DP. Psychological safety comes of age: observed themes in an established literature. Annual Rev Organizational Psychol Organizational Behav. 2023;10(10, 2023):55–78.
39. Houck D. Helping nurses cope with grief and compassion fatigue: an educational intervention. Clin J Oncol Nurs. 2014;18(4):454–8.
40. Montgomery A, Panagopoulou E, Esmail A, Richards T, Maslach C. Burnout in healthcare: the case for organisational change. BMJ. 2019;366:l4774.
41. Xiao Q, Cooke FL, Chen L. Nurses' well-being and implications for human resource management: a systematic literature review. Int J Manage Reviews. 2022;24(4):599–624.
42. Botti M, Endacott R, Watts R, Cairns J, Lewis K, Kenny A. Barriers in providing psychosocial support for patients with cancer. Cancer Nurs. 2006;29(4):309–16.
43. Kenny A, Endacott R, Botti M, Watts R. Emotional toil: psychosocial care in rural settings for patients with cancer. J Adv Nurs. 2007;60(6):663–72.
44. Timpson J. Clinical supervision: a plea for 'pit head time' in cancer nursing. Eur J Cancer Care. 1996;5(1):43–52.
45. Kenny A, Allenby A. Implementing clinical supervision for Australian rural nurses. Nurse Educ Pract. 2013;13(3):165–9.
46. Delgado C, Roche M, Fethney J, Foster K. Workplace resilience and emotional labour of Australian mental health nurses: results of a national survey. Int J Ment Health Nurs. 2020;29(1):35–46.
47. (ACN) ACoN. Position statement: Clinical supervision for nurses and midwives.2019.

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