The experiences and perceptions of rural and remote nurses who provide care to pregnant women in the absence of midwives: A phenomenological study

Thesis submitted by

MICHELLE M^{C}ELROY

Midwife, DipHE Mid, BA Mid (Hons), Grad Cert Mid

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James Cook University

Advisory team

Associate Professor Nichole Harvey (Principal Advisor)

Dr Kristin Wicking (Secondary Advisor)

Dr Karen Yates (Advisor Mentor)

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Statement of Contribution of Others

This thesis has been completed through the support of the following people:

Nature of Assistance	**Contribution**	**Names**
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Statement of the Use of Generative AI

Generative AI technology was not used in the preparation of any part of this thesis.

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Signature Date

Michelle MCELROY

Name

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I love a sunburnt country, A land of sweeping plains,

Of ragged mountain ranges, Of droughts and flooding rains.

I love her far horizons, I love her jewel-sea, Her beauty and her terror —

The wide brown land for me!

(MacKellar & Brunsdon, 1990)

If I had not found this wide brown land, it would not have found me, and I would not have found my passion for this study.

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Abstract

Maternity unit closures in rural and remote areas of Australia have led to a notable gap in services for pregnant women. In cases where midwives are unavailable and suitable facilities are inaccessible, registered nurses (RNs) are expected to take on the responsibility. Although maternity education aims to prepare RNs for such situations, there is little evidence to suggest it fully meets their needs. The broad generalist scope of practice of remote RNs, combined with the unique challenges of living and working in rural and remote locations, adds to the stress. The added responsibility of providing maternity care only intensifies this pressure. However, the experiences of nurses caring for pregnant women in these settings have not been explored.

Phenomenology was used in this study as a way of exploring and interpreting the experiences and perceptions of rural and remote nurses who provide care for pregnant women. RNs working in rural and remote health facilities without maternity services were recruited using a purposive sampling method. Semi-structured conversational interviews were conducted, recorded and transcribed verbatim. van Manen's phenomenological six-step method and Gadamer's hermeneutic circle were used to guide the research from data collection to completed analysis.

Eight nurses participated, and three key themes with several sub-themes emerged from the data: (1) **Being in the world of the rural and remote nurse**, where participants described the unchangeable aspects of rural nursing that must be considered as a whole; (2) **Scope of practice – unprepared or underprepared**, in which participants expressed feeling unprepared, both theoretically and practically, as well as mentally, to care for pregnant women despite their extensive nursing skills; and (3) **Moral distress**, which extended to feelings of unpreparedness to feelings of inadequacy, fear, and concerns about the suitability of care provided.

The findings indicate that, at some point, rural and remote nurses will be responsible for caring for labouring and/or pregnant women, and the women in these areas face a higher risk of complications due to lower social determinants of health. Although participants expressed pride in their nursing abilities and job satisfaction, they unanimously highlighted the fragmented and insufficient care resulting from an overstretched and under-resourced workforce.

This study highlights the experiences and perceptions of nurses delivering maternity care in rural and remote settings, a previously neglected topic. The voices of these RNs deserve recognition and attention from policymakers in government and clinical practice. Both the nurses and the women they care for require additional support.

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Chapter 1: Introduction

1.1 Introduction

The past two decades have seen a staggering 43% closure of rural maternity services in Queensland (Hirst, 2004; Hirst, 2005; Kildea et al., 2016). Women who live in those areas account for 18% of the total number of women who gave birth in the state and the ramifications have forced over half to leave their communities to have their babies (Department of Health and Ageing [DoHA], 2015). The 2022/23 annual report, released by the Australian Health Practitioner Regulation Agency (AHPRA) (2023), showed 453,515 nurses registered in Australia, of which only 26,344 (5.8%) held dual registration as a midwife. Rural and remote areas have a slightly higher nursing full-time equivalent (FTE) per 100,000 people compared to major cities. However, according to the Australian Institute of Health and Welfare (AIHW) (2024a) that workforce also demonstrates a transient and ageing demographic. Furthermore, people in these areas generally have poorer access to health services due to the distances they need to travel (AIHW, 2018, 2022a).

The reality of rural and remote nursing practice demonstrates that at some point in their career, rural and remote area nurses (RNs) will care for a pregnant and/or labouring woman. Additionally, an increased likelihood of lower social determinants of health indicate that these women will have a higher risk of experiencing complications (AIHW, 2024b, Barclay & Kornelsen, 2016). Little is known about the experiences of RNs placed in these situations. This chapter provides a background to the research presented in this thesis.

This chapter will begin with information about myself and my background incorporating my impetus for this research. It will then review pertinent background information relating to the context of rural and remote living, health and health services, cultural and midwifery practices, and nursing scope of practice. This chapter will conclude with an outline of chapters contained within this thesis.

1.2 About me

I had no desire to ever become a nurse. However, with the introduction of the direct entry midwifery program in the late 1980s through the English National Board (ENB) (Radford & Thompson, 1994) this changed everything. I started to consider a profession

in health, and the birth of my midwifery career began in the mid-1990s in England. A short three years later I found myself as a clinical shift leader on a remarkably busy 12 bed birth suite and in possession of a Bachelors (honors) degree.

In a bid to 'find my thing' I navigated to clinical education and whilst I enjoyed the challenges and rewards of teaching and watching the positive effects it brought to midwives, doctors, women, and their families, I still had something missing – I just did not know what at that point. The life changing event of losing my mother completely altered my outlook and gusto for life and soon after, my husband, two teenage sons, a dog and I set forth on Australian soil seeking adventure and ready to trailblaze a path. I set off as a confident midwifery 'Sister' and educator with a Royal College of Midwives award for innovation in midwifery education tucked into my repertoire.

I very quickly made a name for myself and not necessarily in the right way. I was reminded on numerous occasions when I set off to perform routine (to a United Kingdom [UK] trained midwife) tasks, 'you are not in the UK now Michelle.' Hmm… I was beginning to realise this! People that know me will concur; I am impossible at maintaining the status quo and find it physically inconceivable not to 'put my hand up' when new challenges are presented to me. So, I found myself in roles that would give me the opportunity to make a difference (or so I hoped): midwifery educator and then midwifery manager.

During turbulent times at work, a much-needed long service leave break gave me the opportunity to work in Alice Springs for three months. Having never worked with Indigenous Australian women before, I was completely overwhelmed and in awe of their resilience, sense of family and culture. Like a sponge, I soaked up our 'yarning' where we would swap stories of our families, our history, and our experiences. I had never experienced ways of working like this and was hooked.

Back in Victoria, my patience and finally my spirit were broken as a midwifery manager. In a changing environment, my own principles and standards were challenged to the point of potentially destroying my very core as a midwife. I became overwhelmed with trying to navigate the fine line between management and leadership within the toxic culture of a health service 'needing' to make drastic changes if I were to meet the needs of women and midwives. To be honest, my time in Alice Springs had changed me. I stepped away. At the time, I believed I was not strong enough for the role of midwifery manager; I now know I was lost and destined for a different role, one that would allow

me to find myself as a midwife again. My husband and I took a huge leap of faith and moved 2500km north to remote Queensland, leaving our adult sons behind in Victoria.

Rural and remote midwifery, and in particular midwifery education in this context, has brought me back full circle. There have been challenges. As a direct entry midwife working in a rural and remote health facility in Queensland, I was again questioned: 'How useful would I be if I was not a nurse'? I thought at the time that this was a reasonable question. Most rural and remote hospitals have minimal numbers of maternity patients and needed staff to move between maternity and nursing roles. I found myself continuing to apologise for this apparent inadequacy, whilst frustratingly watching the employment of enrolled and registered nurses (non-midwives) in a maternity unit due to the short supply of dual registered midwives. In my educational role I was not allowed to teach certain things like advanced life support, (despite being educated to) as I was not a nurse. The irony, however, was in what I was allowed to teach - Imminent Birth to rural and remote nurses giving them the basic skills to look after a pregnant or labouring woman in the absence of a midwife.

Visiting rural and remote health facilities in Queensland revealed working and living conditions I had never imagined, even in comparison to Alice Springs. Working out of a rural health service that provided maternity and birthing services, I travelled to seven remote health facilities that had no on-site midwifery inpatient services. One expectation of my role as educator was to teach nurses about imminent birth. Initially a full day's face to face study day preceded the implementation of a Queensland Health statewide education program developed in 2017, called the Imminent Birth Education Program (Connell, 2018). This program was very innovative, utilising an online delivery method to provide the theoretical component. I was lucky enough to be a part of the working party for this program.

1.3 Impetus for the study

It was during these education sessions that the impetus for this study originated. Whilst delivering new and refresher skills to nurses, part of my own brief was to understand their previous experiences and offer some kind of debrief session. At the start, there was trepidation from some nurses to voice their stories. The motivation to speak out about actual or perceived issues was complex: I was initially unknown to most, fear of ramifications they had done the wrong thing, feelings of inadequacy, feeling they had let the woman down, fear of acknowledging working outside their scope of practice, all

behaviours echoed by Umoren et al. (2022). All these concerns were revealed to me over time; initial apprehension gave way to the floodgate opening, and stories, events, tears, pride, fear, and joy emerged. I knew at that point that I needed to find out more about what rural and remote nurses were experiencing so I could be in a better position to help advocate for possible solutions to this issue.

I had developed a rapport and kinship with these rural and remote nurses. My own feelings of being useless as a midwife rather than a nurse, in a rural and remote setting mirrored their feelings of inadequacy. As much as I did not want to be a nurse, similarly, they did not want to be midwives. The paradox was that I was not allowed to step into the nursing world, yet frequently the nurses were expected to step into the midwifery domain.

A literature search revealed midwifery service closures in rural and remote areas were consistent across Australia (Evans et al., 2011; Hoang et al., 2014; Kildea et al., 2016; Longman et al., 2017; Sweet et al., 2015). The context of the enquiry into the deficit in maternity facilities focused on the impact on women, maternity policy, and procedure (Barclay & Kornelsen, 2016; Felton-Busch & Larkins, 2019; Longman et al., 2017) and how to upskill nurses to fill the gap (Belton et al. 2010; Kildea et al., 2006). No literature sought to ask rural and remote nurses how they felt about delivering care left by this deficit.

1.4 Rural and remote

The terms rural and remote are often used simultaneously and/or interchangeably (AIHW, 2020) with both encompassing areas outside Australia's major cities and with remote areas being an extreme extension of rural. There are, however, distinct differences between the two. Smith (2016) contested that in a continent as large as Australia, it is not possible to have one rural or non-urban lifestyle that captures the diversity of people, places, and landscapes. Whereas Siberry et al. (2023) propose that health settings exist on a spectrum between rural and urban, yet the prevailing binary framework continues to dominate, leading to widespread misconceptions and poorly allocated resources.

In Australia, there are several geographical classification systems commonly used. The Accessibility/Remoteness Index of Australia (ARIA), the Rural, Remote and Metropolitan Area (RRMA), the Australian Statistical Geography Standard- Remoteness Areas (ASGS-

RA) and the Modified Monash Model (MMM) (Australian Bureau of Statistics [ABS], 2018). There are benefits and disadvantages to each of these systems as they all classify remoteness differently. ARIA measures distance (in km) to services with values ranging from 0 (high accessibility) to 15 (high remoteness); this system however may appoint dissimilar areas with the same score. RRMA uses zones of metropolitan, rural and remote, and seven classes within these; this system is not updated to reflect population growth. ASGS-RA divides Australia into five classes of remoteness based on population and distance to services: RA1 (major city) to RA5 (very remote). The ASGS-RA model is a refinement of the ARIA system, however, does not take cultural or socioeconomic factors into account. The Modified Monash Model (MMM) (as shown in Table 1.1) is based upon the ASGS-RA model and defines areas in categories ranging from MM1 (major city) to MM7 (very remote) (Department of Health [DOH], 2019). This system is reviewed and updated after each census.

The MMM was used in this study for consistency with significant documents utilised (Australian Government, 2023; AIHW, 2009, 2020; Wakely et al., 2019) to provide clear definitions and scoring criteria for each location from which participants were recruited. All these locations were classified as MM7.

Table 1.1: Modified Monash Model for Classification of Remoteness

Modified Monash Category (DOH, 2019)	Description including the Australian Statistical Geography Standard – Remoteness Area (2016)
MM1	**Metropolitan areas:** (ASGS-RA1) Major cities accounting for 70% of Australia's population
MM2	**Regional centre:** Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas that are in, or within a 20km drive of a town with over 50,000 residents. For example: Hobart, Bundaberg, Townsville, Darwin, Mackay.
MM3	**Large rural towns:** Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas that are not MM 2 and are in, or within a 15km drive of a town between 15,000 to 50,000 residents. For example: Coffs Harbor, Maryborough, Kalgoorlie.

MM4	**Medium rural towns:** Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas that are not MM 2 or MM 3 and are within a 10km drive of a town with between 5,000 to 15,000 residents. For example: Port Augusta, Charters Towers, Moree.
MM5	**Small rural towns:** All remaining Inner (ASGS-RA 2) and Outer Regional (ASGS-RA 3) areas. For example: Mount Buller, Mossman, Port Fairy.
MM6	**Remote communities**: Remote mainland areas (ASGS-RA 4) AND remote islands less than 5kms offshore. For example: Cape Tribulation, Lightning Ridge, Alice Springs, Mount Isa, Mallacoota, Port Hedland. Additionally, islands that have an MM 5 classification with a population of less than 1,000 without bridges to the mainland will now be classified as MM 6 for example: Bruny Island.
MM7	**Very remote communities**: Very remote areas (ASGS-RA 5). For example: Longreach, Mornington Island, Thursday Island and all other remote island areas more than 5kms offshore.

Source: From Department of Health (2019)

1.5 Health and demographics in a rural and remote setting

The significance of accurate classification becomes pertinent when informing health policy development and subsequent distribution of resource allocation. The health status of the population is collected to determine National Health Priorities. There are three main indicators used for this: life expectancy, causes of death and morbidity (AIHW, 2022b). The National Health Priority areas focus on specific chronic conditions: cardiovascular health, cancer control, injury prevention and control, mental health, obesity, dementia and diabetes (Primary Health Network (PHN) for country South Australia, 2020). These are said to impact the three indicators representing a significant health burden (Smith, 2016). Health needs of rural and remote populations need consideration. Twenty eight percent of Australians live in rural and remote areas, the contribution of geographical location and poorer health outcomes deliver unique

challenges. Data demonstrates higher rates of hospitalisations, injuries and deaths as well as poorer access to primary health facilities (AIHW, 2022b). Taking into consideration areas focused on by the National Health Priority, the AIHW (2022b) reports a higher health differential for rural and remote Australians, when compared to those living in a major city, in arthritis, asthma and diabetes. The burden of disease for living with a chronic condition or dying prematurely from the condition is 1.4 times and 1.8 times higher respectively (AIHW, 2022b).

The concept of health is inherently complex and multifaceted. According to the AIHW (2024b), the determinants of health encompass factors that are beyond an individual's control, such as gender, culture, and genetics. Additionally, there are social determinants that may be within an individual's control to varying degrees, including employment, housing, and protection.

When examining health inequalities within rural and remote populations, the significance of these determinants becomes evident. For instance, when comparing rural and remote populations to those residing in major cities, disparities in income and social status are apparent. Rural and remote populations have an average income that is 19% lower and a mean household net worth that is 30% less than their urban counterparts. Furthermore, educational attainment also differs significantly, with only 54-57% of rural and remote Australians having completed year 12 education, compared to 77% in major cities (AIHW, 2024b).

The physical and social environments in rural and remote areas are directly related to health outcomes. Factors such as living conditions, social isolation, and distance from essential services have been documented as influential (Mills et al., 2010; Smith, 2016; Welch, 2000). These environmental determinants further exacerbate health disparities, highlighting the need for targeted interventions to address the unique challenges faced by rural and remote populations.

The majority of agriculture, particularly grazing and cropping, occurs in regional, rural, and remote Australia (Australian Bureau of Agricultural and Resource Economics and Sciences [ABARES], 2024; Brown et al., 2020). Of the 239,093 employed in farming, 81% are reported as living in regional areas (ABARES, 2023). Agriculture is recognised as being one of the most dangerous occupations involving workplace injury (Safe Work Australia, 2016). This coupled with a reported indifference to health care (Brumby et al., 2006; Dixon & Welch, 2000; Hull et al., 2022) and the aforementioned social

determinants places farmers and their families at even greater risk of poor health. Elliot-Elliot-Schmidt and Strong (1997) propose that indifference to health among rural and remote populations is closely linked to their perceptions. Specifically, individuals in these areas often regard seeking medical assistance as an inconvenience that interferes with their work and may be perceived as a sign of weakness. This perspective is further supported by Brumby et al. (2006) who observed that farmers tend to equate adequate health with the ability to fulfill work-related demands.

Moreover, mental health issues are particularly salient in this context. Brew et al. (2016) highlight that Australian farmers are significantly less likely to seek help for mental health concerns compared to their non-farming counterparts, with farmers being only half as likely to pursue such assistance. This reluctance underscores the broader challenges faced by rural and remote populations in accessing and prioritising healthcare services.

The health status of Indigenous Australians is significantly worse than that of Australia's non-Indigenous population on every health indicator, with lower life expectancies, higher burden of disease, higher likelihood of hospitalisations and poorer self-reported health (AIHW, 2021, 2022b; Dixon & Welch, 2000; Smith, 2016). Between 18 and 44% of Indigenous Australians live in regional, remote, and very remote areas with the proportion of total population who identify as Indigenous increasing from 1.8% in major cities to 32% in remote areas. Such are the issues that in 2008, following the National Apology to Australia's Indigenous Peoples (Rudd, 2008), the first Closing the Gap report (Australian Government, 2009) was produced with an aim of building a 'fairer' Australia. This report highlighted six key targets:

1. Close the life expectancy gap within a generation
2. Halve the gap in mortality rates for Indigenous children under five within a decade
3. Ensure access to early childhood education for all Indigenous four-year-olds in remote communities within five years
4. Halve the gap in reading, writing and numeracy achievements for children within a decade
5. Halve the gap for Indigenous students in year 12 attainment rates by 2020

6. Halve the gap in employment outcomes between Indigenous and non-Indigenous Australians within a decade

(Australian Government, 2009, p. 5)

Despite 16 years and 12 reports, the targets set forth have yet to be achieved. In 2019, a formal partnership agreement was established between the Commonwealth Government, state and territory governments, and the Coalition of Peaks. This agreement initiated a process of Indigenous consultation and co-design aimed at refreshing the Closing the Gap targets, as well as revising the prevailing strategy and ideological underpinnings (Bond & Singh, 2020; National Indigenous Australians Agency [NIAA], 2020). In the second and most recent report since the establishment of this partnership, the Australian Prime Minister, the Hon Anthony Albanese, emphasised the necessity for change by stating, "We cannot keep doing the same thing and expect to achieve a different outcome" (Australian Government, 2024, p. 2). In the same document, this sentiment was echoed by the Minister for Indigenous Australians, the Hon Linda Burney, who declared, "it is completely unacceptable that only four of the 19 targets are on track" (p. 4). The report underscores that, while there has been progress in certain areas, significant challenges persist. It is evident that ongoing efforts are essential to achieve meaningful and sustainable improvements in Indigenous health, wellbeing, and social equity.

The shortage of Aboriginal and Torres Strait Islander nurses in remote Australia continues to present a critical challenge, with many communities lacking culturally representative healthcare providers. This absence contributes to ongoing health inequities and limits the delivery of culturally safe care. National and state initiatives are attempting to address this gap through targeted recruitment strategies, culturally responsive education programs, and financial and mentoring support for Indigenous students pursuing nursing and midwifery careers. However, at the time of completing this research, there were no Indigenous nurses employed in any of the areas studied, which highlights and further emphasises the severity of the problem. Recent workforce reports confirm that the proportion of Indigenous nurses remains disproportionately low compared to population needs, and that sustained investment in Indigenous workforce development is urgently required to improve access, trust, and health outcomes for Aboriginal and Torres Strait Islander peoples (AIHW, 2024a; Department of Health and Aged Care [DHAC], 2023a).

Planning of health services to better meet the needs of the rural and remote population is suggested by the Queensland Health rural and remote services framework as needing to consider "geographical location, health service needs, distribution of population, transport networks, workforce supply, the availability of appropriate infrastructure and equipment, information communication technology requirements and available funding" (Queensland Health, 2014, p. 7). Whilst this is an extensive and complex list, the aims of the framework were focused on improving quality and equity within a sustainable configuration of health services. Use of this framework is considered in conjunction with the Clinical Services Capability Framework (CSCF) (Queensland Government, 2022).

The CSCF describes service capability levels for public and licensed private health facilities within Queensland. Within specific service modules (for example, intensive care, emergency, mental health, surgical, neonatal, and maternity) there are minimum requirements for that service by capability level. The capability levels run from low level 1 (low complex ambulatory care) to high level 6 (high complex inpatient and ambulatory care). The capability level criteria within the CSCF include service description, service requirements, workforce requirements, specific risk considerations, and support service requirements (Queensland Government, 2022). These criteria are particularly vital in rural and remote areas, where access to comprehensive health services is often limited, requiring tailored solutions to meet the needs of geographically dispersed populations.

1.6 Maternity services in rural and remote Australia

Between 1995 and 2015 over 150 maternity units in Australia closed, 41 of these were located in Queensland and are shown in Figure 1.1 (Australian College of Midwives [ACM] & Rural Doctors Association of Australia [RDAA], 2023; Kildea et al., 2015; Sinnerton, 2018). In a press release statement for the national rural maternity services forum, ACM Chief Midwife, Alison Weatherstone, stated:

> The risks to rural mothers and babies are enormous when there is no local birthing service, the costs to rural families are huge, and there are also significant indirect costs to rural communities – because when a local maternity unit is closed, doctors and midwives leave town too and other local health services are often lost. (ACM & RDAA, 2023, p. 1)

Aligning with the minimal capability level requirements of the CSCF (Queensland Government, 2018), closures have been attributed to maternal and infant safety and the premise that closures are a lesser risk than running maternity units without obstetric back-up on site (Monk et al., 2013). However, there is little evidence that corroborates poor clinical outcomes for low-risk women, as a number of research papers demonstrate contradiction to this theory (Abdel-Latif et al., 2006; Cameron & Cameron, 2001; May et al., 2007; Tracy et al., 2006)

Figure 1.1 Queensland maternity units that have closed

Source: From Sinnerton (2018)

In 2011, the Department of Health and Ageing (DoHA), produced a report, The *National Maternity Services Plan* (Australian Health Ministers' Conference, 2011) informed by a preceding inquiry *Improving Maternity Services in Australia* (DoHA, 2009). These key

documents reviewed maternity services in Australia highlighting inadequacies in access to, and choice of, maternity care for women living in rural and remote communities. Both documents made fundamental recommendations as priority areas for improvement; in particular, access issues for rural and remote women in the provision of maternity care. The latter document sets out a five-year strategy plan from 2010-2015. Two years past this deadline saw the development of a further report, the National Framework for Maternity Services (NFMS), which established a bid to yet again "ensure equitable access to maternity care for all women that supports optimal outcomes for a woman and her baby" (Council of Australian Governments [COAG], 2017, Para 1), Figure 1.2 shows a visual timeline of maternity reviews and planning documents. Whilst maternity and consumer group pressures successfully influenced the re-opening of five birthing service facilities (Clinical Excellence Queensland, 2019), progression for most rural and remote women remains slow.

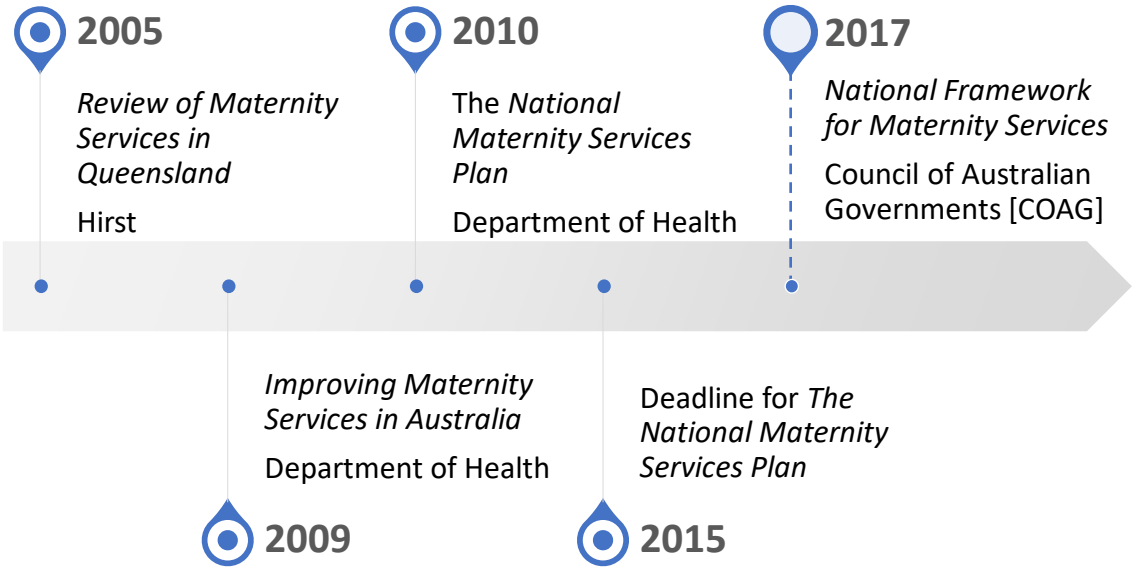

Figure 1.2 Timeline of Maternity Reviews and Planning Documents

Despite the intricate challenges inherent in providing maternity services in rural and remote areas of Queensland, contemporary discussions acknowledge the multifaceted consequences and risks faced by pregnant women due to closures of maternity services (Byrne et al., 2020; Donnellan-Fernandez et al., 2020; Jackson et al., 2012; Kildea, 2006;

Robinson, 2023). These ramifications for women encompass heightened feelings of stress, distress, and isolation, as well as less favorable outcomes and increased financial burdens (Barclay & Kornelsen, 2016). Additionally, reports (Longman et al., 2017; McLelland et al., 2013) show increased incidents of unplanned birthing, free birthing (where a woman choose to birth her baby outside a maternity facility without a healthcare professional present), and babies born before arrival (BBA). The Australia's Mothers and Babies Report (AIHW, 2023a) showed in 2021, 514 mothers in Queensland gave birth somewhere other than a hospital, birth centre or home. That number has increased proportionate with rural hospital closures. Unfortunately, exact data for these women has not been collected. Such outcomes are often attributed to inadequate antenatal care and/or delays in seeking hospital care, often stemming from apprehensions about being compelled to leave their community for childbirth (Barclay et al., 2016; Kildea et al., 2016). The percentage of women birthing away from their usual rural and remote Queensland Hospital and Health Service (HHS) ranges from 11% to 68%, a stark contrast to Queensland's regional and metropolitan HHS, where the highest rate is merely 8% (Clinical Excellence Queensland, 2019).

The closure of maternity services can also have broader implications for the sustainability and viability of rural communities. Access to local maternity services is not only crucial for maternal and infant health but also for the social and economic well-being of communities. The closure of birthing services may deter young families from settling in rural areas, leading to population decline and further strain on local resources and services.

Cultural considerations play a significant role in the experiences of women birthing in rural and remote Australia. Indigenous women often face unique challenges and considerations due to cultural beliefs, traditions, and historical factors. For Indigenous women, childbirth is often viewed as a deeply spiritual and communal event, with traditional practices and ceremonies playing a central role (Kosiak, 2021). Accessing culturally appropriate maternity care in rural and remote areas can be challenging, with limited availability of Indigenous midwives or culturally sensitive healthcare providers (McCalman et al., 2018). However, the importance of culturally safe maternity care for Indigenous women in rural and remote Australia goes beyond cultural competence and acknowledges the power imbalances and systemic issues that can impact Indigenous women's experiences of childbirth (Kruske et al., 2016). Care involves creating an

environment where Indigenous women feel respected, supported, and empowered to make informed decisions about their care (Felton-Busch & Larkins, 2019; Kosiak, 2021).

The reproductive health and outcomes for Indigenous women and their infants exhibit notable disparities compared to the non-Indigenous population. In the period 2012 – 2021, the maternal mortality rate (MMR) for Indigenous women was 16.8 per 100,000 women giving birth, in comparison to a rate of 5.3 per 100,000 non-Indigenous women (AIHW, 2023b). The stillbirth rates for First Nations babies are 1.6 times higher and neonatal deaths 1.8 times higher than for non-Indigenous babies (AIHW, 2023c).

In an article by Robinson (2023) high profile maternity care leaders Professor Sue Kildea, Professor Ruth Stewart and the ACM chief midwife Alison Weatherstone believe that midwifery services in rural and remote Australia are now at crisis point, a situation, they suggest, is not insurmountable. Reprioritisation of midwifery services through innovative approaches that invest in midwifery continuity of care models and the workforce is the solution put forward (ACM & RDAA, 2023). Like-minded reports and midwifery research uphold the safety and cost-effectiveness of midwifery models (Bradow et al., 2021; Robinson, 2023; Sinnerton, 2018). Queensland's Chief Midwife, Liz Wilkes, simplifies this as explicitly, allowing midwives to work to their full scope of practice (Sinnerton, 2024).

1.7 Midwifery practice in the rural and remote context

Midwives are uniquely essential to the provision of quality of care for pregnant women and newborns in even the most difficult humanitarian, fragile and conflict-affected settings (World Health Organisation [WHO], n.d.). Midwifery in Australia is a stand-alone profession with entry into that profession by one of two means; either as a registered nurse who then completes a post graduate midwifery course, or by completing a Bachelor of Midwifery either by itself or alongside a Bachelor of Nursing. Traditionally within Australia midwives were primarily nurses, with the introduction of direct entry Bachelor of Midwifery in 2002 (Gray & Smith, 2017). The introduction of the single-entry program was borne from a desire by the profession to separate from the nursing medical model, a shortage in recruitment of a skilled and competent midwifery workforce and the ability for cross continental midwifery working (Gray & Smith, 2017; Leap, 1999; Yates et al., 2013).

Employers in rural and remote healthcare settings tend to prioritise hiring dual registered midwives, as evidenced by research (Bull et al., 2023; Kensington & Rankin,

2021; Longman et al., 2017; Reiger, 2000). These midwives possess the capability to fulfill various roles across multiple clinical domains (Yates et al., 2013), making them appear more flexible. However, the reality of small rural and remote hospitals presents these midwives with the challenge of maintaining competence and confidence during periods of low midwifery activity (Bull et al., 2023; Yates et al., 2011) or when emergent nursing requirements are prioritised over routine midwifery tasks (Hundley et al., 2007; Kensington & Rankin, 2021) thus leading to dampening of their midwifery skills (Hoang et al., 2012).

The availability of midwives working in the Australian rural and remote context is diminishing for several reasons. Australia in general has faced a concerning trend of declining midwifery workforce. The DHAC (2023b) report shows a reduction of 2,132 dual registered midwives between 2018 and 2022; however, the numbers of single registered midwives showed an increase of 1,319 for the same period. There is also a growing concern that the impact of an ageing midwifery workforce will further decline numbers as older midwives retire (Callander et al., 2021; Schofield & Beard, 2005). This is evident particularly within the rural and remote data, which shows the average age of employed nurses and midwives raises by five years commensurate with rurality (DHAC, 2023a) with the highest proportion of midwives being aged between 55 – 65 years (DHAC, 2019). In addition, rural midwives are reportedly working lesser hours than their metropolitan counterparts (National Rural Health Alliance [NRHA], 2019).

There have been several attempts to address recruitment and retention in rural and remote contexts. Attracting new midwives to the profession has been shown by research to involve students coming from a rural background and/or having a positive rural placement in their education (Dunbabin & Levitt, 2003; McElroy et al., 2022). Consequently, universities are focusing on working with health industry partners to attract students from local communities and provide opportunities and support students with rural placements (Centre for Rural and Remote Health [CRRH] & James Cook University [JCU], n.d.; O'Connor, 2018; Walsh et al., 2023a). Financial incentive schemes to attract existing midwives have also been employed (Queensland Health, 2023). However, Smith (2016, p. 275) suggests that in the 'pull and push factors' for recruitment and retention, "financial incentives come only halfway down an extensive list of 11 with factors such as lifestyle, rural background and attractive location coming before".

Despite these attempts, there is growing evidence of departure from the profession due to factors such as disillusionment of the role and the profession, stress, and exhaustion (Ball et al., 2003; Harvie et al., 2019). The loss of skilled midwives negatively impacts the sustainability of midwifery care, with the shortage also intensifying the workload and stress experienced by remaining midwives, potentially compromising the quality of care delivered. Consequently, the declining midwifery workforce in Australia not only threatens maternal and neonatal health outcomes but also widens the disparity in healthcare access between urban and rural populations.

1.8 Nursing scope of practice

Currently, programs of study for nursing in Australia do not cover midwifery theory. Whilst the Nursing and Midwifery Board (Nursing and Midwifery Board of Australia [NMBA], 2013) require nursing students to complete a minimum of 800 hours clinical placement in a variety of settings, there is no requirement for student nurses to attend a maternity related setting or even witness a birth. The Scope of Practice and Capabilities of Nurses' Fact Sheet, when describing the two separate professions of nursing and midwifery, clearly states “each of these titles [nurse and midwife] are protected under the National Law with each having different education, knowledge, skills and standards for practice and different responsibilities and activities” (NMBA, 2022, p. 1). Whilst the Scope of Practice of an Enrolled Nurse (EN) states they provide nursing care under the supervision of or delegated to them by a registered nurse (RN) or midwife, there is no such caveat under the RN for the provision of midwifery care. Indeed, there is no reference to the provision of maternity care in the RN activities within their scope of practice (NMBA, 2013). What is stated in standard 3 of the Registered Nurses Standard for Practice is that “RNs, as regulated health professionals, are responsible and accountable for ensuring they are safe, and have the capability for practice” (NMBA, 2016a, p. 4) alongside standard 6.2 that emphasis the RN “practises within their scope of practice” (p. 5) and standard 1.5 stating the RN “uses ethical frameworks when making decisions” (p. 4).

Considering the governing statements for nursing practice in Australia, the confusion surrounding the RN scope of practice is evident (Bragg & Bonner, 2015; Kidd et al., 2012; Parker et al., 2013; Smith et al., 2019). Interestingly, there is no such confusion regarding the scope of practice for midwives, who are not expected to include RN activities in their practice. Understanding the needs of rural and remote Australians, as

discussed earlier in this chapter, highlights the need for rural and remote RNs to have a wider, generalist set of skills and scope to manage the specific context of practice (National Rural Health Commissioner [NRHC], 2022).

To address this, the first national rural and remote nursing generalist framework (2023–2027) was developed. This framework outlines the comprehensive skill set required for nurses to work to their full scope of practice as rural and remote nursing generalists (NRHC, 2022). It encourages RNs to leverage their entire skill set across various stages of care and lifespan, advocating for clinical bravery and extending abilities beyond familiar territories. The framework is further supported by the Commonwealth of Australia's document, which recommends that all health professionals in sexual and reproductive health work safely to their full scope (Senate Community Affairs References Committee, 2023).

However, this extension of scope does not apply to midwifery. Maternity and antenatal care by nurses is only discussed in the context of working with midwives as part of a multidisciplinary team (Homer, 2022; NRHC, 2022). Despite the lack of midwives in rural and remote locations, the question remains why nurses are providing care to pregnant women when it is clearly outside their scope of practice and not endorsed by governing bodies.

The exploration of the RN scope of practice through the development of the national rural and remote nursing generalist framework sets the stage for understanding the deeper associations and links between phenomenology and nursing that will be addressed in upcoming chapters. However, as stated by Cohen et al. (2000), beginning research is like a beginning, a journey worth the time and trouble and what researchers learn about themselves along the way is often the most important part of the process. In research, as in marriage, having wonderful partners with whom to share the process will make the journey more fun and a richer experience (Cohen et al., 2000). What will transpire over the coming chapters and borne from the soul searching displayed early in this chapter is the revelation of relationships built on this journey. Thus, this journey has enabled a life-changing experience for myself, and hopefully for rural and remote nurses.

This study aimed to examine the insufficiently documented experiences of rural and remote registered nurses in providing care to pregnant women. The central research question underpinning this investigation is: ‘What are the experiences and perceptions

of RNs who deliver maternity care in these resource-limited environments?' By exploring these experiences, the study aims to generate a nuanced understanding of how such circumstances affect not only the provision of care to mothers and babies but also influence the nursing workforce and the wider healthcare system.

1.9 Conclusion

This chapter has provided an overview of my background and impetus for this study, highlighting the significant challenges faced by rural and remote nurses and midwives in Queensland. It has also reviewed pertinent background information relating to the context of rural and remote living, health services, cultural and midwifery practices, and nursing scope of practice. The following chapters will delve deeper into these issues, exploring the experiences of rural and remote nurses and proposing potential solutions to improve support and outcomes for both healthcare providers and the communities they serve.

1.10 Structure of thesis

Chapter Two will provide an outline of current literature in relation to rural and remote nurses. Chapter Three discusses the philosophical underpinnings of the research approach taken and the reasoning for the chosen methodology of Hermeneutic interpretive phenomenology, including a historical examination of this methodology. Chapter Four explores how van Manen's methodological themes guided the research and describes the methods used to obtain and analyse the data, including ethical considerations and methodological rigour.

Chapter Five introduces the participants of the study giving a contextual view of the life of the rural and remote nurse. This chapter will also detail the interview process and how a reflective diary was used to enhance reflexivity and transparency. Chapter Six explores the interpretation of the data collected, revealing the experiences and perceptions of the rural and remote nurses in providing care to pregnant women through the identification of three main themes: (i) Being-in-the-world of the rural and remote nurse: (ii) Scope of practice – unprepared or underprepared: and (iii) Moral distress. Each of these themes will be supported by the words of the participants. Chapter Seven discusses the themes in relation to the available, relevant literature. The final chapter, Chapter Eight, will address limitations to the study, and suggest recommendations for practice, education, research and policy.

Chapter 2: Literature review

2.1 Introduction

Some discussion regarding methods undertaken will necessitate the use of first-person language relating to myself as the Principal Investigator (PI).

The PI's interest was sparked by personal experiences while facilitating and delivering basic emergency maternity training to rural and remote nurses. It became apparent that the stress and anxiety associated with potential and actual birthing events were significant. The reality of rural and remote practice indicates that, at some point in their careers, RNs will inevitably care for pregnant and/or birthing women. Furthermore, the increased likelihood of low social determinants of health, which are prevalent in rural and remote living conditions, suggests that these women are at a higher risk of experiencing complications (Barclay & Kornelsen, 2016; Queensland Health, 2009 - 2016).

As previously discussed, the landscape for maternity care in rural and remote Australia has undergone significant changes over the past decade. These changes have had varied consequences for different groups, including RNs. However, as presented in the previous chapter, the impact on RNs does not occur in isolation. Exploring the literature in hermeneutic research extends beyond merely justifying the study; it involves considering the broader context. Therefore, it was essential to situate RNs within the rural and remote maternity care environment to provide a comprehensive understanding.

Engaging in a literature review at an early stage is sometimes argued to potentially influence the researcher and lead to less innovative methodological choices (Finlay, 2009; Kumar & Owen, 2019). However, Lockhart and Resick (2014) challenge this view; suggesting that clarifying the problem and its significance is crucial, particularly for novice researchers. Furthermore, guiding the reader to understand how this research addresses any knowledge gaps is paramount (Cohen et al., 2000) and prevents aspects being viewed in isolation (Aveyard, 2019). The justification of the PI's research topic is thoroughly addressed through the examination of existing literature presented within this chapter (Creswell & Creswell, 2018). The study is systematically situated within the broader body of research, while employing phenomenology as an appropriate methodological framework. This approach offers a fresh perspective on the challenges

and experiences of rural and remote nursing, as demonstrated through the discussions in preceding and forthcoming chapters (Cohen et al., 2000).

Two reviews were undertaken. The first was a review to ascertain the outcomes resulting from births that occur in a non-birthing facility in rural and remote Australia (rural and remote birthing), and the second was a review examining what challenges and enablers elicit job satisfaction in rural and remote nursing in Australia (rural and remote nurses). The former review has not been published and has been included in the thesis as Appendix 1, and the latter review was published in a peer reviewed journal titled 'Nurse Education in Practice' and is included in this chapter.

A preliminary literature search, assessing the range and diversity of literature *associating rural and remote area nurses and birthing in a remote non-birthing facility* was undertaken prior to these reviews as suggested as good practice by Aveyard (2019). This search produced no literature; therefore, the research question was refined to '*exploring the impact on mothers, babies, the workforce, and the healthcare system.'*

2.2 Review ascertaining the outcomes resulting from births that occur in a non-birthing facility in rural and remote Australia

A systematic review (Appendix 1) was conducted to ascertain the outcomes resulting from births that occurred in a non-birthing facility in rural and remote Australia and what impact this had on mothers, babies, the workforce, and the healthcare system. This review was submitted but not accepted for publication; however, the information gained was deemed pertinent as background to this study and thus will be discussed briefly in this chapter.

During the first systematic literature search, international studies, in particular Canadian, were reviewed and analysed. Despite similarities in the remote working conditions and Indigenous populations between Australia and Canada, there are differences in Canadian nurse education, namely the Canadian RN being able to obtain a certificate in 'obstetric nursing' (Faculty of Health Sciences and Wellness, 2020). It was decided that these disparities in scope of practice would not align with the review's aims, and these papers were excluded.

In Australia, a significant closure (41%) of small rural and remote maternity units occurred over the preceding three decades. This article explored the outcomes of what birthing in a rural and remote non-maternity setting means to those involved. What

transpired from this review was limited research into the impact birthing outside a maternity facility has on mothers, babies, the workforce, and the healthcare system. What has been highlighted is the multifactorial complexity of rural and remote maternity services and the need for further research into this area.

2.3 Review of the challenges and enablers that elicit job satisfaction in rural and remote nursing in Australia

McElroy, M., Wicking, K., Harvey, N., & Yates, K. (2022). What challenges and enablers elicit job satisfaction in rural and remote nursing in Australia: An Integrative review. *Nurse Education in Practice, 64*, 103454. https://doi:https://doi.org/10.1016/j.nepr.2022.103454

Research into any relationship between midwifery service and the role of the nurse in the rural and remote setting is meagre at best. As shown in the previous review, when an association has been made it is focused on upskilling of the RN to meet service needs. Following the previous review and to develop a deeper understanding of the current workforce conditions for RNs, an integrative literature review was undertaken to provide a comprehensive understanding of the remote area nurse phenomenon.

This article explored job satisfaction for RNs through the identification of challenges, enablers and stressors. The results, as in the rural and remote birthing review, again highlighted multifactorial complexities of which some were unchangeable. However, many warranted further attention. Indeed, where interventions had been employed, these studies drew attention to positive outcomes.

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2.4 Publication

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Review

What challenges and enablers elicit job satisfaction in rural and remote nursing in Australia: An Integrative review☆

Michelle McElroy*, Kristin Wicking, Nichole Harvey, Karen Yates

James Cook University, Centre for Nursing and Midwifery Research, 1 James Cook Drive, Douglas, Queensland 4811, Australia

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ABSTRACT

Aim: To explore challenges and stressors experienced by rural and remote area nurses and identify any interventions that aided in decreasing stress and increasing job satisfaction.
Background: Demand for a generalist nursing workforce in rural and remote locations exposes nurses to the same conditions as people residing there: higher mortality rates and higher incidence of chronic diseases and inadequacies in accessing health services.
Design: Christmals and Gross's integrative review framework was used with specified inclusion and exclusion criteria. Four databases were searched with no date limits. Only Australian studies were searched as international scope of practice differences for nurses could have distorted findings.
Findings: Eighteen studies identified three broad themes: access to education; isolation (geographical, professional and personal) and recognition of role.
Discussion: Interlinked themes showed positives and negatives from differing viewpoints. Ambivalence to education stemmed from inadequate exposure to learning and was linked with geographical isolation. Isolation was found to be less of a challenge to nurses who had an existing emotional connection with the community.
Conclusion: The themes identified were recurrent and interconnecting. The benefits of working in small rural and remote communities are being used as a driver for recruitment. These benefits include higher wages, providing a sense of belonging and allowing nurses to work to their full scope and develop generalist nursing skills. The geographical isolation generates challenges through inequality in access to education and professional support, working outside their scope of practice, safety and vulnerability that comes with living remotely and adapting to extreme weather conditions.
Tweetable abstract: What are the challenges and enablers of rural and remote working and living that influence job satisfaction for rural and remote area nurses in Australia?

1. Introduction

Just under a third of Australians reside outside a major city and around 28% of the population live in rural and remote areas (Australian Institute of Health and Welfare [Australian Institute of Health and Welfare AIHW, 2020). Geographically, the Australian landscape is complex and unique; as such, definitions of rural and remoteness are difficult. Commonwealth Government classifications such as the Modified Monash Model (MMM) and the Australian Statistical Geography Standard – Remoteness Areas (ASGS_RA), divide the Australian landscape into specific categories based on their location, population size and accessibility to services (Australian Bureau of Statistics [AustralianBureau of Statistics ABS, 2018).

The Australian Institute of Health and Welfare and National Rural Health Alliance data highlights health disparities for people living in rural and remote areas including higher mortality rates and hospitalisations and inequalities in accessing health services (Australian Institute of Health and Welfare (AIHW), 2019; NRHA, 2019). A high

☆ Whilst this review concentrated solely on Australian rural and remote area nurses, commonalities may apply to international rural and remote nurses. Further research should focus on international benchmarking quality interventions and assessing rural and remote area nurses' perceptions of the impact working rurally and remotely has on job satisfaction.

* Corresponding author.
E-mail addresses: michelle.mcelroy@jcu.edu.au (M. McElroy), kristin.wicking@jcu.edu.au (K. Wicking), nikki.harvey@jcu.edu.au (N. Harvey), karen.yates@jcu.edu.au (K. Yates).

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proportion of the population who reside in rural and remote areas are Indigenous Australians; 65% of Indigenous Australians live in remote and very remote locations in comparison to 6.3% who live in major cities or regional areas (Australian Institute of Health and Welfare AIHW, 2019). Furthermore, Indigenous Australians have a mortality rate that is 1.6 times greater than non-Indigenous Australians (Australian Institute of Health and Welfare AIHW, 2020) with around 80% of the mortality gap being accredited to chronic disease (Australian Institute of Health and Welfare AIHW, 2010) These factors contribute to a higher mortality rate and more hospitalisations for people who live in rural and remote areas. The other major factor contributing to poorer health outcomes for people living in rural and remote areas is poorer access to health care services (Australian Institute of Health and Welfare AIHW, 2020).

The rural and remote nursing supply requirements of 1200 full-time nurses per 100,000 population, surpasses major city demand by 0.2% (Australian Institute of Health and Welfare AIHW, 2009; NRHA, 2019). On average, nurses working in remote and very remote areas also worked 4.5 hours per week above the national average and are 1.8 years older (Australian Institute of Health and Welfare AIHW, 2009). Nursing workforce is continuing to grow but is not consistent with population growth (Australian Institute of Health and Welfare AIHW, 2009). Francis and Mills (2011) also suggest that a new generation of nurses are more discerning than their predecessors. Demands for better working conditions and career opportunities will force rural nursing leaders to create a workplace culture that more effectively encourages recruitment and retention. The challenge to attract a rural-generalist nursing workforce has changed recruitment strategies that entice through incentives and highlight the advantages of working rurally.

1.1. Aims

This integrative review examined Australian studies that explored stressors concomitant with rural and remote nursing. The aim was to identify challenges and enablers associated with these stressors and ascertain if there were any interventions that decreased stress experienced by rural and remote nurses and/or improved job satisfaction. The term RANs (remote area nurses) will be used in this report and will refer to both rural and/or remote nurses throughout.

2. Methods

An integrative review framework was used (Table 1) primarily for its diversity of inclusive methodological sources (Christmals and Gross, 2017). Appraising both qualitative, quantitative and mixed methods research studies in nursing allows an identification of themes central to the rural specialisation, thus presenting a holistic perspective and synthesis of the literature. The identified contribution that integrative reviews make to research helps provide a varied perspective to a phenomenon, particularly in evidence-based nursing (Ganong, 1987; Hopia et al., 2016; Whittemore and Knafl, 2005); consequently, aligning soundly with the subject under investigation. Comprehensive and inclusive objectivity of quantitative, qualitative and mixed methods demands a greater insight and attention to detail. Therefore, an integrative literature review framework (Christmals and Gross, 2017) was followed.

2.1. Search strategy

The following four electronic databases were searched: CINAHL, Cochrane Library, EBSCOhost and Scopus. These four were chosen for their relationship to health and nursing, but also to provide a wide range of key search types: abstract and index, high-quality independent evidence, evidence-based practice and abstract and citation of peer reviewed literature. Search terms included 'Australia', 'rural', 'remote', 'generalist', 'satisfaction', 'nurs* ', 'stress* ' (with * representing a search term truncation allowing for terms starting with 'nurs' and 'stress'). During this systematic search, some international studies, in particular Canadian, were yielded. Despite the similarities in the remote working environments between Australia and Canada, there are differences in Australian and Canadian nurse education and scope of practice (Faculty of health sciences and, 2020). These disparities were deemed to potentially conflict with the aims and findings of the review and they were discounted. To enable as much rich data as possible, there were no date limits put on the search. A second search expanded search terms to include 'enablers' and 'challenges'. A third search reviewed the reference lists of already accessed papers (ancestry searching). Joanna Briggs (JBI) Critical Appraisal Checklists (Munn et al., 2015) and Mixed Methods Appraisal Tool (MMAT) (Hong et al., 2018) were used to appraise the studies. Findings for the search results are presented below. (Fig. 1).

2.2. Inclusion criteria

The empirical phase of the integrative review framework is split into G6 – the screening tool and G7 – extraction of information using the assessment tools, shown below. (Table 2)

The first and second searches yielded 164 papers following removal of 27 duplicates . After reading the titles and abstracts for relevance, papers were either categorised as being Included, Excluded or Maybe. Comments were added for all papers categorised as being 'maybe' or 'excluded' and the reference list of each excluded paper was checked for any potential further studies. There were 115 papers excluded that did not meet the phase 1 criteria. A further 49 full text articles were then assessed against the criteria and refined to 16. The third search yielded 28 articles, of which 26 were excluded, with reasons, when assessed against phase 1 criteria.

Phase 2 addressed the interpretive phase of the framework. Articles

Table 1
Integrative review framework.

Conceptual Phase				Empirical Phase			Interpretive Phase		Communication Phase
Introduction and Background		Research methodology		Data search, evaluation, and extraction			Data analysis and interpretation	Discussion, conclusion and recommendations	
G1	G2	G4	G5	G3	G6	G7	G8	G9	G10
G: Stages of the Integrative Review									
G1 Formulate review purpose and question	G2 Delineate Inclusion and Exclusion Criteria	G4 Adopt a data collection tool.	G5 Set rules of inference for data analysis and interpretation	G3 Conduct literature search.	G6 Revise data collection tool to fit review purpose.	G7 Extract relevant information from included articles	G8 Systematically analyse data.	G9 Discuss and interpret data	G10 Write research report and paper for publication

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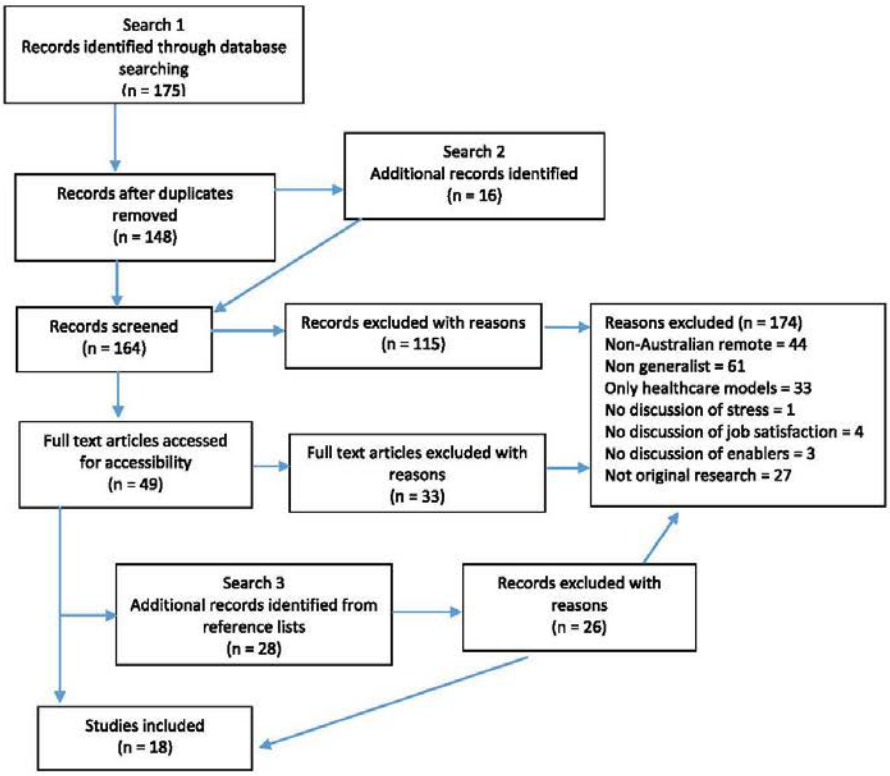

Fig. 1. Search results. PRISMA Flowchart 2020.

Table 2
Empirical and Interpretive Phases.

Empirical Phases	
Phase 1	**Screening Tool Criteria:** Is the study published in English? (YES/NO/ UNCLEAR) – Stop if No Does the study include rural nurses working in remote Australian locations (YES/NO/ UNCLEAR) – Stop if No Does the study only include nurses working in generalist areas? (YES/NO/ UNCLEAR) – Stop if No Does the study only discuss healthcare models in rural areas? (YES/NO/ UNCLEAR) - Stop if Yes Does the study discuss stressors/stresses of rural nurses? (YES/NO/ UNCLEAR) – Include if Yes Does the study discuss rural nurses' job satisfaction? (YES/NO/ UNCLEAR) - Include if Yes Does the study discuss enablers for rural and remote nursing? (YES/NO/ UNCLEAR) - Include if Yes Does the study discuss education needs of rural nurses? (YES/NO/ UNCLEAR) - Include if Yes Non-original research studies were not included
Phase 2	Mixed Methods Appraisal Tool (MMAT) (Munn et al., 2015) Joanna Briggs Institute (JBI) Assessment Tools (Hong et al., 2018) Qualitative Research Studies reporting prevalence data Analytical cross-sectional studies Case series

were systematically analysed using critical appraisal tools which are, as suggested by Aveyard (2019), recommended to ensure all papers are reviewed with equal rigor. Table 3 documents each articles' appraisal method and quality. Despite some evidence of methodological weaknesses highlighted through the critical appraisal tools, it was considered that identified and documented validation of data analysis and/or coding deemed an acceptable medium quality to the articles. Therefore, the critical appraisal of papers in phase 2 led to the final 18 articles being included.

3. Results

3.1. Settings and methodologies

The 18 Australian studies were based in the Northern Territory (NT) (2), Victoria (Vic) (5), New South Wales (NSW) (4), Tasmania (TAS) (1), Western Australia (WA) (1), Queensland (QLD) (3) and Australia wide (2). The studies, summarised in Table 3, applied varied methodological approaches, positive affirmation for the decision to perform an integrated review. Six mixed-methods studies (Cant et al., 2011; Connell et al., 2019; Hegney et al., 2002a; Kidd et al., 2012; Paliadelis et al., 2012; Warburton et al., 2014) used a convergent triangulation model, surveys, questionnaires, interviews and focus groups. Opie et al. (2010) used structured questionnaires in their cross-sectional study, the findings of which were later evaluated by Lenthall et al. (2018) using participatory action research. The two grounded theory studies (Bragg and Bonner, 2015; Mills et al., 2007) employed semi-structured and open-ended interviews. Semi-structured interviews were used in both phenomenological studies (Adams et al., 2019; Terry et al., 2015) and all five qualitative studies (Heidelbeer and Carson, 2013; Kenny and Duckett, 2003; Lea and Cruickshank, 2015; Parker et al., 2013; Smith

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Table 3
Summary of studies.

First Author (Year) Ref number	Research Aims	Location/Method/Sample	Findings/results	Appraisal method and quality
Adams (2019)	Understanding the experience of isolation for health workers in industrial settings	Western Australia Phenomenology Semi-structured, face to face and telephone interviews 7 participants	3 themes were: role dissonance, gaining and maintaining skills; and isolation – split into geographical, personal, and professional. Remote health workers exposure to isolation impacts scope of practice. Similarities of healthcare professionals in industrial context with RAN. Broad practice role restricted by legislative, professional, organisational boundaries.	JBI Critical Appraisal Checklist for Qualitative Research • No evidence of locating researchers culturally / theoretically or addressing influence on the research. • Validity of the data does not appear compromised. • Deemed medium quality
Bragg (2015)	To understand rural nurse resignations by exploring 3 leftovers 'comeback themes from the substantive grounded theory of conflicting values	New South Wales Grounded Theory: Face to face Interviews and open-ended questions 12 participants	3 'comeback' themes were: window period after resignation, not being offered an exit interview and rural nurses leaving the profession. Potential to address reasons for resignation. There were fewer options available, in very remote areas, to continue nursing following resignation. Exit interview data will improve nurse retention.	JBI Critical Appraisal Checklist for Qualitative Research • No evidence of locating researchers culturally / theoretically or addressing influence on the research. • Strong evidence of validation of coding. Data does not appear compromised. • Deemed medium quality
Cant (2011)	Rural registered nurses' experiences of advanced clinical nursing practice whilst enrolled in an advanced primary care course of study.	Victoria Mixed methods: focus groups and online questionnaire Convergent triangulation model 32 participants	2 Themes were: developing skills for AP and enhancing patient care. AP training equipped nurses with the skills and knowledge for the AP role. Increased positive professional relationships. Positively impacted patient care. Early stages of role – lack of national legislative recognition and role definition.	Mixed Methods Appraisal Tool • Addressed all quality criteria in this tool. • Deemed high quality for inclusion
Connell (2019)	To describe the development and evaluation of an educational resource aimed to provide the non-midwifery workforce in R&R health facilities with basic knowledge and skills to assist women who present when birth is imminent	Queensland Mixed methods: Online course modules and face-to-face workshops Anonymous surveys 639 participants	Widespread, state-wide, uptake of the program. Blended learning assured continued accessibility. Highly rated content and teaching methods. Unexpected interest from non-midwifery staff in birthing facilities – rural and urban. Course mandated in 1 HHS. 1 metro non-birthing hospital ED nurse uptake.	JBI Critical Appraisal Checklist for Studies Reporting Prevalence Data • Unclear if the analysis for each component was conducted at the same response rate leading to coverage bias. • Evidence of 2 researchers independently coding the same data. • Deemed medium quality
Hegney (2002)	To investigate the reasons that R&R nurses, employed in health districts that experienced higher than average turnover, resigned from QH between Jan1999 - May 2000	Queensland Mixed methods mail survey 146 participants	Top 31 factors categorised into: professional issues – teamwork, skill acquisition, organisational structures, and rural related issues. Demographic data supports a predominantly female, older, and rurally sourced workforce that needs to be targeted. Demonstrates the potential benefits and positives of rural nursing from those who have resigned.	Mixed Methods Appraisal Tool • No evidence of locating the researchers culturally / theoretically or addressing influence on the research. • Data does not appear compromised as pre-coded questionnaires. • Deemed medium quality
Hegney (2015)	Do R&R nurses have different levels of personal well-being than nurses working in major cities. Do R&R nurses perceive their work environment to be more or less favorable than nurses working in major cities?	Queensland Cross-sectional: On-line survey 2679 participants	Remote area nurses had lower levels of secondary traumatic stress than nurses in major cities. Nursing foundations for quality care were perceived more favourably by nurses in major cities. There was no difference between nurses across their geographical locations for stress, anxiety, depression, compassion satisfaction, burnout, resilience.	JBI Critical Appraisal Checklist for Analytical Cross-Sectional Studies • Addressed all quality criteria in this tool. • Deemed high quality.
Heidelbeer (2013)	Questions asked about life and professional work history patterns in the NT. Perception of the impact of non-resident work on their professional and private lives	Northern Territory Qualitative descriptive: Semi-structured interviews 7 participants	Participants worked 'short-term' 1–6-month placements. Place of work compartmentalised, and social interaction limited. Self-selected role benefits outweighed the burdens. Context specific professional impacts raised regarding continuing competency.	JBI Critical Appraisal Checklist for Qualitative Research • No evidence of locating the researchers either culturally / theoretically or addressing influence on the research. • Evidence of validation of coding. Data does not appear compromised. • Deemed medium quality
Kenny (2003)	To explore overall issues that impact on service delivery of rural hospitals in Victoria	Victoria Qualitative descriptive: Semi-structured interviews 60 participants	2 themes were: rural workforce and education for rural practice. Lack of medical support and supervision for nurses a common characteristic leading to	JBI Critical Appraisal Checklist for Qualitative Research • Influence of the researchers on the research is not addressed

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First Author (Year) Ref number	Research Aims	Location/Method/Sample	Findings/results	Appraisal method and quality
			increased pressure. Diversity of nursing needed. Experienced nurses lacking tertiary level education and graduate nurses lacking clinical experience. Education needs to be skill and academic focussed.	• Cultural/theoretical locating of the researchers unclear. • Evidence of cyclical processes of analysis. Data analysis appears non-compromised. • Deemed medium quality.
Kidd (2011)	To explore the experiences of general nurses working in rural hospital settings with regards to their ED responsibilities	Victoria Mixed methods: questionnaire and focus groups 53 participants	Lack of ED skills confidence. Context relevant, adequately funded, and accessible education an issue. High job satisfaction despite challenges. Inadequate professional recognition of rural nurses.	Mixed Methods Appraisal Tool • Not evident if the two components of the research consistent with the participants. • Evidence of consultation / consensus, combining the two domains. • Deemed as medium/high quality.
Lea (2014)	What are the new graduate nurses perceptions and experiences of support through a rural TtoPP What are the functional elements of a rural TtoPP	New South Wales Qualitative exploratory: Interviews conducted at time intervals 15 participants	3 themes were: Getting started at the 3–4-month milestone: Initial transitional shock theory and previous rural exposure assisted transition. Settling in at the 6–7-month milestone: continued learning support, feeling more settled, relationships built and increased leadership roles. Just another nurse at the 11–12-month milestone: feeling accepted and increased responsibility but lacking support. Desire to stay in rural practice. Overall TtoPP did not provide support needed, especially for rural practice.	JBI Critical Appraisal Checklist for Case Series • Addressed all quality criteria in tool. • Deemed high quality for inclusion.
Lenthall (2018)	Follow up from Opie 2010 - Levels of occupational stress in the remote area nursing workforce	Northern Territory Participatory action research: Occupational stress intervention implementation 37 participants	Evaluation of occupational stress interventions. Very few measurable changes. Differences between Central Australia and NT intervention priorities. Many interventions not implemented – 5 reasons were: Unstable workforce, lack of funding, lower standards of equipment and infrastructure, interagency complexities, implementation time too short.	JBI Critical Appraisal Checklist for Qualitative Research • No evidence of locating the researchers culturally / theoretically or addressing Influence on the research in this or the previous Opie study. • Evidence of validation of coding. Data does not appear compromised. • Deemed medium quality.
Mills (2007)	To examine rural nurses' experiences of mentoring	Victoria Grounded theory: Semi-structured interviews 9 participants	Experienced rural nurses cultivated novices through supportive mentoring relationships using 3 frames of reference: Culture, politics, and clinical practice. Mentoring strategies included orientation to local cultural norms. Expected outcomes of increased confidence for neophyte nurses.	JBI Critical Appraisal Checklist for Qualitative Research • Addressed all quality criteria in tool. • Deemed high quality for inclusion.
Opie (2010)	To identify key workplace demands and resources for nurses working in very remote Australia and measure their levels of occupational stress	Australia wide Cross sectional: Questionnaires 349 participants	Nurses working in very remote Australia experience significantly higher levels of psychological distress and emotional exhaustion compared with other professional populations. Reported moderate levels of job satisfaction. Most significant job demands were: Emotional demands, Staffing issues, Workload, Responsibilities & expectations, Social issues. Key job resources were: Supervision, opportunity for professional development and skill development. Need to reduce job demand and increase job resources.	JBI Critical Appraisal Checklist for Analytical Cross Sectional Studies • Very broad inclusion criteria only defined. • Data does not appear compromised. • Deemed medium quality.
Paliadelis (2012)	Understand the challenges faced by rural acute care clinicians and the impact these challenges have on their capacity to carry out their role.	New South Wales Mixed methods: Survey, focus groups and workshops 226 participants	Identified challenges from survey and focus group discussion were: Workforce issues, access, equity & opportunity, resources, and contextual issues. Workshops identified positives of: Broad range of clinical experience, greater autonomy, and feelings of embeddedness in rural community. Workshops solutions to challenges were: Workforce issues – being flexible, Interprofessional support, access, equity &	Mixed Methods Appraisal Tool • Addressed all quality criteria in tool. • Deemed high quality for inclusion.

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Table 3 (*continued*)

First Author (Year) Ref number	Research Aims	Location/Method/Sample	Findings/results	Appraisal method and quality
			opportunity – overcoming isolation, formal mentorship, and access to study leave, resources – consideration of impact of withdrawal of services, improved IT services and contextual issues – valuing and being valued, encouraged participation.	
Parker (2013)	To investigate the factors contributing to effective Interprofessional practice (IPP) in rural contexts, to examine how IPP happens and to identify barriers and enablers	New South Wales Qualitative descriptive: Semi-structured Interviews 22 participants	3 sections of findings were: Views and experiences of IPP were: Valued by all and it was complex and varied. Barriers to IPP were: Workload and workforce limitations, Non-valuing team members, Fragmentation of services and Overcoming barriers. Enablers to IPP were: Connection to the community, Pivotal roles, and Funding, Proximity and colocation, Workload, and workforce drivers. Clear evidence of IPP but uneven implementation.	JBI Critical Appraisal Checklist for Qualitative Research • Addressed all quality criteria in tool. • Deemed high quality for inclusion.
Smith (2019)	Explore the lived experiences and the perceptions of NPs who work in rural and remote settings in relation to barriers and enablers to their extended scope of practice roles	Australia wide Qualitative: Semi-structured Interviews 20 participants	3 levels of barriers and enablers were found. Macro level barriers were: National policy, lack of jobs and inadequate funding. Macro level enablers were: Scope of role, support for education and state of health service policy. Meso level barriers were: Local health service policy, workload, lack of community understanding. Meso level enablers were: Community support, networks, and local health service manager support. Micro level barriers were: Lack of role clarity, health professional status and isolation. Micro level enablers were: Colleague support, Interprofessional teamwork, capabilities of NP and promotion of role.	JBI Critical Appraisal Checklist for Qualitative Research • Addressed all quality criteria in tool. • Deemed high quality for inclusion.
Terry (2015)	The types of workplace health and safety issues that rural community nurses encounter and its impact on providing care to rural consumers	Tasmania Phenomenology: Semi-structured Interviews 15 participants	3 WHS themes Geographical environment: Driving long distances and working in isolation. Physical environment: Unpredictable client behaviour, poor home conditions, animals, and smoking issues. Organisational environment: Vertical and horizontal violence, workload, burnout, and work-related stress. Service objectives being met in some instances under the auspice of WHS practices. Meeting the needs of the community was achieved but in a reactive not proactive approach.	JBI Critical Appraisal Checklist for Qualitative Research • No evidence of locating the researchers either culturally / theoretically or addressing influence on the research. • Evidence of validation of coding. Data does not appear compromised. • Deemed medium quality.
Warburton (2014)	In-depth exploration of the organisational (extrinsic) and individual/social (intrinsic) factors associated with the retention of older rural healthcare workers	Victoria Qualitative section of Mixed methods: Semi-structured Interviews 17 participants	Extrinsic themes were: Valued by the organisation, workload pressures, feeling valued, support, flexibility, and lack of options, interpersonal conflict, and interpersonal practice. Intrinsic themes were: Intention to retire, family influences, enjoyment of current work, financial influences, health, sense of self, social input, and adjustment to change. Many factors were linked together by participants. Strategies for retention of older rural healthcare workers were: Reduce workload, two-way communication, financial remuneration and professional development.	JBI Critical Appraisal Checklist for Qualitative Research • No evidence of locating the researchers either culturally / theoretically or addressing influence on the research. • Data does not appear compromised. • Deemed medium quality.

Advanced practice [AP] Emergency department [ED] Hospital and health service [HHS] Interprofessional practice [IPP] Work health & safety [WHS] Nurse practitioner [NP] Registered nurses [RNs] Remote area nurse [RAN] Rural and remote [R&R] Transition to practice program [TtoPP]

et al., 2019). Hegney et al. (2015) used online surveys in their cross-sectional study.

3.2. Themes

The stressors that were found to be concomitant with working in a rural and remote nursing setting were grouped under three key themes: access to education; isolation and recognition of role. In reference to

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each of these themes, findings will be presented on what the enablers and/or challenges were, associated with each stressor. Furthermore, any interventions that were reported to decrease stress experienced by rural and remote area nurses (RANs) and therefore improve job satisfaction, will also be presented in relation to each key theme.

3.2.1. Access to education

The predominant stressor discussed in these studies centered on the challenge of accessibility affecting uptake of education, rather than the education itself. These significant barriers to this access were not, according to Kidd et al. (2012) evident for RANs' metropolitan counterparts. A central finding addressed was education needs for RANs: the necessity for regular, appropriate, high quality and accessible training (Adams et al., 2019; Connell et al., 2019; Hegney et al., 2002a; Heidelbeer and Carson, 2013; Kenny and Duckett, 2003; Kidd et al., 2012; Lea and Cruickshank, 2015; Mills et al., 2007; Smith et al., 2019; Warburton et al., 2014) to be delivered in a timely manner (Heidelbeer and Carson, 2013).

Enablers in this theme were sparse. Recognition of the support needed by RANs was identified in several studies, with Queensland Health (QH) leading the way with financial and leave entitlement assistance (Connell et al., 2019; Hegney et al., 2002a; Kidd et al., 2012). Whilst Smith et al. (2019) found gaining initial skill acquisition a positive, the generalist nature of the RANs' work and high level of educational needs highlighted by Hegney et al. (2002a), signifies the challenges related to education. These challenges stem from the interface between the diverse nature of the skill acquisition and necessary skill maintenance. These challenges, coupled with rural and remote locations, then highlights the difficulties faced by health facilities to deliver appropriate education (Connell et al., 2019).

Funding and ability to backfill featured consistently as barriers (challenges) to the professional development of RANs in these studies. Hospitals encountered significant issues with backfilling staff leave (Connell et al., 2019; Hegney et al., 2002a; Kenny and Duckett, 2003; Warburton et al., 2014). A Chief Executive Officer was quoted in one study underlining the issue: "We know that they need better education, but it is really hard. If we let them go, we can't replace them. Who is going to staff the wards? We are short already" (Kenny and Duckett, 2003, p. 616). Hegney et al. (2002a) also reported the scholarship scheme in their study was abandoned due to backfilling constraints. Despite funding assistance, the Australian Nursing and Midwifery Federation (ANMF), reported in Kidd et al. (2012) that nurses continued to need to use annual and long service leave to attend education.

Further challenges for access to education were linked with isolation, a theme discussed in depth below. Paliadelis et al. (2012), suggested that insufficient exposure to infrequent patient presentations relevant to specialist health areas may also lead to lack of competence and confidence in those specific areas., Therefore, specialist skill maintenance must sometimes be gained from education rather than from practice. Adams et al. (2019) also intimated that in remote locations, nurses are more likely to become overwhelmed and conform to organisational needs to provide specialist skills when the need does arise, thus stepping outside their scope of practice, regardless of educational preparation. Aligning education to match the practice requirements would again require solving the challenge of backfilling.

The backfilling issue would, as many suggested (Connell et al., 2019; Kenny and Duckett, 2003; Lea and Cruickshank, 2015), lessen if nurses were able to access education in the remote setting where they work, ideally through a blended approach to delivery (Connell et al., 2019; Kidd et al., 2012). However, the ageing demographic of remote nurses increased the likelihood of their education being non-university based and therefore potentially eliciting fear of online or tertiary education and a lack of interest in pursuing it, when they were so close to their retirement (Kenny and Duckett, 2003; Warburton et al., 2014). Conversely, there were also requirements for a high level of commitment to education, portrayed by participants in Mills et al. as "having passion" and "leading by example" (Mills et al., 2007, p. 588).

Whilst the call to Health Departments for increased priority of education through supportive funding and backfilling was overwhelming (Adams et al., 2019; Hegney et al., 2002a; Heidelbeer and Carson, 2013; Lea and Cruickshank, 2015; Lenthall et al., 2018; Terry et al., 2015), there were interventions offered in some studies (Connell et al., 2019; Kenny and Duckett, 2003; Lea and Cruickshank, 2015). Successfully overcoming the barriers of geographical distance, cost and backfilling does, however, appear achievable. The intervention applied by Connell et al. (2019) reported an approach of incorporating mixed mode education delivery and was received with positive evaluations showing a greater sense of job satisfaction. Both Lea and Cruikshank (2015) and Kenny and Duckett (2003) attempted to address backfilling issues through undergraduate preparation to fulfil the RAN role.

3.2.2. Isolation

Rural and remote living is geographically, socially and professionally isolating (Adams et al., 2019). Therefore, not surprisingly, isolation was viewed by participants in many of these studies as a stressor; with geographical, personal and professional isolation often intertwined. Despite isolation being considered a stressor, Paliadelis et al. described isolation as a "double-edged sword" (2012, p. 8); meaning there were both positive and negative aspects to isolation, when working remotely for registered nurses.

Several positive (enabler) aspects reported were higher wages (Adams et al., 2019; Cant et al., 2011; Heidelbeer and Carson, 2013) and the development of generalist skills and greater autonomy of practice (Adams et al., 2019; Cant et al., 2011; Lenthall et al., 2018; Paliadelis et al., 2012). One study indicated high retention rates were linked to a positive rural context and if the person themselves enjoyed this style of living (Hegney et al., 2002a). The rural and remote lifestyle, a sense of belonging and level of respect from the community, were all ranked highly as reasons to continue to work in non-metropolitan areas (Hegney et al., 2002a). Mills et al. (2007) further suggested that 'community embeddedness' resulted from nurses being part of their community and reported that successful transition to living and working remotely was more likely achieved if an emotional connection to the geographical place was present. The RNs' complex interactions with people in the community, in their varied roles (i.e., nurse, health care consumer, community member), endowed them with multiple perspectives and coined the phrase 'live my work' (Mills et al., 2007).

Transition to working rurally, according to Cant et al. (2011) and Lea and Cruikshank (2015), appeared to be less of a shock for nursing graduates and Registered Nurses (RNs) who had undergone distance study or remote placement during their education, supported by their university. This finding is congruent with the above findings highlighting the importance of nurses valuing a sense of belonging, an emotional connection with the community and wanting to feel like part of the community (Hegney et al., 2002a; Mills et al., 2007). This connection would therefore be more likely if they had previously lived in the community (i.e., undertaken a clinical placement) or if it was their hometown.

There were also several negative (challenges) aspects reported. Some workers recognised that they had given little thought beforehand, to the remoteness, including the significance of extremes in climate and weather (Adams et al., 2019). Safety was also a concern for many RANs in these studies. Physical distance and not having a 'back-up' were highlighted by Heidelbeer and Carson (2013) whilst Terry et al. (2015) focused on the vulnerability of health workers who visited people in their isolated homes.

Unfortunately, as recognised by Lenthall et al. (2018), many aspects of these rural and remote context conditions are unable to be changed. Adopting a zero-tolerance and risk assessment strategy to address violence between health consumers and healthcare providers (Terry et al., 2015), whilst being proactive and assisting in meeting the needs of the community, did not always adequately address the staff concerns

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(Lenthall et al., 2018). Professional isolation was abundantly evident as a challenge in several studies (Adams et al., 2019; Hegney et al., 2002a; Heidelbeer and Carson, 2013; Lenthall et al., 2018; Paliadelis et al., 2012; Terry et al., 2015). Physical distances reduced health professionals' ability to partake in both formal and informal professional socialisation and information sharing (Adams et al., 2019; Heidelbeer and Carson, 2013). Adams et al. (2019) described overwhelming feelings of loss of professional identity. Participants in their study felt unprepared for the breadth of scope of practice needed, as mentioned in the above theme of Access to Education, regarding infrequent patient presentations requiring specialist skills. Their feelings were echoed in Heidelbeer and Carson's study, where participants identified that isolation made working outside of their scope of practice inevitable (Heidelbeer and Carson, 2013). This finding was contrary to Hegney et al. (2015) who reported the same levels of wellbeing and perceptions of the professional practice environment regardless of geographical setting.

Alongside professional isolation was the challenge of personal isolation. Several studies (Adams et al., 2019; Cant et al., 2011; Heidelbeer and Carson, 2013; Opie et al., 2010; Paliadelis et al., 2012; Terry et al., 2015) showed that geographical and personal isolation negatively challenged RANs. There was a sense of loss and powerlessness from the lack of family interaction and absence from significant events (Adams et al., 2019) coupled with confined working and living, higher levels of psychological distress (Opie et al., 2010), challenging rosters and loneliness (Heidelbeer and Carson, 2013).

An intervention that was mentioned that may help with personal and professional isolation was the introduction of 'fly in, fly out' (FIFO) arrangements for some rural health care workers. Despite this not being ideal for the community, due to the transient nature of RANs coming and going, many RANs who adopted a FIFO lifestyle, did rate this option highly due to the advantage of being able to disengage professionally when not working (Heidelbeer and Carson, 2013).

3.2.3. *Recognition of role*

One of the biggest draw cards for remote area nursing is the generalist nature of the work and the ability to practice to their full scope (Adams et al., 2019; Cant et al., 2011; Lenthall et al., 2018; Paliadelis et al., 2012). However, a varied understanding, acceptance and expectations of the RAN's role and scope of practice was evident in several studies and differed between the remote managers, the health services and the clients (Bragg and Bonner, 2015; Cant et al., 2011; Kenny and Duckett, 2003; Kidd et al., 2012; Mills et al., 2011; Parker et al., 2013; Smith et al., 2019; Warburton et al., 2014). These differences consequently brought both challenges and enablers to the RANs achieving job satisfaction. A cascade often flowed from one to another, for example, misunderstanding leading to non-acceptance leading to low expectations.

Enablers reported in the studies included client loyalty, ability to work to their full scope and Inter Professional Practice (IPP) through shared experiences. Warburton et al. and Smith et al. both reported client and community loyalty derived from trust and flexibility (Smith et al., 2019; Warburton et al., 2014). Whilst having the ability to work to their full scope is shown here as a positive outcome, in some studies (Adams et al., 2019; Lea and Cruickshank, 2015; Paliadelis et al., 2012) it was linked to a requirement of necessity pertaining to health service deficits (staffing levels or lack of another more qualified professional) rather than to fulfill the RAN's wishes and was often inconsistent. IPP was linked in Parker et al. (2013) to a shared experience of remote living and trust built on vested community interest.

The capabilities and scope of RANs' practice was frequently challenged and restricted by other health professionals working outside a rural and remote setting (Mills et al., 2011). The capabilities and scope of RANs' practice is, according to Mills et al. repeatedly questioned, with one RAN quoting "sometimes we are very put down by our city colleagues… will you send someone down [to the city] so we can show them how to…" (2011, p. 587). The mindset of medical staff towards RANs appeared evenly divided between those who showed respect and gratitude for their generalist abilities versus those who showed professional rivalry (Parker et al., 2013). The latter attitude suggests a concern for multi-professional working and is a potential contributing factor for the professional isolation described by many RANs (Parker et al., 2013).

Role recognition confusion further extends to the endorsed Nurse Practitioner (NP). Initially the role was developed, according to Smith et al. (2019), to service the need for a new model of rural and remote healthcare. The scope of this extended generalist NP role from the RANs has also been limited by a highly debated role definition and lack of access to the Medicare Benefits Schedule (MBS) and Pharmaceutical Benefits Scheme (PBS) (Smith et al., 2019) and presents both enablers and challenges.

Whilst Cant et al. (2011) and Smith et al. (2019) both agree that the increased scope of practice of an NP enables an increase in job satisfaction, they also concur that the lack of respect for the enhanced skills of the NP and lack of recognition by colleagues are both barriers to collaborative practice that consequently increased professional isolation. Interprofessional practice (IPP) is imperative to offering professional support and recognition (Parker et al., 2013); however, it is sometimes hampered by lack of role clarity between health professionals and a conflict between personal and organisational values (Bragg and Bonner, 2015). Achieving and building such a commitment and cooperation between professionals requires the need for relationship-orientated leadership behaviours (Smith et al., 2019).

4. Discussion

This integrative review focused on both challenges and enablers associated with job satisfaction for RANs. Whilst each theme has been discussed separately, with supporting evidence for each synthesised from the relevant studies; it should be noted that none of the themes sat in isolation from each other.

The reviewed literature presents an understanding of the unique world of rural and remote area nursing, whilst showing an interconnection between the themes explored, that are entrenched within the context of living and working in rural and remote communities. Whilst many enablers, including those of a generalist role, greater autonomy and a sense of belonging and community were identified in the studies, Paliadelis et al. (2012) suggested that having greater autonomy which was not accompanied by professional education and support was a 'double-edged sword'. The challenges: lack of access to education, professional isolation and loneliness and a lack of role recognition and vulnerability, were highlighted but with minimal interventions or solutions suggested.

Such are the distinctive needs of rural and remote health services, that small community benefits featured as a driver to recruitment in many of the studies. The benefits displayed of a small community with a sense of belonging and high level of community respect (Hegney et al., 2002a; Mills et al., 2007; NRHA, 2019) are further promoted in the Queensland Government (QG) (Queensland Health, 2017) report 'Advancing rural and remote service delivery through workforce'. This report applies a broader perspective to identify with potential employees, in relation to themselves as a family member and as a person rather than just an employee, which also speaks to the concept of Mills et al. 'live my work' (Mills et al., 2007). Acknowledgement of the benefits of previous engagement in the rural and remote setting is also highlighted in this QH report (Queensland Health, 2017) with the contribution of collaborative university partnerships; a benefit also highlighted by Lea and Cruickshank (2015). The recognised enticement benefits of the isolated rural and remote lifestyle (Adams et al., 2019; Cant et al., 2011; Lenthall et al., 2018; Mills et al., 2007; Paliadelis et al., 2012), however, appear as equally restricting barriers to job satisfaction for many of the same reasons: living and working in the same community, lack of escape and high expectations of community members

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(Adams et al., 2019; Hegney et al., 2002a; Heidelbeer and Carson, 2013; Kenny and Duckett, 2003; Warburton et al., 2014).

Having the ability to embed into the community was very dependent on the ability to emotionally connect with the lifestyle (Mills et al., 2007). For nurses that chose to entrench fully into rural and remote working, this appeared an easier transition (Mills et al., 2007). However, some nurses chose the option of a flexible 'non-resident' (CRANAplus, 2018; Heidelbeer and Carson, 2013) lifestyle, making it difficult for them to become accustomed to the micro dynamics of working and living in a rural and remote community. Onnis (2016) suggests that not every RN is suited to working in the specialty of rural and remote area nursing.

Safety issues for RANs, despite being highlighted in three of the studies (Heidelbeer and Carson, 2013; Lenthall et al., 2018; Terry et al., 2015) did not appear to warrant political concern until the tragic death of a RAN in 2016 (CRANAplus, 2020) and subsequent outpouring of anger from within the health industry (DOH, 2016). Since that time, safety for rural and remote health workers has been high on the agenda, driving the CRANAPlus remote health workforce safety and security report (NRHA, 2017) and the Northern Territory Remote area nurse safety report (DOH, 2016). In 2017, the attendees at the National Rural Health Conference in Cairns (NRHA, 2017) heard that safety remained a major challenge in both recruiting and retaining RANs.

Professional isolation linked both challenges of access to education and scope of practice anxieties and was reported in many of the studies as the most concerning challenge to remote working (Adams et al., 2019; Connell et al., 2019; Hegney et al., 2002a; Kenny and Duckett, 2003; Kidd et al., 2012; Lea and Cruickshank, 2015; Mills et al., 2007; Warburton et al., 2014). One of the characteristics central to the recruitment strategy of Queensland Health (Queensland Health, 2017) is for rural and remote nurses to have greater autonomy and the ability to work within their full scope of practice. A scope of practice is defined by CRANAplus as "the full spectrum of roles, functions, responsibilities, activities and decision-making capacity which individuals in the profession are educated, competent and authorised to perform" (CRANAplus, 2018, p. 7). Repeated reporting throughout these studies, however, suggested that remote nurses were unable to adhere to this definition. And, perhaps even more concerning, they remained obliged to practice within the expanded scope that they were not educationally updated to fulfil.

There are resolutions and interventions to providing education offered in some of these studies by means of their study design and/or discussion. The recognition by Hegney et al. (2002a) that managerial issues exist is positive and relevant; however, identifying the managers as sole offenders is neither realistic nor helpful. Provision of educational opportunities by managers, can be as difficult to achieve as attendance to these opportunities by staff. Nurse Educators (NEs) are also exposed to the same challenges and enablers as any other RANs and yet NEs fall into a much narrower recruitment bracket (Cleary et al., 2014). Enabling achievement of education goals for health services, managers, educators and nurses is complex and can easily be blocked by any one of the stakeholders, thus causing frustration and dissatisfaction for everyone involved (Hegney et al., 2002a; Kidd et al., 2012; Warburton et al., 2014).

In a bid to address access to education issues, Hegney et al. (2002a) discussed a Queensland statewide rotational up-skill program for RANs between metropolitan and rural facilities. Whilst, at first glance, the scheme was well intentioned, the blatant disregard for the existing skills held by the RAN and the assumption that they need to 'learn something' from their metropolitan counterparts acknowledges the frustration felt in some of these studies (Cant et al., 2011; Kenny and Duckett, 2003; Kidd et al., 2012; Mills et al., 2007; Parker et al., 2013; Smith et al., 2019; Warburton et al., 2014). The professional isolation felt by many of these RANs led to feelings of lack of value and confidence. The low-level care image depicted of rural and remote nursing through documents like the Clinical Services Capability Framework (Queensland Government, 2018), gives an impression of a workforce incapable of higher-level skills. In fact, most of the studies in this review present an illustration of remote area nurses as multifaceted and generalist (Adams et al., 2019; Hegney et al., 2002a; Heidelbeer and Carson, 2013; Kenny and Duckett, 2003; Kidd et al., 2012; Paliadelis et al., 2012). The generalist nature of the role means they expect anything to walk through their doors (Mills et al., 2007).

The disrespect displayed by some medical practitioners towards the role of advanced Nurse Practitioners was suggested by Cant et al. to be accredited to the lack of scope definition (2011). Indeed, this disregard for the scope of practice was shown by Clarin (2007) to commonly form a barrier to effective communication and teamwork between nurses and medical staff. Nursing in a rural and remote location demands specific protocols and guidelines to assist health professionals (Burrows et al., 2019). With the myriad of expanded roles (Moola et al., 2020): rural and isolated practice registered nurses (RIPRN); Immunisation program nurse (IPN); and Sexual health program registered nurse (SRH), it is not surprising there is confusion about scopes of practice. Those varying scopes and confusion about them, have resulted in the theme of scope of practice being viewed as both an enabler and a barrier to job satisfaction.

5. Limitations

There was one identified potential limitation to this integrative review. Due to the generalist nature of rural and remote area nursing, it was deemed appropriate for this literature review to exclude studies focused on non-generalist nurses. Nurses working across a myriad of locations and clinical areas need to provide a broader expanse of both immediate and ongoing care. Studies were omitted if they included nurses working only in emergency departments or only in mental health nursing. Whilst emergency medicine is unpredictable in nature, it could be argued that emergency nurses are more accustomed and prepared to deal with a variety of presentations (Burrows et al., 2019). Indeed, Kidd et al. suggested that "a patient presenting via the emergency department was often deemed more 'scary' to deal with than a similar patient who might need the same care but as an inpatient" (2012, p. 13).

There were also limitations identified for the studies included in this review, noted following completion of the appraisal tool checklists. None of these studies addressed how the researchers' positionality may have influenced their data analysis. For example, the researchers did not acknowledge what impact, if any, their cultural or theoretical background may have had on their analysis process and subsequent results. These studies also did not describe the researchers' application of reflexivity during data collection and analysis. Whilst there does not appear to be conflict or potential influence from any of the researchers, the rigour of these studies could have been more clearly established by such clarification statements (Moola et al., 2015).

6. Conclusion

This review highlights enablers and challenges to job satisfaction encountered by rural and remote nurses. There are identified, recurrent, interconnected themes over the seventeen years of these studies. These recurrent themes indicate that the challenges, such as accessible, relevant education and safety, that remote area nurses face are real and hindering. Despite being identified in several policy driven reports (Australian Health Ministers' Advisory Council Rural Health Standing Committee (Australian Health Ministers' Advisory Council Rural Health Standing Committee (AHMAC), 2012; Australian Institute of Health and Welfare AIHW, 2009; CRANAplus, 2018; Queensland Health, 2017) these themes are either considered too insignificant or too insurmountable to be addressed.

Rural and remote nursing is not for everyone and could be described as a nursing speciality in health. However, those that embrace and immerse themselves in this lifestyle appear to have increased job

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satisfaction, brought about by many enablers, compared with their metropolitan counterparts (Cant et al., 2011; Hegney and McCarthy, 2000; Hegney et al., 2002a, 2002b; Molinari and Monserud, 2008). Connell et al. (2019) showed where educational interventions were applied challenges were overcome and subsequently led to greater job satisfaction.

To enable these challenges to be addressed, it is essential to understand these enablers and challenges according to the perspective of those who are experiencing them (Bragg and Bonner, 2015). Their (the RANs') interpretation, however, needs to be approached sensitively and by those who can realistically implement change. Findings in this study indicate that the voices of the RANs and their advocates are loud and clear. The geographical distribution of the studies suggests there are comparable concerns across all Australian states and territories. There is also an opportunity to speculate parallels internationally and then to benchmark successful interventions.

There are obvious unchangeable factors to the rural and remote nursing context: geographical isolation and breadth of client needs. Nevertheless, professional isolation and the readiness and ability of RANs to fulfil their scope of practice are both issues that warrant immediate attention.

The authors suggest that funding needs to be allocated appropriately for providing education and the resources needed to successfully sustain skill levels. Future research should focus on the RAN's perceptions of the impact that professional isolation has on their likelihood of working outside their scope of practice and the concomitant effects that doing so may have, on themselves, the people they nurse and the health services where they work.

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Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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References

NRHA]. (2019). *Nurses in rural, regional and remote australia,*. (https://www.ruralhealth.org.au/sites/default/files/publications/fact-sheet-nurses.pdf).

Australian Institute of Health and Welfare (AIHW). 2009. *Nursing and midwifery labour force 2009*. (https://www.aihw.gov.au/reports/workforce/nursing-midwifery-labour-force-2009).

Adams, M., Lazarsfeld-Jensen, A., Francis, K., 2019. The implications of isolation for remote industrial health workers. Rural Remote Health 19 (2). https://doi.org/10.22605/RRH5001.

Australian Institute of Health and Welfare (AIHW). 2020. Australia's Health 2020 (978–1-76054–319-8).

Australian Health Ministers' Advisory Council Rural Health Standing Committee (AHMAC)*National Strategic Framework for Rural and Remote Health* 2012.

Australian Institute of Health and Welfare (AIHW), 2010. *Contribution of chronic disease to the gap in adult mortality between Aboriginal and Torres Strait Islander and other Australians* (Cat. No. IHW 48.

Australian Institute of Health and Welfare (AIHW)*Rural & remote health*. AIHW 2019.

Aveyard, H., 2019. Doing a Literature Review in Health and Social Care: A Practical Guide, fourth ed. Open University Press.

Bragg, S., Bonner, A., 2015. Losing the rural nursing workforce: Lessons learnt from resigning nurses. Aust. J. Rural Health 23 (6), 366–370. https://doi.org/10.1111/ajr.12251.

Burrows, G., Calleja, P., Cooke, M., 2019. What are the support needs of nurses providing emergency care in rural settings as reported in the literature? A scoping review. Rural Remote Health 19 (2), 4805.

Cant, R., Birks, M., Porter, J., Jacob, E., Cooper, S., 2011. Developing advanced rural nursing practice: a whole new scope of responsibility. Collegian 18 (4), 177–182. https://doi.org/10.1016/j.colegn.2011.08.001.

Christmals, C., Gross, J., 2017. An integrative literature review framework for postgraduate nursing research reviews. Eur. J. Res. Med. Sci. 5 (1), 7–15.

Clarin, O., 2007. Strategies to overcome barriers to effective nurse practitioner and physician collaboration. J. Nurse Pract. 3 (8), 538–548. https://doi.org/10.1016/j.nurpra.2007.05.019.

Cleary, M., Horsfall, J., Hayter, M., 2014. Data collection and sampling in qualitative research: does size matter? J. Adv. Nurs. 70 (3), 473–475. https://doi.org/10.1111/jan.12163.

Connell, J., Kelly, J., Nagle, C., 2019. Imminent birth education for rural and remote settings: an evaluation study. Aust. J. Rural Health 00 (0), 1–7. https://doi.org/10.1111/ajr.12547.

AustralianBureau of Statistics [ABS]. 2018. Data byregion. Retrieved 2.04.2018 from http://stat.abs.gov.au/itt/r.jsp?databyregion&ref=CTA2.

CRANAplus. (2018). *Framework for remote and isolated practice*. (https://crana.org.au/uploads/pdfs/CRANA-Framework-for-Remote-and-Isolated-Practice-2018.pdf).

CRANAplus. (2020). *Remote health workforce safety and security report: Literature review, consultation and survey report*. (https://old2021.crana.org.au/uploads/pdfs/CRANAplus_SS_PS_2020.pdf).

Department of Health. (2016). Remote area nurse safety - On-call after hourse security. N. T. Government. (https://digitallibrary.health.nt.gov.au/prodjspui/bitstream/10137/927/1/Remote%20Area%20Nurse%20Safety.pdf).

Francis, K., Mills, J., 2011. Sustaining and growing the rural nursing and midwifery workforce: Understanding the issues and isolating directions for the future. Collegian 18 (2), 55–60. https://doi.org/10.1016/j.colegn.2010.08.003.

Ganong, L., 1987. Integrative reviews of nursing research. Res. Nurs. Health 10 (1), 1–11. https://doi.org/10.1002/nur.4770100103.

Hegney, D., McCarthy, A., 2000. Job satisfaction and nurses in rural Australia. JONA: J. Nurs. Adm. 30 (7/8), 347–350.

Hegney, D., McCarthy, A., Rogers-Clark, C., Gorman, D., 2002a. Retaining rural and remote area nurses. J. Nurs. Adm. 32 (3), 128–135.

Hegney, D., McCarthy, A., Rogers-Clark, C., Gorman, D., 2002b. Why nurses are attracted to rural and remote practice. Aust. J. Rural Health 10 (3), 178–186. https://doi.org/10.1046/j.1440-1584.2002.00447.x.

Hegney, D., Eley, R., Osseiran-Moisson, R., Francis, K., 2015. Work and personal well-being of nurses in Queensland: does rurality make a difference? Aust. J. Rural Health 23 (6), 359–365. https://doi.org/10.1111/ajr.12206.

Heidelbeer, D., Carson, D., 2013. Experiences of non-resident nurses in Australia's remote Northern Territory. Rural Remote Health 13 (3), 1–12. (https://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=104217093&site=ehost-live).

Faculty of health sciences and wellness. 2020. Certificate of obstetric nursing. Humber college. Retrieved November 2020 from (https://healthsciences.humber.ca/programs/obstetric-nursing-rn.html).

Hong, Q., N., Pluye, P., Fabregues, S., Bartlett, G., Boardman, F., Cargo, M., Dagenais, P., Gagnon, M., P.,, Griffiths, F., Nicolau, B., O'Cathain, A., Rousseau, M., & Vedel, I., 2018. *Mixed Methods Appraisal Tool (MMAT)*,.

Hopia, H., Latvala, E., Liimatainen, L., 2016. Reviewing the methodology of an integrative review. Scand. J. Caring Sci. 30 (4), 662–669. https://doi.org/10.1111/scs.12327.

Kenny, A., Duckett, S., 2003. Educating for rural nursing practice. J. Adv. Nurs. 44 (6), 613–622. https://doi.org/10.1046/j.0309-2402.2003.02851.x.

Kidd, T., Kenny, A., Meehan-Andrews, T., 2012. The experience of general nurses in rural Australian emergency departments. Nurse Educ. Pract. 12 (1), 11–15. https://doi.org/10.1016/j.nepr.2011.05.001.

Lea, J., Cruickshank, M., 2015. The support needs of new graduate nurses making the transition to rural nursing practice in Australia. J. Clin. Nurs. 24 (7–8), 948–960. https://doi.org/10.1111/jocn.12720.

Lenthall, S., Wakerman, J., Dollard, M., Dunn, S., Knight, S., Opie, T., Rickard, G., MacLeod, M., 2018. Reducing occupational stress among registered nurses in very remote Australia: a participatory action research approach. Collegian 25 (2), 181–191. https://doi.org/10.1016/j.colegn.2017.04.007.

Mills, J., Francis, K., Bonner, A., 2007. Live my work: rural nurses and their multiple perspectives of self. J. Adv. Nurs. 59 (6), 583–590. https://doi.org/10.1111/j.1365-2648.2007.04350.x.

Mills, J., Field, J., Cant, R., 2011. Rural and remote Australian general practice nurses' sources of evidence for knowledge translation: a cross-sectional survey. Int J. Evid. Based Health 9, 246–251. https://doi.org/10.1111/j.1744-1609.2011.00220.x.

Molinari, D., Monserud, M., 2008. Rural nurse job satisfaction. Rural Remote Health 8 (4). https://doi.org/10.22605/RRH1055.

Moola, S., Munn, Z., Sears, K., Sfetcu, R., Currie, M., Lisy, K., Tufanaru, C., Qureshi, R., Mattis, P., Mu, P., 2015. Conducting systematic reviews of association (etiology): The Joanna Briggs Institute's approach. Int. J. Evid. Based Healthc. 13 (3), 163–169. https://doi.org/10.1097/xeb.0000000000000064.

Moola, S., Munn, Z., Tufanaru, C., Aromataris, E., Sears, K., Sfetcu, R., Currie, M., Qureshi, R., Mattis, P., Lisy, K., Mu, P.-F., 2020. Systematic reviews of etiology and risk. In: Aromataris, E., Munn, Z. (Eds.), JBI Man. Evid. Synth.. https://doi.org/10.46658/JBIMES-20-01.

Munn, Z., Moola, S., Lisy, K., Riitano, D., Tufanaru, C., 2015. Methodological guidance for systematic reviews of observational epidemiological studies reporting prevalence and incidence data. Int J. Evid. Based Health 13 (3), 147–153.

National Rural Health Alliance. (2017). National Rural Health Conference. Cairns.

Intentionally Blank

Onnis, L., 2016. What is a sustainable remote health workforce? People, practice and place. Rural Remote Health 16 (3), 3806. https://doi.org/10.22605/RRH3806.
Opie, T., Dollard, M., Lenthall, S., Wakerman, J., Dunn, S., Knight, S., MacLeod, M., 2010. Levels of occupational stress in the remote area nursing workforce. Aust. J. Rural Health 18 (6), 235–241. https://doi.org/10.1111/j.1440-1584.2010.01161.x.
Paliadelis, P., Parmenter, G., Parker, V., Giles, M., Higgins, I., 2012. The challenges confronting clinicians in rural acute care settings: a participatory research project. Rural Remote Health 12 (2). (www.rrh.org.au/journal/article/2017).
Parker, V., McNeil, K., Higgins, I., Mitchell, R., Paliadelis, P., Giles, M., Parmenter, G., 2013. How health professionals conceive and construct interprofessional practice in rural settings: a qualitative study. BMC Health Serv. Res. 13 (1), 500. https://doi.org/10.1186/1472-6963-13-500.
Queensland Government. (2018). *Clinical Services Capability Framework (CSCF) Maternity services.* (https://www.health.qld.gov.au/_data/assets/pdf_file/0024/444273/cscf-maternity.pdf).
Queensland Health. (2017). *Advancing rural and remote service delivery through workforce: A strategy for Queensland 2017–2020.* (https://www.health.qld.gov.au/_data/assets/pdf_file/0039/672978/rural-remote-workforce-strategy.pdf).
Smith, T., McNeil, K., Mitchell, R., Boyle, B., Ries, N., 2019. A study of macro-, meso- and micro-barriers and enablers affecting extended scopes of practice: the case of rural nurse practitioners in Australia. BMC Nurs. 18 (1) https://doi.org/10.1186/s12912-019-0337-z.
Terry, D., Lê, Q., Nguyen, U., Hoang, H., 2015. Workplace health and safety issues among community nurses: a study regarding the impact on providing care to rural consumers. BMJ Open 5 (8), e008306. https://doi.org/10.1136/bmjopen-2015-008306.
Warburton, J., Moore, M., Clune, S., Hodgkin, S., 2014. Extrinsic and intrinsic factors impacting on the retention of older rural healthcare workers in the north Victorian public sector: a qualitative study. Rural Remote Health 14 (3). https://doi.org/10.22605/RRH2721.
Whittemore, R., Knafl, K., 2005. The integrative review: updated methodology. J. Adv. Nurs. 52 (5), 546–553. https://doi.org/10.1111/j.1365-2648.2005.03621.x.

2.5 Conclusion

This chapter has provided a context from which to situate the nurses in this study. The chapter has highlighted the gaps in rural and remote midwifery service delivery and the impact and current working conditions for RNs. Situational freedom, as termed by Leonard (1989), suggests that the RNs, whilst not constrained to make choices, are circumscribed by the specific conditions of rural and remote working. As multi-skilled generalist healthcare workers, RNs are consistently asked to work to the limits of, and often beyond, their scope of practice. To date there is no literature that explores nurses' thoughts and feelings on this phenomenon. This thesis will explore the perceptions and experiences of registered nurses who do not hold a midwifery qualification and are providing care to pregnant women in a rural or remote setting, answering the research question "What are the experiences and perceptions of RNs working in a rural and remote setting who provide care to pregnant women in the absence of midwives?"

The following chapter presents a detailed exploration of the methodology chosen for this study, phenomenology. This chapter will examine the historical and theoretical underpinnings of phenomenology and its relationship with and justification for this study.

Chapter 3: Methodology

Throughout this chapter, discussion utilising my own philosophical standpoint in relation to my chosen methodology will necessitate the use of first-person language.

3.1 Introduction

This chapter will initially explore my philosophical position that led me to choose phenomenology as the methodology for this research. The history of phenomenology will be examined, discussing the works of Edmund Husserl, his student Martin Heidegger and the later scholar Max van Manen. An explanation as to why a hermeneutic (interpretive), as opposed to a Husserlian (descriptive) approach was chosen for this study will be given. Finally, the nature of the lived experience and the relationship with nursing and how these concepts resonate with my own philosophy will be considered.

3.2 Finding my own philosophy

Identifying my philosophy has probably been the most challenging concept of this research project causing confusion and self-doubt. I first needed to reflect upon my own assumptions, biases, beliefs and values before I was able to articulate my own standpoint and position myself as a researcher. According to Alele and Malau-Aduli (2023) research endeavours to answer questions through an approach constructed of paradigms and philosophical assumptions. My understanding of how I, as a woman and a midwife, live my life and practice professionally, was centered around my life events and influences. However, as suggested by Whitehead et al. (2020) I was drawn to the practical application of my research rather than the theoretical foundations. I had never consciously considered my beliefs in the context of the terminology identified by philosophers, a terminology that I saw as being shrouded in intellectual thinking (Creswell & Creswell, 2018; Guba & Lincoln, 1994; Wahyuni, 2012).

While Creswell and Creswell (2018) advocate for starting the research process by identifying a predominant worldview, my own approach diverged significantly in its focus and trajectory. Rather than beginning with a predefined framework or philosophical orientation, I prioritised a reflective exploration of existence itself and the influence of life experiences on my philosophical thinking.

This perspective aligns more closely with Jaspers' (1971) assertion that existence serves as the fundamental arena for realising our origins, guiding me toward my chosen

methodology in a manner that feels deeply personal and rooted in subjective interpretation. Unlike Creswell and Creswell's (2018) structured approach, which emphasises the establishment of fixed paradigms early on, my research methodology evolved fluidly, shaped by the process of uncovering meaning and addressing practical questions step by step. Wahyuni (2012) might describe this as a pragmatic stance; wherein philosophical convictions are developed along a continuum in direct response to the issues posed by the research question.

In this way, my approach embraced the dynamic interplay between philosophy and practice, allowing for the adaptation and refinement of my standpoint throughout the research journey.

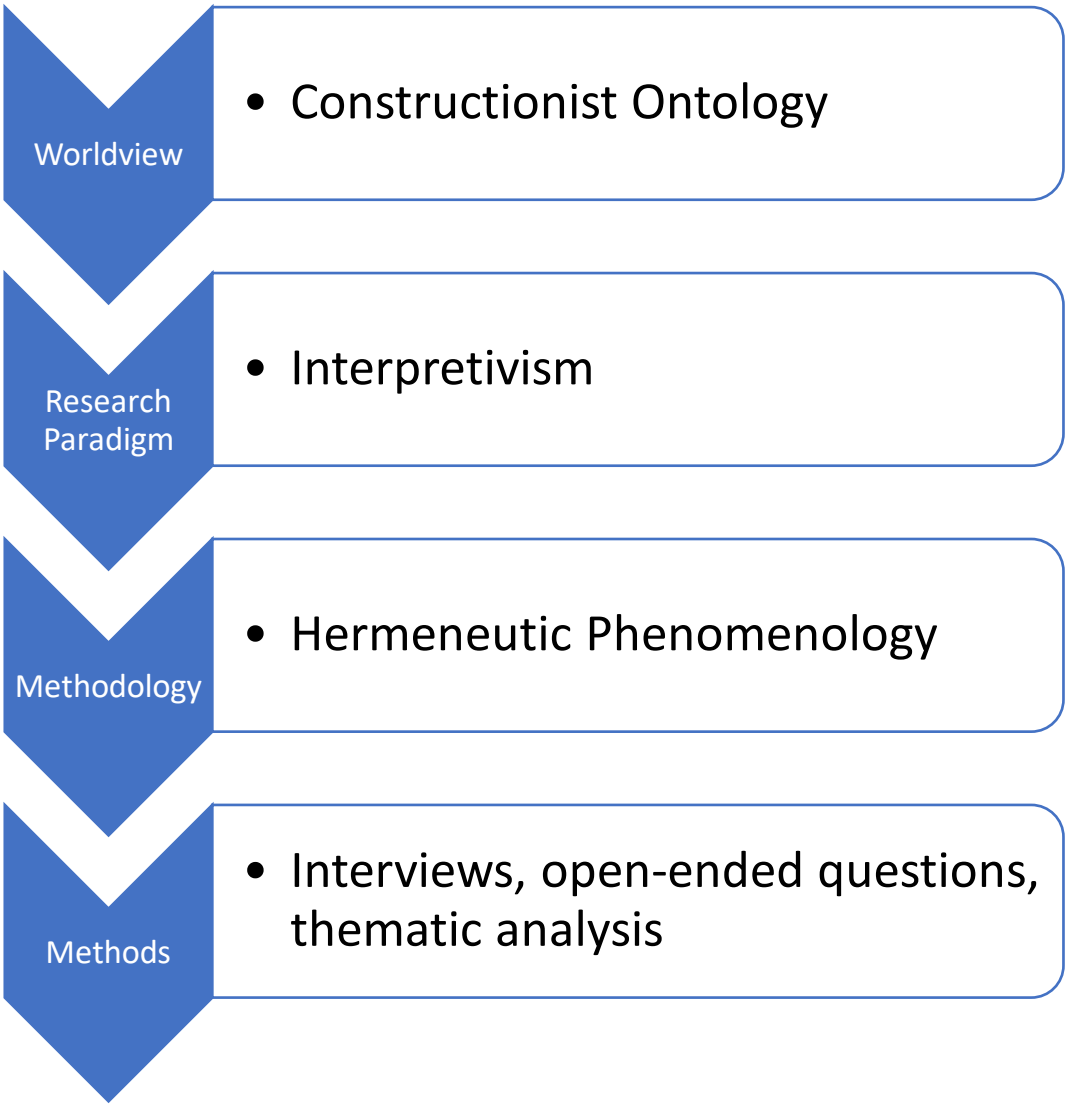

Figure 3.1 My Philosophical standpoint, research paradigm, methodology and methods

Creswell (2012) states that research paradigms consist of four philosophical elements: *axiology* (values, beliefs and ethical position), *ontology* (the nature of reality), *epistemology* (the study into the nature of knowledge) and *methodology* (the process adopted for doing the research). Guba and Lincoln (1994) define these elements as the foundations upon which paradigms sit. Patterson and Williams (1998) regard how these elements, albeit without the inclusion of methodology, should be consistent together, with *axiology* being the element that attains more than justification with the others as detailed in Figure 3.2.

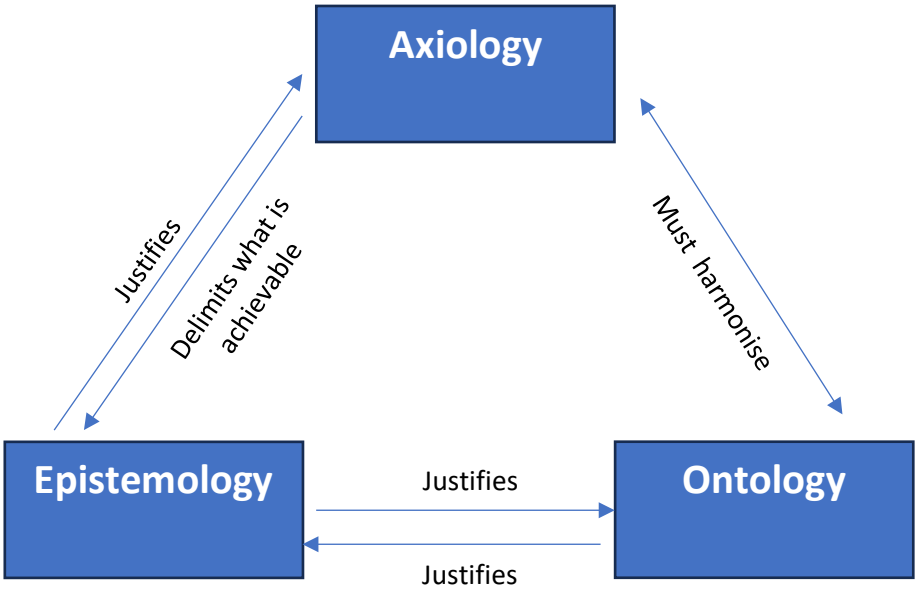

Figure 3.2 Three philosophical elements

Source: Patterson and Williams (1998, p. 286)

The written order of these elements appears from text to be inconsequential (Alele & Malau-Aduli, 2023; Creswell, 2012; Killam, 2013; Patterson & Williams, 1998). My decision to cite *axiology* as the initial element in this list is, however, completely intentional.

I believe that *Axiology* (derived from the Greek words 'axios' meaning worthy and 'logos' meaning science) (Encyclopedia Britannica, 2015) is central and underpinning to all philosophical elements and paradigms, the blanket that is thrown over to draw them together. When considering what I value, standards taught in my upbringing come first to mind, those of knowing right from wrong, doing to others what I believe I would want

done to myself or my family. This communication stems from listening to my parents, teachers and the local vicar, from moral stances, examples being set and the words in hymns and church readings. Reflecting on my personal journey, I resonate with Olafson's (1998) viewpoint that the foundation of my future moral compass was laid in terms of possibilities rather than just actualities. I perceive the world not merely as a collection of fixed realities that are factual, real, and empirically verifiable, but rather as a landscape filled with potentialities that are speculative and open-ended, allowing for diverse interpretations and potential courses of action.

As a midwife, values and judgements have been paramount in my practice throughout my career, addressed professionally through codes of conduct and ethics. It is therefore fitting that axiology is forefront of my beliefs and ethics at the start of my research journey. This quote by Hart (1971, p. 29) fittingly embodies my belief in and motivating factor behind my research: "behind our passions, interests, purposive actions, is the belief that they are worthwhile". In providing examples of axiological stances in healthcare, Guba and Lincoln (1994) refer to health equity, emphasising the need to address inequality and promote justice. This statement epitomises my decision to undertake this research and to answer the axiological question of 'what ought to be' (Brown & Dueñas, 2020) with regards to health impartiality in a rural and remote Australian setting. The application of axiology within the paradigm and methodology will be discussed throughout this chapter.

Addressing the basic structure of 'being' (Harman, 2007), *ontology* focuses on the researcher's assumptions of truth. Heidegger defined this concept further in his lecture course in 1923 as 'Ontology: Hermeneutics of Facticity' (Heidegger & van Buren, 1999). Facticity literally means 'the condition of being fact' (Cambridge dictionary, n.d.-a) and Heidegger situates facticity as the truth that lies in the reality of 'dasein' (being). The nature of the reality does not exist as independent and cannot only be described in theoretical terms, as "human life is always immersed in a specific situation, involved with its surroundings in a very particular way" (Harman, 2007, p. 25). In this sense, Heidegger's philosophy for the nature of existence characterises ontology.

My perceptions of a reality have changed over time and been dependent upon circumstance and events. As a child, I was raised to see hurdles as objects to overcome, be that as an independent person (or being) or by seeking assistance. This mindset followed forth into my career pathway of healthcare and again into my research journey. My ontological stance has similarly changed over time. Change is evident in my

midwifery practice since as a junior midwife I believed that my practice and relationship with the woman was key in delivering best practice. However, as my career has progressed, I now understand that the concepts, relationships and entities relevant to midwifery spread much wider than myself and the influence I have can be greater through the structured framework that ontology provides. Patterson and Williams (1998) suggest this is a normal linear process where revision and understanding are contextual and time bound, aligning this process with Gadamer's reconceptualised hermeneutic circle (Gadamer, 2006). These concepts will be discussed further in chapter 4.

I believe that different assumptions adopt differing approaches to the nature of reality (Brown & Dueñas, 2020). For example, in a discussion with one of my advisory team, I was asked if I believed if a person who drove through a red light should be prosecuted. My first thought was to find out more information, very few acts can be considered in isolation, a decision is usually formed by a myriad of quick choices (Rosen, 2017). As most actions deliver consequences, the knowing and willing choices of an individual and whether they had contemplation of such consequences needs to be addressed. All these considerations have the potential to differ at each event and with each individual. Linking this with the midwifery profession, quantitative research is paramount in delivering concise knowledge, the 'black or white'. However, midwifery also deals with human beings, and over my career I have grown to understand that the 'grey' is where the quality lies. As such, my research is searching for meaning that is subjective with multiple realities and qualitative in nature.

Epistemology derives from the Greek *epistēmē (knowledge) and (like axiology) logos (reason) (*Stroll & Martinich, 2023). Epistemology is concerned with the nature and scope of knowledge and is intricately linked with my ontological assumptions, which pertain to the nature of reality itself. These assumptions fundamentally influence my epistemological perspective, shaping the questions asked by Alele and Malau-Aduli (2023). I will ask about knowledge 'what is knowledge?' 'how do we acquire knowledge?', 'is it trustworthy?' and these questions will guide my methods of inquiry. Patterson and Williams (1998) suggest that the relationship between the reality and its study is paramount with regards to characterising paradigms as epistemology needs consistent ontology.

I believe that knowledge is multifaceted in its creation. Not a singular fact of information, it emphasises the significance of context, language, culture, and historical

background in shaping meaning. In this view, knowledge is not something that exists independently of interpretation but rather emerges through the process of interpretation itself. Consequently, I believe that a person's ability to acquire knowledge is dependent upon these factors and will therefore vary between individuals irrespective of any knowledge delivery mode based on reliable sources, empirical evidence or logical reasoning. Trustworthiness of knowledge in research is understood in its relation to the process through which it is constructed and validated (Taylor & Francis, 2013). This concept will be discussed in more detail in chapter 4; however, I believe that trustworthiness should also be applied to the multiplicity and diversity of perspectives used in its construction. Trustworthy knowledge is characterised by inclusivity, reflexivity and openness to alternate viewpoints (Southworth, 2022). Applying my axiological and ontological stance to how knowledge will be gained and its trustworthiness in my own research, I addressed the questions previously stated above by Alele and Malau-Adule (2023). While my knowledge of the research provided understanding, it was not my experiences that were sought. As a researcher, my role is to represent the participants of the research fairly. I believe this is best done through the interpretivist paradigm, especially hermeneutic constructivism, which aims to illuminate a person's inner perspective for qualitative research (Peck & Mummery, 2023)

Reading, as a new researcher, has opened up and broadened, not only my practical skills but, more importantly, my sense of self. Extensive researching and a desire to develop my study to be authentic and true to its meaning led me to phenomenology. Reading to the point of obsession, I believe I have gained an understanding that has still only scratched the surface of this methodology, and I am still by no means an expert in the field of phenomenology. Indeed, Smythe and Spence (2020) suggested that by "trying to understand Heidegger word by word actually risks losing the spirit of the meaning he was striving to grasp" (p. 4). To those philosophical purists potentially reading this and to the Heidegger legacy, I apologise in advance. However, my interpretation is, in itself, true to 'Dasein' [Being there] (Heidegger, 1973) and I will therefore forge onwards with sharing my understanding, reasoning and application of this methodology.

Both Harman (2007) and Rothman (2014) suggest that my introduction to, in particular, Heidegger's phenomenology is my witnessing the emerging drama of 21st century philosophy. Unlike traditional philosophers who teach by presenting slices of the problem, Heidegger states this "simply drains the life out of philosophy" (Harman, 2007, p. 51). I have been seduced by Heidegger's veiling and unveiling of things encountered in

the world by Dasein. Although initially appearing complex and unfamiliar, persistence in examining these concepts revealed that, despite Heidegger's contentious historical affiliations and political ideology—topics that will be explored in greater depth later in this chapter—his philosophical contributions offer profound insights that transcend such controversies. Fitting to Harman (2007), Heidegger's way is typical of great thinkers, who resonate, appeal and ultimately challenge. This has certainly been my experience and thus brought forth my own emerging philosophy.

3.3 Choice of methodology

Phenomenology was used in this study as a way of exploring and interpreting a number of nurses' experiences, both actual and perceived, of caring for pregnant women in a rural or remote health care setting and in the absence of a midwife, a subject previously uninvestigated. As a researcher and midwife, who does not hold a nursing qualification, the notion of my understanding of the RNs world was contextual and, as claimed by Heidegger (1973), any insight would always be partially withdrawn into shadow. As stated in the previous chapter, searching the literature produced no studies in this area. Therefore, despite the suggestion by Harman (2007) that a revealed phenomenon is never entirely discernable from the outside, phenomenology, which is deemed by Polit and Beck (2017) as especially useful when a phenomenon is poorly defined, was chosen.

The term phenomenology is derived from the Greek word *'phenomenon'* meaning 'appearance'. Witnessing firsthand, the complexities surrounding rural and remote nursing, I believe that their [the nurses'] opinions and reality of practice is significant. What Heidegger's hermeneutical phenomenology offers is a platform for that practice to be interpreted through their experiences. The parallels between the philosophical framework of this methodology and nursing ideology uncovers the 'humanness' of science (Whitehead et al., 2020) and draws on notions of care and being-with by the use of storytelling of the lived experience. The concept suggested by Heidegger that unless you 'cared' about something, it stayed concealed (Heidegger, 2013; Rothman, 2014) is congruent to nurses' and midwives' practices. Suggested by Cohen et al. (2000) as a methodology seeking to understand another's experience being ideally suited to nursing research; this concept will be discussed in more detail further in this chapter.

van Manen (2014) observes that scholars from professional human sciences, despite their limited philosophical background, are increasingly engaging with phenomenology. He asserts that these disciplines contribute valuable perspectives to phenomenological

research. As a researcher, my role involves 'thinking phenomenology while doing phenomenology' (Berndtsson et al., 2007). Despite not being a philosopher, van Manen (2014) argues that anyone can engage in phenomenology through reflection and appreciation of classical texts. Achieving this status requires a deeper understanding of the methodology.

3.4 Phenomenology background and history

The phenomenological movement has been described by Spiegelberg and Schuhmann (1982) as a movement in three phases: the preparatory phase, the German phase and the French phase. The preparatory phase involved two major philosophers Franz Brentano [1838-1917] and Carl Stumpf [1848-1936]. Whilst Stumpf is credited with founding experimental phenomenology, it was Brentano who had a greater impact and influence on the development of the later phases. In the German phase, Edmund Husserl [1859-1938] and Martin Heidegger [1889-1976] are considered the father of the movement and his radical critic student, respectively. The French phase identifies key figures such as Gabriel Marcel [1889-1973], Jean-Paul Sartre [1905-1980] and Maurice Merleau-Ponty [1908-1961]. Whilst the historical background to phenomenology goes beyond Husserl and Heidegger, it is their work that has had the greatest influence on the use of phenomenology in nursing research (Cohen & Omery, 1994) and will be outlined further in this chapter.

Influenced by Franz Brentano, Edmund Husserl's phenomenology was described as a response to what he saw as a crisis in science whereby the discipline was "crying out for a philosophy that would restore its contact with the deeper concerns of man" (Spiegelberg & Schuhmann, 1982, p. 112). The publication of his [Husserl's'] multi-volume 'logical investigation' 1900-1901 [reprint (Husserl, 2001)] marked the birth of the name 'phenomenology' in his trailblazing attack on "psychologism: the theory that logical laws are really just psychological laws of the human mind" (Harman, 2007, p. 18). In his work, Husserl made some conceptual elaborations. He asserted that the act of studying consciousness (as experienced from the first-person perspective), required the researcher to differentiate between consciousness itself and the phenomena at which it is directed (Husserl, 2001). In applying his mathematical background Husserl described the method of reduction, termed 'bracketing', in a bid to describe how a researcher could suspend their own ideas and beliefs to fully support their understanding of the phenomenon being described (Guignon, 2012; Husserl, 2001). Thus, intentionality of

consciousness would then allow the things of the world to show themselves as a phenomena (van Manen & van Manen, 2021). This understanding, an insight into a descriptive view of a given experience, exemplifies one of the principles that is at the core of Husserlian phenomenology, reflective intuition. Husserl suggested that knowledge of an object outside the mind came from its depiction in the mind; a theory to be later radicalised by Heidegger (1973).

Initially idolising and studying his senior colleague's philosophical work, Heidegger's philosophy travelled in quite a different direction from Husserl's, with a focus on human existence and being rather than, as suggested by Nelms (2014) on pure ego. Heidegger shifted from phenomenological thinking as an epistemological concern to ontology and what it means 'to be'. The German word *'Dasein'* [meaning presence] was adopted as a Heideggerian term and is suggested by Ricoeur and Thompson to be that of a being which understands being and having an "ontological pre-understanding of being" (1981, p. 54). A more recent summarised understanding of '*Dasein'* by van Manen and van Manen states, "let that which shows itself be seen from itself in the very way in which it shows itself from itself" (2021, p. 1070).

Heidegger challenged Husserl's descriptive phenomenological reduction, or bracketing, stating that an integral component to his interpretive phenomenology is the researchers' experiences and presuppositions are embraced rather than set aside (Miles et al., 2013a; Miles et al., 2013b). van Manen (1990) further asserts that the reduction of bias is untenable and actually emerges from the connection between the philosophical framework and the interpretive process. Additionally, Cohen et al. (2000) acknowledge that rather than having an epistemological approach, hermeneutic phenomenological interpretation relies upon the researcher's own perspective. The challenge, they suggest, is the bias reduction brought with their dialogue (Cohen et al., 2000).

When discussing the historical background of phenomenology, it would be remiss to exclude the paradox between Husserl's Jewish background and the Anti-Semitism displayed by Heidegger in his Nazi affiliation. Comparable to Rothman (2014), I resonated with the Heideggerian philosophy and my ability to understand the truth lay in my ability to care about wanting to know. The more I read about Heidegger the more his Nazism played its role in his hidden truth. Brody (2014), Faye (2006), Grange (1991), Mitchell and Trawny (2017), Rothman (2014), Smyth and Spence (2020) and Trawny (2014) have all discussed Heidegger's connection with the Nazi party, but it is Trawny's (2014) publication of Heidegger's 'black notebooks' that revealed Heidegger used "his

own philosophy for anti-Semitic ends" (Rothman, 2014, p. 2). Trawny, a lifelong self-confessed Heideggerian, declared at an event on Heidegger and Nazism hosted by the Goethe Institute [2014] where he was a panel member, that publishing the anti-Semitic passages had been "very painful" (Rothman, 2014, p. 3).

The paradox arises when looking at the prominent Jewish associations of Heidegger over his career and private life. At the age of 20, Heidegger, albeit for a short period of time and before being discharged for medical reasons, entered Jesuit training in Austria. Although historical writing examines the Jesuit hostility to Judaism (Bell, 2020), Heidegger's alienation over time with the Catholic Church throws doubt into an early indoctrination. It appears that Heidegger's relationship with Husserl went from adulation to intellectual decline before coming abruptly to an end in the early 1920s with Heidegger's growing Nazi allegiances (Harman, 2007). Notwithstanding the evident shift in the dynamics of the relationship, it was Husserl's inclusion of Heidegger's book titled 'Being and Time' in his journal that secured Heidegger's role as professor at Marburg University in 1927. However, Husserl also stated his disappointment of the book in his personal notes (Harman, 2007, p. 19). Heidegger's failure to attend Husserl's funeral in 1938 caused further controversy. Heidegger was also acknowledged to have had a number of mistresses during his married life. Hannah Arendt, a Jewish student, was the most prominent and was said to have been the inspiration for his major works of the 1920s (Harman, 2007).

Questions arose for me as I continued to read; should Heidegger's Nazi affiliation eclipse his intellectual legacy, had it tainted his philosophy, and in due course my connection with it? Searching for a reason to, according to Babich, "not throw the baby out with the *bathwater," cited by* Rothman (2014, p. 4), I found myself in agreement with both Rothman and Trawny (Rothman, 2014; Trawny, 2014). Heidegger's concept of errancy portrays him as human, emphasising that the possibility of being wrong is an inherent aspect of human existence. As a health professional rather than a philosopher, I was looking for a platform to reveal a lived experience and, like Smythe and Spence (2020), his writing 'called to me'. Rothman concluded that Heidegger was too influential to disavow and marginalise (2014), an opinion I concurred with, for similar reasons to Smythe and Spence (2020), there is something in his writing that calls to me.

Max van Manen [1942 – present] is a more recent proponent of phenomenology as a qualitative research method. His scholarly background specialises in phenomenological research and pedagogy as is detectible in his call for researchers to consult primary

rather than secondary literature, consulting "the tradition and movement of phenomenology" (van Manen, 2018, p. 1966). Whilst adopting characteristics of both Husserlian (descriptive) and Heidegger's Hermeneutic (interpretive) phenomenology, van Manen does, however, concur with the Heideggerian position on bracketing. van Manen's work positions that phenomenology is the study of the lived meaning of experience, and therefore the researcher needs to ask, "what is that experience like?" (van Manen, 2014, p. 35).

3.5 Why hermeneutic phenomenology?

Despite the common standpoint of exploring the lived experience, there are fundamental differences between Husserlian and Heideggerian phenomenological approaches. These are compared in Table 3.1.

Table 3.1 Comparison of the characteristics of Husserlian and Heideggerian phenomenology

Husserlian phenomenology	Heideggerian phenomenology
The lived experience	
Epistemology – the philosophy of knowing	Ontology – the science of being, of what is
Descriptive – the essence of transcendental subjectivity	Interpretive
Questions what is known	Questions what is experienced and understood
Consciousness – person lives in a world of objects	Being - person exists in and is part of the world
Interpreter bias is bracketed out	Interpreter must clarify the pre-understanding of their understanding
Intentionality is cognitive	Intentionality is practical

Descriptive, even eidetic in nature, Husserl's phenomenology, sometimes termed transcendental, can be described as the science of the essence of consciousness or an

enquiry into the consciousness of the researcher (Porter, 1998). Husserl believed that when relating to consciousness, phenomenology suspended all assumptions related to the individual's experience. These experiences of perception, memory, thought, imagination and emotion, he termed intentionality, a directed consciousness of an object or event (Reiners, 2012). In considering consciousness as a model of self-awareness based on a subject-object contrast, Zahavi (2003) argues Husserl's restricted use of a reflective rather than pre-reflective model shows limitations, a criticism previously shared by Heidegger (1973).

Husserl contended that consciousness always has intentionality. Simply defined as "the unique peculiarity of experiences to be the consciousness of something" (Husserl, 2004, p. 242), Husserl again refers to the relationship between subject and object; subscribing to the Cartesian view of mind-world split (Dreyfus, 1993). He clearly held intentionality as an essential property of consciousness when writing "Intentionality is what characterizes consciousness" (Husserl, 2004, p. 242). Husserl stated that all conscious states are intentional and believed that some content in the mind, a conscious awareness, accounts for directedness; the intentional content, a description of reality (Koch, 1999). Indeed, Goldie reiterates, in terms of directedness towards an object, bodily feelings are unproblematically intentional (Goldie, 2002).

Neoma and *Noesis* are terms employed by Husserl in his writings on intentionality. Moustakas describes these as "*Noema* being the landscape that is my perception and *noesis* the joyful feeling the landscape evokes" (Moustakas, 1994, p. 29) with these terms showing an evident correlation with directedness. Whilst thoughts, feelings and emotions can contribute to the subject/object relationship, are they always directed or pre-reflectively intentional? A number of alternate viewpoints are posited. van Manen proposes intentionality is only available to awareness retrospectively (van Manen, 2015). Challenging the assertion that all conscious states are inherently intentional, Zhongwei (2014) posits that certain sensory experiences constitute non-conscious states, thereby serving as counterexamples to this claim. Similarly, existential feelings, as elaborated by Slaby and Stephan (2008), are non-directed, objectless emotions that form a significant part of a person's background and beliefs. This perspective aligns with my research findings, corroborating Heidegger's proposition that an individual's engagement with the world is mediated through intentional content (Dreyfus, 1993). This notion suggests a process of reduction by the participant, isolating the mind and its

contents from the external world, a notion that I believe would not be possible within the lifeworld of the rural nurses in this research.

Thoughts, feelings and actions are orientated to be 'in' and 'of' the world (van Manen, 2014). As such, Husserl termed the notion 'life world' (2001) whereby, reflective intuition would assist the researcher in defining the experiences of those that have experienced them. Bowie and Wojnar (2014) portray this stance as Husserl's explanation of how the researcher can overcome biases to achieve a state of transcendental consciousness. As previously described, reduction (or bracketing) would be used to assist the researcher in achieving this concept. The 'setting aside' of any preconceptions allows the researcher to view and describe the meaning of the experience in more and more detail.

Hermeneutic phenomenology transitioned from Husserlian phenomenology which centred around the pure description of the lived experiences or lifeworld from those who have experienced it (Cohen et al., 2000), to the interpretation of such experiences. Gadamer further suggests that it is this interpretation, rather than the phenomenon, that should be the object of the research (Gadamer, 1989, pp. 254-264). How a researcher interprets and makes meaning of the experiences of individuals' lives is fundamental to hermeneutic phenomenology. Such an approach requires the researcher to recognise, embrace and address any pre-suppositions (McConnell-Henry et al., 2009). Elaborating further, Koch (1995) suggests that it is actually the experiences and understanding of the researcher that allows immersion and interpretation of the data, making them as much a part of the research as the participants. In adopting a hermeneutic, interpretive, phenomenological perspective for this study, I have been able to incorporate and engage with my existing knowledge and understanding. Engagement facilitated a deeper comprehension, connection, and advocacy with the participants, thereby enhancing the depth of data analysis.

3.6 The nature of the lived experience, phenomenology in nursing

van Manen (1990) suggests that phenomenology involves examining the experiential significance of lived experiences, thus enabling an opportunity to understand a phenomenon previously rarely reported upon (Crowther et al., 2017). The term 'lived experience' used in phenomenology is derived from the German word *Erlebnis* (Dilthey, 1985). Lived experiences refer to everyday subjective or actual encounters, perceptions, and emotions that individuals undertake throughout their lives. These experiences are

deeply personal and can encompass a wide range of phenomena, yet most are often fleeting in our consciousness and not brought to reflective awareness. However, such ordinary experiences are suggested by van Manen and van Manen (2021) to become quite extraordinary when held to a phenomenological gaze. This hermeneutic phenomenological gaze considers the experience in relation to time with *dasein* being the past, present and future (Heidegger, 1973) therefore simultaneously defining lived experiences described by individuals (Burns & Peacock, 2018). Heidegger insists however, that time is not considered a situation-less experience, should the context of the experience change, so therefore would the meaning of the event.

The use of phenomenology as a research method in nursing, and in particular lived experience studies, has been criticised by some scholars. Paley suggested that nursing researchers undertaking life experience studies contravene Heideggerian ontology by "invoking cartesian duality between what is experience and what is reality" (Paley, 1998, p. 4) and subscribe only to a positivist model. Whereas Crotty (1997) asserts that nursing researchers must understand Heidegger's intent through his text *Being and Time* (Heidegger, 1973) to truly interpret his work. Despite these questions around the appropriateness of hermeneutic phenomenology as a method for nursing research, its popularity remains strong among nursing researchers (Beck, 1994; Benner & Wrubel, 1988; Davis, 1973; Johnston et al., 2017; Mackey, 2005; Miles et al., 2013b).

When considering the appropriateness of examining the lived experience through phenomenology in nursing research, Heidegger's delineated use of *sorge* (care) (Merriam-Webster, n.d.-a) as a fundamental structure of dasein emphasises its significance in the nursing world. Sorge, is inherently relational, as relationships stem from caring and concern. Engaging with something or someone necessitates a sense of importance and connection, whether positive or negative. Sorge fosters the interconnectedness essential for active participation in the world or in another person's life (Miles et al., 2013a). This concept underpins every facet of nursing practice, as caring and concern are integral to the relationships nurses cultivate with patients. The depth of these connections profoundly impacts identities; actively engaging in another's lifeworld becomes intrinsic to dasein's essence.

When investigating an appropriate methodology for my research, I recognised the congruence between phenomenological methodology and nursing research. Like Wilkes (1991) I understood that a nursing appreciation of caring and holism should employ

research methods that utilise the lived experience to explore and analyse this holistic approach. Furthermore, Knaak (1984) determines that the emphasis placed on observation, interviews, interaction and interpersonal relationships during data collection highlights a shared set of values between phenomenologists and nurses. These parallels drew me to the knowledge that phenomenology was the most appropriate methodology for this study. I now understand and share van Manen's view that the joy of phenomenology includes becoming familiar with some of the great philosophical phenomenological texts. It is here that we may become infected by the pathos that drives phenomenological thought and that makes 'thinking' such a compelling engagement into the exploration of lived meaning of human life and existence (van Manen, 2014, p. 24).

3.7 Conclusion

This chapter has described my own philosophical standpoint and how this has influenced my choice of methodology for this study. The historical background to phenomenology and its associated scholars were discussed. Reasoning for the choice of interpretive as opposed to descriptive phenomenology was given. Finally, consideration was given to how phenomenology, and specifically the lived experience, aligns with not only my own, but nursing values, making it the most appropriate fit for this study.

The following chapter will present the data collection tools and techniques used in this study including how van Manen's six step method (1990) and an adapted hermeneutic circle (Cushing, 2020; Gadamer, 2006) guided the process.

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Chapter 4: Methods

As with the previous chapter, some discussion regarding methods undertaken will necessitate the use of first-person language with some relation to myself as the Principal Investigator (PI).

4.1 Introduction

The aim of this study was to examine the poorly described experience of rural and remote RNs providing care for pregnant women, thus suggesting phenomenology as an appropriate methodology. With its roots in philosophy, each aspect of the research must be congruent with the hermeneutic phenomenological way of 'dasein' which has been discussed in the previous chapter.

This chapter will describe the methods used and how they are underpinned by the philosophy of phenomenology. In an aim to gain structure in a methodology, which by nature is described as nebulous (Taylor & Francis, 2013), van Manen's phenomenological six-step method (1990) was used to guide and inform the research. Whilst not intended to be prescriptive, its use is guiding the researcher through "woodpaths, towards a clearing" (van Manen, 1990, p. 29). The methodological themes described by van Manen below, were used in this study, alongside other authors' dialogue, as a means of allowing emerging research techniques to be developed and evolve.

1. Turning to the nature of the lived experience
2. Investigating experience as we live it, rather than as we conceptualise it
3. Reflecting on the essential themes which characterise the phenomenon
4. Describing the phenomenon through the art of writing and rewriting
5. Maintaining a strong and orientated relation to the phenomenon
6. Balancing the research context by considering the parts and the whole

(van Manen, 1990, pp. 30 - 31)

4.2 van Manen's methodological themes

This section will outline the application of van Manen's methodological themes in detail, providing a comprehensive examination of how these principles shaped the study's methodological approach and informed its processes.

4.2.1 Turning to the nature of the lived experience

As discussed in previous chapters, the nature of the lived experience piqued my interest, through incidental narrative during delivery of education in rural and remote areas of North Queensland. Thus, this deeply fascinating starting point into the phenomenological research journey was identified as a true phenomenon (van Manen, 1990). As a midwife educator who is not a nurse, the experience analogy came from discussing critical health education when having never cared for an 'acute trauma patient' or an 'elderly gentleman in the end stage of life'. There was no concept of their [rural and remote RNs] lived experiences working with pregnant women as non-midwives. As such, in the formulation of the phenomenological question, van Manen (1990) reminded me to be constantly mindful, to be orientated to their 'lived experience' making it possible to ask the question 'what is it like?'. Being a midwife and an educator, I felt well placed to explore this phenomenon. However, I was cautioned by van Manen's suggestion of "knowing too much" (1990, p. 46), predisposing assumptions and pre-understandings prior to really understanding the phenomenon. It is important to recognise the role of the researcher and, as previously discussed, an inability to ignore what is known by 'bracketing'.

In an attempt to identify and overcome such suppositions, Gadamer's reconceptualised hermeneutic circle, as shown in Figure 4.1 (Gadamer, 2006), was employed as an iterative process of developing a new understanding by guiding on several levels.

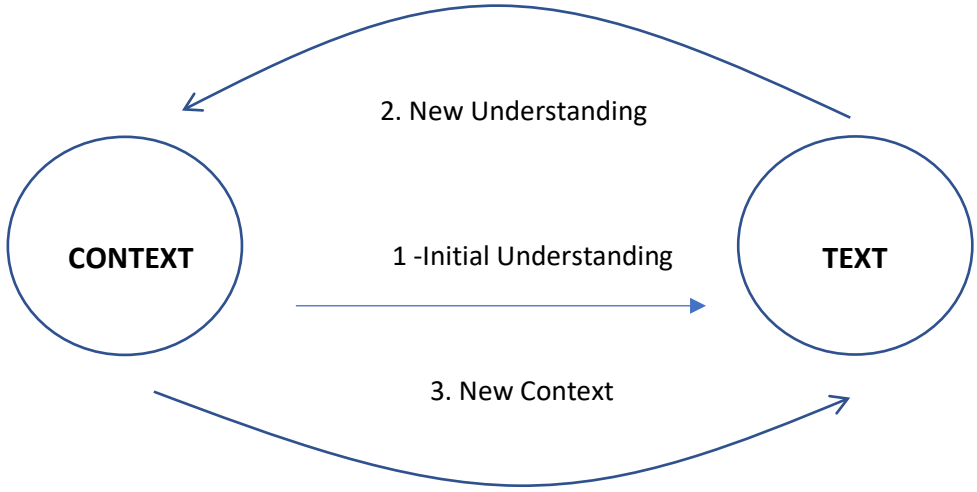

Figure 4.1 Hermeneutic circle

Source: Image adapted from Cushing (2020) and Gadamer (2006)

The hermeneutic circle allows the researcher, utilising reflexivity and examination of individual dialectical parts of the data, to better understand the data as a whole and vice versa (Cohen et al., 2000). The word context in the circle therefore refers to the smallest units of data right through to the data as a whole. Gadamer (2006) viewed this understanding as the exploration of a reality through conversation to develop an agreement representing new understanding. To achieve transparency through critical thinking and reflection (Cohen et al., 2000) I began the process of pre-research writing and journaling and continued through the context to text phases (Alsaigh & Coyne, 2021) and back again.

4.2.2 Investigating experience as we live it

Hermeneutic phenomenology in practical terms is, according to Cohen et al. (2000), the study of how people interpret and make meaning of their life experiences. Gadamer (1989) further explains this as the study of texts (languages). Therefore, investigating remote RNs experiences necessitated inquiry through one-on-one interviews to unfold the language and then transcribe it to allow investigation of the text.

An interview protocol guided the dialogue, through semi-structured conversation and probing questions, to elicit a free-flowing account. Active narrative production is seen by Holstein and Gubrium (1995) as setting parameters that both constrain as well as provoke relevant narrative. Whilst some constraint was needed to maintain connection with the research question, it was important to explore and direct the respondent's ongoing responses.

Employing video on the Zoom Video Communications platform [Zoom] (for those who consented) and keeping a reflective diary at the time of interviews also allowed for direct observation and collection of experiential anecdotes. The use of technology will be discussed later in this chapter. van Manen (1990) suggested that the best anecdotes are sometimes difficult to recollect in the moment and may provide accounts that were never written or spoken, making it necessary to go back and observe.

4.2.3 Reflecting on the essential themes which characterise the phenomenon

In order to effect and understand direct contact with the experiences of those living the phenomenon, van Manen describes the researcher as *"crafting a text"* (1990, p. 78). Eliciting meaning from these texts he suggests, involves considering the phenomenon

described by recovering themes. Reflecting on the lived experiences of those involved then leads to reflectively analysing the themes uncovered.

van Manen (1990) describes a three-step progressive approach to identifying themes. The sententious approach describes eliciting meaning from reading the text as a whole. The selective approach then involves re-reading the text several times to elicit phrases deemed particularly relevant which are then highlighted. Finally, the detailed approach examines further each sentence and/or paragraph seeking how it describes significance of the phenomenon. After utilising an electronic transcription service, I listened/ watched the tapes for accuracy and edited the texts where needed, also adding to my reflective journal. This process allowed me to gain general feelings about the experiences being described. Identification of standout paragraphs was commenced at this stage. Re-reading and listening to the transcripts further allowed identification of relevant statements following which a detailed analysis examined line by line consideration of the relevance of each statement to the phenomenon. A detailed description of these processes is described later in this chapter under data and thematic analysis.

4.2.4 Describing the phenomenon through the art of writing and rewriting

In phenomenology, to be an authentic writer (speaker) one must be attuned to listening deeper than what is our accustomed range of hearing (van Manen, 1990). Ultimately, Goble et al. (2012) suggest this can only be achieved by writing phenomenological text. Only through this reflective writing and rewriting can one examine every word for its vocative meaning and cognitive weight (van Manen, 2017).

Writing, reflecting, and rewriting ultimately allows comprehension and meaning of the phenomenon under investigation to emerge from the text. This process, however, began long before data collection, at the start of the research journey for me. My insight into the phenomenological process enabled a deeper level of reflection and ability to become sensitive during the interviews to the nuances of language, the silence between words and the body language on display. Journalling during the interviews ensured these insights were documented and provided a context into the narrative data collected.

The iterative process of moving between data sources, draft writings, and discussions with my advisory team deepened my immersion in the phenomenon's 'lifeworld' (Paley, 2014), enhancing my understanding. In phenomenology, the relationship between

research and writing goes far beyond the act of reporting. Writing not only externalises internal thought—a process described by van Manen (1990) as a 'producing activity'—but also serves as an avenue for deeper reflection and self-discovery. Sartre's perspective complements van Manen's view by emphasising that writing measures "the sense of one's own depth" (Sartre, 1977, p. 5), suggesting that the act of writing is not merely about documenting insights but about delving into the dimensions of understanding and personal engagement with the research. Together, these perspectives highlight how writing in phenomenological research is both an intellectual and observational practice, allowing the researcher to fully immerse themselves in both the meaning of the phenomenon and their own reflective process.

4.2.5 Maintaining a strong and orientated relation to the phenomenon

The objective of the movement between data, reflection and writing is the generation of themes that will elicit meaning to the text. Braun and Clarke define a theme as a "pattern of shared meaning organised around a central concept" (2022, p. 77). Such themes need to be derived from the research question (Kiger & Varpio, 2020). van Manen (1990) asserts that if the researcher does not maintain a strong orientation to the fundamental question, there is a tendency to become side-tracked and settle for superficial speculation. Holding on to the question, "what are the perceptions and experiences of registered nurses who do not hold a midwifery qualification and are providing care to pregnant women in a remote setting?", was therefore essential. Maintaining this central research question as a foundational anchor ensures that the thematic development process remains firmly rooted in the lived experiences of the participants, rather than being influenced by the researcher's assumptions or preconceived notions (Nowell et al., 2017). This methodologically disciplined approach facilitates the articulation of themes that authentically and intricately capture the multifaceted nature of participants' experiences. Through iterative engagement with data, critical reflection, and scholarly writing, the research question serves as an analytical lens, effectively distinguishing between profound insights that enhance the depth of understanding and superficial observations that merely skim the surface (Clarke & Braun, 2018). Consequently, thematic analysis transcends its role as a data-organising method to emerge as a rigourous interpretive endeavour that upholds the core objectives of the inquiry.

4.2.6 Balancing the research context by considering the parts and the whole

Within the research aim lies the question *ti einai*: what are? Whilst this question is the ultimate target, van Manen suggests that when engaging in 'the parts' one can easily lose 'the whole' (1990). Each narrative transcript and associated data were analysed individually. The adapted hermeneutic circle previously discussed (Cushing, 2020; Gadamer, 2006) was utilised associating text and context; where text represented 'part' and context represented 'the whole'. Thus, movement between the individual text and the entire transcripts assisted to situate them within this circle.

Connection, or indeed disconnection, from the parts to the whole need to be considered. This consideration can be achieved by the researcher re-examining the texts in relation to the bigger picture. Do the individual themes fit meaningfully within the larger dataset? (Kiger & Varpio, 2020). Braun and Clarke (2022) recommend visual thematic mapping as consideration of the overall story in a bid to demonstrate how themes interrelate.

4.3 Ethics

This qualitative research study relies upon the intimate and trusting relationship sought between the researcher and participants deeming ethical treatment mandatory. The conduct of this study meets the requirements set out in the National Statement on Ethical Conduct in Human Research (National Health & Medical Research Council [NHMRC], 2018). The purpose of the National Statement is the protection and respect of any participants and promotion of research underpinned by beneficence and non-maleficence to not only the participants but also the community surrounding them. As such, the values and principles of this statement must be considered to inform every aspect of the research being undertaken.

Research merit and integrity were demonstrated throughout from the reasoning of the research need, the appropriate methodology utilised for the little-known subject area to the qualifications, appropriateness and commitment of the PI and supervising team. Demonstration of justice was exhibited with participants. Recruitment processes including purposive sampling was fair and non-coercive. The PI's lack of current employment within the organisation ensured no potential exploitation or unfair burden to participate in the research. All potential participants were fully informed of the potential risks and benefits and had mental health welfare access should they deem it

necessary. All participants gave free and informed consent and have access to view the research outcomes.

Respect for participants above all else is demonstrated through the nature of the research under investigation. A desire to delve into the lifeworld of remote nurses shows respect for their voices. Respect was also displayed regarding to reassurance of participant confidentiality and anonymity.

Participants were assured that any data from the study would be dealt with in a way that any identifiers, be that place names, dates, or persons, would not be able to be identified. Transcripts from Zoom interviews were downloaded from the Zoom cloud to the JCU Tropical Data Hub (TDH) and stored and archived. In line with the JCU research data management toolkit (MacKay et al., 2021), three copies of the data will be kept in separate places. Written data was scanned to my hard drive, an external password protected hard drive and paper stored in a secured filing cabinet in my office. Likewise, audio/video data, once transcribed and categorised is archived on the JCU TDH, on the PI's hard drive and an external password protected hard drive. All data will be kept for the duration of the thesis work, then destroyed after five years as per the NHMRC (2019) in a secure manner, as organised by the university. Participants were able to choose dates and times of their interviews and as these were carried out over Zoom platform or telephone. Participants also were able to choose a location of their choice to conduct the interview, giving them the ability to feel comfortable in their surroundings.

The PI sought and gained ethical approval from the Research and Ethics Committees of Townsville Hospital and Health Service and James Cook University. Site-Specific Application (SSA) of Governance was obtained from the research site Hospital and Health Service (Appendices 2 & 3).

4.4 Recruitment and participants

When considering potential participants for hermeneutic phenomenological research, Cohen et al. (2000) ascertain it is essential to view them as people who offer a picture of an individual making sense of an important experience. Alongside this, sample size in phenomenological research, as suggested by Speziale and Carpenter (2011), should be small enough to allow in depth examination rather than generalisation of findings. The sampling strategy of this study was purposive in nature and directed by the criteria of

selecting individuals who have knowledge of the phenomenon of concern. Participants were recruited from seven facilities within one rural and remote Hospital and Health Service that was known to the PI, from prior employment. All of these sites had no maternity facilities. The inclusion criteria for nurses participating in the study were:

- Currently working in a remote facility as an RN
- Has worked in a remote facility for a least 3 months
- Is not now, or has previously been, registered as a midwife (in any country)
- Willing to participate in the study and has given written informed consent

Email contact with the Directors of Nursing (DONs) at the chosen sites was made during the governance process as a means of attaining written support for the study. Following governance approval, DONs were sent a follow up email informing them of the status of the study, pre-empting postal delivery of information sheets and posters to the sites and requesting time to deliver information sessions to potential participants.

Two of the sites made immediate contact and arranged dates and times for information sessions. The first one delivered was well attended with RNs who appeared enthusiastic about the study as indicated by their engagement and questions asked. The second arranged information session needed to be rescheduled on three occasions. These re-schedules ironically were borne from issues identified in the literature review around staffing shortages and the inability to backfill for education purposes (Connell, 2018; Hegney et al., 2002; Kenny & Duckett, 2003; Kidd et al., 2012). The second information session, when delivered, was again well attended. Contact with two of the sites was hindered by a change in DON role and subsequent contact confusion. One of these sites had three changes of DON within the recruitment period. Staff turnover in rural areas is a known issue. Research by Wakerman et al. (2019) reported that turnover for remote area nurses working in clinics was 148% with only 20% working longer than 12 months after commencement. The challenges of sustaining an adequate nursing workforce is suggested by Henwood et al. (2009) as stemming from a lack of ongoing support leading to burnout and attrition.

Two of the sites consisted of only one or two RNs and therefore, information was delivered via a telephone call rather than a scheduled Zoom session. Two sites necessitated numerous contacts because of confusion over their ability to partake. The DONs emailed me after the initial contact to stress that they did not provide birthing services and therefore would be unable to help. Whilst Ennis and Wykes (2016) state

that study information sheets need to contain adequate information for potential participants to make an informed decision, their research also suggested that the complexity of the information had little bearing on successful recruitment. The Flesch-Kincaid readability score (Flesch, 1948) for the information sheet in this study was 40.7, which is well within the range of 33 – 53.3 found for healthcare providers in a study by Mac et al. (2020). The higher a Flesch-Kincaid reading score the easier it is to read with Lynch et al. (2021) stating a reading score of between 30 and 49.9 equates to college or university level. In both site cases, the confusion was explained and eliminated following telephone contact thus acknowledging, as evident in Xu et al. (2020), that various modes of communication were necessary. The potential that the form was not actually read also exists and further strengthens Xu et al.'s emphasis that verbal communication helped "highlight the really important bits" (2020, p. 5).

A total of eight participants were recruited over a three-month period. After the eighth interview, no new information was identified. Participants represented four of the seven sites contacted.

4.5 Consent

At the beginning of each interview, participants were asked if they had read and understood the information sheet and consent form for the study (included in Appendices 4 & 5). There were no instances where further clarification was needed. Most participants forwarded the completed consent form prior to the interview and others did so at the time of the interview. All participants agreed to the interview being recorded.

4.6 Data collection

The use of Zoom technology for conducting the interviews in a phenomenological study warrants justification. This research planning commenced during challenging and unprecedented times within the Covid-19 pandemic. Eke et al. (2021) prophesised that whilst emergency care and frontline research remain imperative, drained resources and risk avoidance would impact research in other areas. In a bid to reduce risk and limit use of personal protective equipment (PPE), already in short supply, virtual meetings, and telemedicine have highlighted a potential answer to enable researchers to conduct projects wisely and strategically. In their reflections of online versus face-to-face interviews, Deakin and Wakefield (2014) found no difference in the quality of the data

and that many of the participants were more expressive during online interviews, due to preferring the geographical anonymity. Likewise, Archibald et al. (2019) reported key aspects of convenience and simplicity. Similarly, for the researcher, the convenience, efficiency, flexibility and cost-effectiveness of performing online interviews have been reported (Horrell et al., 2015). Travel and accommodation, to facilitate face-to-face interviews, formed a major part of the initial budget for this study. A geographical distance of over 3000km, seven towns (one of which is an island and therefore required a flight) dictated significant time and financial cost. It was therefore decided to perform the interviews using the Zoom platform.

Mastering active enquiry in the field of phenomenology involves many technical skills that develop over time (Cohen et al., 2000). Piloting for interviews has been suggested as an integral aspect of qualitative research for an inexperienced interviewer (Abdul Majid et al., 2017; Jacob & Furgerson, 2015). Therefore, pre-data collection, practice interviews were undertaken to test a number of things: the interview protocol (included in Appendix 6), PI technique, technology used for conducting the interviews and recording the data and PI transcription techniques.

Three practice interviews were conducted over a week, two via the Zoom platform and one over the telephone and recorded with a hand-held digital recorder. One of the practice interview participants had also utilised the Zoom platform for their own research interviews and advised the PI on potential pitfalls for internet connection dropouts and ways to address these issues with participants prior to interviews starting.

Two of the practice interview participants commented on my accent. Originally from the United Kingdom, I had not considered this would be an issue. Both participants did not have English as their primary language and found my Northern English accent and the speed of my speech difficult to understand in places. After an initial defensiveness considering my whole career had relied upon effective communication, I was able to reflect and understand the different needs of the participants in these interviews. In accordance with the guidance provided by Brinkman and Kvale (2015), which emphasises the central role of the interviewer as the principal instrument in qualitative inquiry, my approach was to furnish participants with sufficient information about the study to facilitate their comprehension and enable an informed response. To enhance clarity and engagement, I deliberately modulated my communication style, ensuring to articulate more slowly and distinctly.

Despite developing a semi-structured interview protocol, clarity in this area was needed. Maintaining the focus of the fundamental question stated in the research aim can, according to van Manen (1990), be confusing for beginner researchers. Difficulties emerge from allowing the method to lead the question rather than allowing the question to determine the method. Practicing and developing probes from this protocol served to develop a flow of conversation without allowing the interview to become too directed or structured. It was important that hermeneutic principles of interpretive phenomenology were upheld.

Reflecting on the practice interviews allowed personal insights into my own abilities as a research interviewer. My capabilities as an experienced managerial and clinical interviewer were not the same skill set needed for research interviews. I developed skills in listening as opposed to guiding, employing, as suggested by Tuffour (2017), an open-minded curiosity and empathy. I endeavoured to clarify my thinking to developing narrative text conversations rather than interviewing. I was also able, through recording and practicing transcription, to hear what the participant would hear and how language, accent, tone, and body language (for those interviews on Zoom) can affect the flow of the conversation. Whilst not having the ability to modify my language or accent, I was able to slow my speech and ensure that the participant felt comfortable to ask for me to repeat a question from the beginning of the interview.

As a consequence of the practice interviews, there were a small number of additions to the interview protocol that were suggested and approved by the Human Research Ethics Committee (HREC). There were also issues regarding the uploading of the files to NVivo12™ (Lumivero, 2020). These issues were addressed and resolved through the James Cook University (JCU) Information Technology (IT) department (2021).

Four of the eight interviews were conducted and recorded, without issue over the Zoom platform. Three interviews experienced internet/reception issues and were conducted via telephone and audio recorded onto a separate voice recorder. When a telephone interview is used instead of a Zoom interview, visual cues such as facial expressions, gestures, and eye contact—which provide additional context in qualitative data—are not available. To address these limitations, enhanced verbal probing, reflective listening and journaling, and attention to vocal tone and pauses were utilised to obtain detailed responses and maintain engagement.

Two of the interviews needed to be postponed from the initial date booked. The first was postponed twice, once due to sickness and then internet issues and the second due to internet issues. Interviews all commenced the same way. To help participants feel relaxed and open to sharing their stories, the PI began with a short introduction about their own background. They also encouraged participants to share a bit about themselves. In some cases, this conversation was informal, resembling a casual 'catch-up,' particularly when the participant and interviewer were already acquainted from the PI's previous work in Queensland.

Understanding the importance of this initial communication and in a bid to not let the 'recording button' function as a context marker (Brinkmann & Kvale, 2015), the recording was started before these introductions and 'chit chat' and would be addressed in the transcription phase. Social conversation to create a relaxed and trusting atmosphere is supported by Moustakas (1994), suggesting to the participant that the interviewer is both honest and supportive. Whilst the openness of each interview progression was unique in nature, as each participant recounted their story, sufficient direction assured requirements of the research topic were met (Smythe et al., 2008).

Interviews are described as the building of field text for data collection (Kahn, 2000). In hermeneutic phenomenology, interviews are an essential method of enquiry and can be prospective or retrospective in nature. van Manen (1990) describes them as a resource for developing a richer and deeper understanding through an experiential narrative. Whilst the basic elements of interviewing technique are similar across methods, there is potential for bias, misdirection, and misunderstanding. A corrective solution, according to Holstein and Gubrium (1995) is for the researcher to merely ask the questions properly, to emit the desired information.

The aim of the interview in this research was to construct an interaction between the interviewer and participant. It is acknowledged that this relationship is not an equal one. As the researcher, the PI defines and introduces the topic and then critically analyses the responses to these questions (Brinkmann & Kvale, 2015). However, learning the interviewer role means shaking off the pull to conversation and maintaining a managed 'push of inquiry' (Holstein & Gubrium, 1995). With a background of conducting structured managerial interviews and in a bid to avoid controlling the conversation, the PI adopted an interview protocol where semi-structured life world interviews allowed exploration and interpretation of the phenomenon being described (Brinkmann & Kvale,

2015). The technique employed was also practiced and modified during the practice interviews.

4.7 Data analysis

Phenomenological analysis begins at the start of data collection. The process in phenomenology nevertheless is much more complex than beginning and end. The analysis has been described as "moving between two metaphors" (Cohen et al., 2000, p. 71) from field text to narrative text. The latter presenting the researcher's understanding and interpretation of the data in the form of the findings of the study. As described in chapter 3, Husserlian phenomenology calls for reduction (bracketing) of any preconceptions or presuppositions to suspend the bias of the researcher (Knaack, 1984). Heideggerian phenomenology, however, describes a researcher's pre-understanding (fore-conception) as a structure of 'being-in-the-world' and not something that can be eliminated or bracketed. Indeed, this notion of pre-understanding is, according to Koch (1995) an inescapable portion of the hermeneutic circle.

Following completion of each interview and once assigned a pseudonym number, transcripts were generated from the recordings. For those undertaken on the Zoom platform, transcripts were automatically generated, voice recorder audio were transcribed through Otter.ai™. All interviews were uploaded to the PI's JCU secure OneDrive and an external hard drive for storage and into the NVivo™ platform (Lumivero, 2020). In this platform, the PI then read each transcript whilst listening to the recording. This process served two purposes; it enabled the PI to begin immersion into the data whilst identifying any contradictions and making any alteration as required to ensure concise and accurate data transcription. A number of errors in the transcripts were noted, especially around place names and colloquialisms. The reflective diary notes made during and following each interview were also referred to at this phase. These notes referred to any non-verbal communication and how this may have impacted on the spoken words, any background or environmental interference, internet issues that may have interrupted the conversation flow and any pertinent points that stood out. This process has been described as 'second abstraction' from the lifeworld conversation, the first abstraction being the recording of the interview (Brinkmann & Kvale, 2015). Poland (1995) also recognised the importance of the emotional and non-verbal context of an interview, suggesting that the audio alone does not make verbatim

transcripts. Only once this process had been completed were the transcripts considered verbatim.

Reflexive journal notes are, according to Braun and Clarke (2022), one of the most important aspects of a research journey, situating them as a repository for documenting and storing thoughts. A space, further suggested by Gerstl-Pepin and Patrizio (2009), for metacognitive reflection that enables others to ultimately engage in the researcher's interpretation of the data. Maintaining a reflective diary was a new concept and, whilst initially I needed conscious reminders to undertake the task, they soon became second nature and invaluable in not only the data collection and thematic analysis phases but in my journey as a researcher.

Reflecting on the transcripts alongside writing and re-writing enabled the commencement of theme identification from sententious through selective to a detailed approach, as recommended by van Manen (1990). I utilised a variety of methods in the documentation of theme development. These included utilising my reflective journal, the copy/transfer of significant text in the NVivo™ platform (Lumivero, 2020), handwritten index cards, post it notes and the development of concept maps. These steps are expanded upon in the thematic analysis phase.

4.8 Thematic analysis

Whilst van Manen's (1990) six step approach was utilised in applying a phenomenological methodology to this study, his distaste for coding and technology led (for reasons to be discussed further in this section) me to examine an additional appropriate fit for the thematic analysis process. van Manen suggests that theme coding is "an unambiguous and fairly mechanical application of some… coding of selected terms in transcripts" (1990, p. 78). In particular, Qualitative Data Analysis Software (QDAS) is an inappropriate way of doing phenomenology (van Manen, 2014). van Manen is not the only phenomenologist to warn researchers against the trappings of the perceived 'easy option' of QDAS: Heidegger suggests it as 'dehumanising' (1993): Morison and Moir propose the ease of 'code and retrieve' distances researchers from the data (1998, p. 115); Flusser and Matthews describe technology as a trick extending our reach (1999, p. 18); and lastly Goble et al. summarise QDAS as an obstacle to phenomenology affecting the researchers ability of "being in the world" (2012, p. 4).

The decision to challenge the thinking of these learned and purist phenomenologists, in particular Heidegger who commanded such a prolific role in the PI's phenomenology journey, was one of curiosity rather than arrogance. As discussed in the previous recruitment and data analysis sections, the use of technology in this research has been adopted for many reasons. Without technology, the reach of this research may have been restricted and as stated by Sohn (2017), a potential benefit which was difficult to ignore. It became evident therefore, that the use of QDAS for thematic analysis in this research was not the potential problem in relation to the chosen methodology; rather, the control over the choices being made by the PI within the context of the QDAS. Conclusions were also drawn by Davidson and Di Gregorio (2011) and Sohn (2017) who suggested that qualitative researchers are agentic actors in the choices they make to use a combination of software and manual methods of analysis. Indeed, Zamawe (2015) suggests that software packages are merely there to aid the analysis process, not analyse the data. As such, clarification of its use and related challenges will be described, showing congruence with van Manen's (1990) three step approach to isolating thematic aspects of phenomenology: the wholistic approach, the selective approach and the detailed approach.

The holistic approach was undertaken, as stated in the data analysis section, during interviews, reading, listening, and transcribing the interview data. Through this process, the PI was able to further immerse in the data and begin to formulate an overall understanding of the text (Cohen et al., 2000). Only once the transcripts were read and listened to several times and considered verbatim did the selective approach begin. Whilst moving on in van Manen's (1990) three step approach, it should be noted that this was not a linear process. van Manen's (1990) six research activities being followed in this study, in conjunction with the dialectic process of the hermeneutic circle (Gadamer, 2006) determined the fluid movement of moving back and forth between themes, sub themes and the text as a whole.

QDAS, utilised as an index system rather than a writing driver, facilitated organising data through nodes described by NVivo™ as containers for related material (Lumivero, 2020). Statements, phrases, and paragraphs were transferred into nodes, a process van Manen terms saving "rhetorical gems for developing phenomenological texts"(van Manen, 2014, p. 320). Figure 4.2 illustrates NVivo™ theme names linking quotes and concepts, with 'Education' as the overarching theme, segmented into sub-themes like 'barriers to education.'

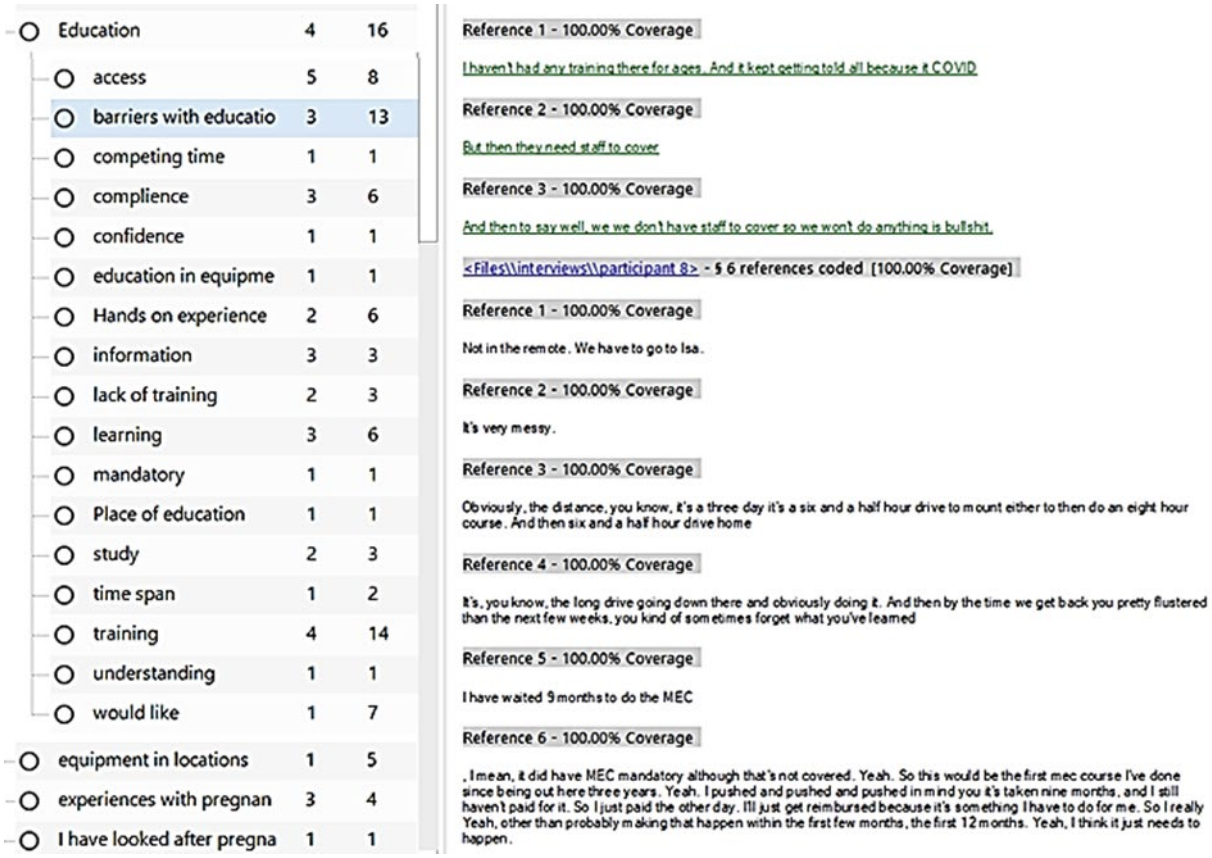

Figure 4.2 Developing meaning from text – Selective approach Round 1

This selective approach was completed for each transcript twice at this stage (concept runs) and was deemed round 1 in this approach. The second concept run, as suggested by Braun and Clarke (2022) was commenced in a different order to the first. New themes or sub themes were added as necessary, and I moved back and forth between transcripts making 'annotations' and 'memos'. There are several benefits to the NVivo™ program and its ability to link phrases, quotes, and concepts alongside these memos and annotations. In this study, maintaining an electronic dataset enabled ease of fluidity in data management and assisted in linking the PI's reflective diary notes, sharing data with the PI's advisory team, and providing an electronic audit trail.

In round 2 of the selective approach, an excel spreadsheet was produced transferring the concepts into a format that enabled ease of cross examination. Cross referencing to allow reference back to the transcript was enabled by writing the line from the transcript next to the concept. Having a visual representation of the concepts saved gave the PI a wider view of the data and highlighted where some participants were more vocal in areas than others. For instance, in the spreadsheet under the overarching initial theme of Education, sub theme Timeframe, comments were made from 3 of the 8

participants. Figure 4.3 below shows this from participant 5 onwards. The transcripts were re-read again at this stage in a bid to ensure that distinguishing diverse meaning was captured.

Line	Participant 6	Line	Participant 7	Line	Participant 8
43	Yeah, it can't be just all theoretical	41	I haven't had any training there for ages. And it kept getting told all because it COVID	20	It's very messy.
43	then they need staff to cover	42	But then they need staff to cover	44	Obviously, the distance, you know, it's a three day it's a six and a half hour drive to mount either to then do an eight hour course. And then six and a half hour drive home.
44	we don't have staff to cover so we won't do anyt	44	And then to say well, we we don't have staff to cover so we won't do anything is bullshit.	44	It's, you know, the long drive going down there and obviously doing it. And then by the time we get back you pretty flustered than the next few weeks, you kind of sometimes forget what you've learned
				67	I have waited 9 months to do the MEC
				44	It's taking staff away from the clinic
				32	Once at Mount Isa
		43	if they are not going to do the training more than yearly, then they need to come out and do scenarios	41	You know, we do it annually supposed to but that isn't always happening
				74	probably making that happen within the first few months, the first 12 months. Yeah, I think it just needs to happen

Figure 4.3 Developing meaning from text – Selective approach Round 2

The third approach informed the detailed line by line reading, where van Manen (2014) suggests the researcher asks the question, what does this reveal about the phenomenon? as they examine every sentence and concept saved. In round 1 of this approach, I examined each concept individually to illicit meaning from each sentence or sentence cluster in relation to identified themes. I looked for confirmation of relationship, any new ideas or conflict with initial themes identified. Figure 4.4 shows this process was done initially with the research team by using index cards, 'post-it' notes and butcher's paper.

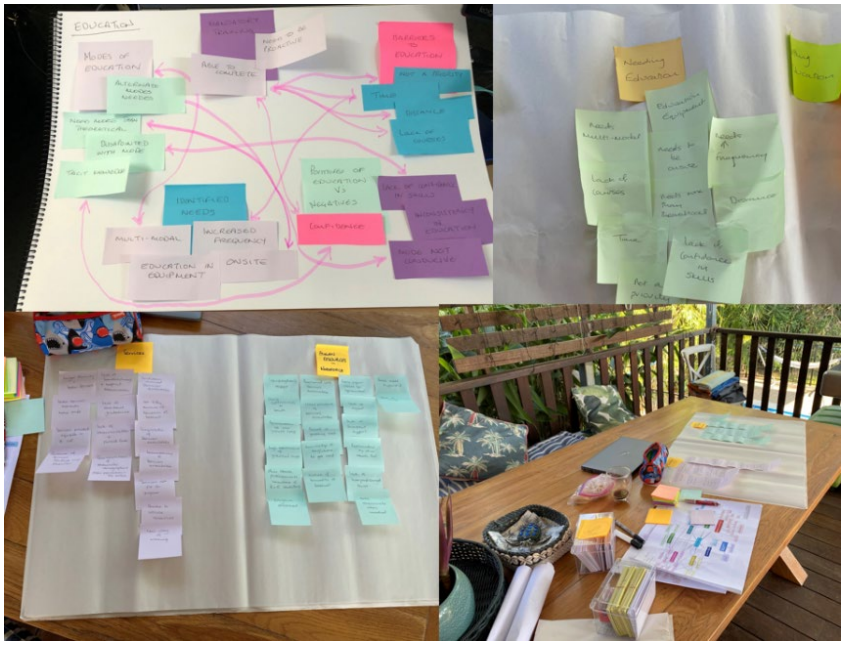

Figure 4.4 Developing meaning from text – Detailed approach Round 1

This process then moved onto round 2, theme generation over another 4 stages. Stage 1 started with 4 themes and numerous sub themes (as shown in Figure 4.5) and was refined through to stage 4 (as shown in Figure 4.6) with the final 3 themes and 7 sub themes. Throughout each of these stages, the process of moving forwards and backwards allowed for the identification and comparison of themes to a wholistic picture of the phenomena as an entirety. Cohen et al. (2000) describes this as the conversion of field text into narrative text.

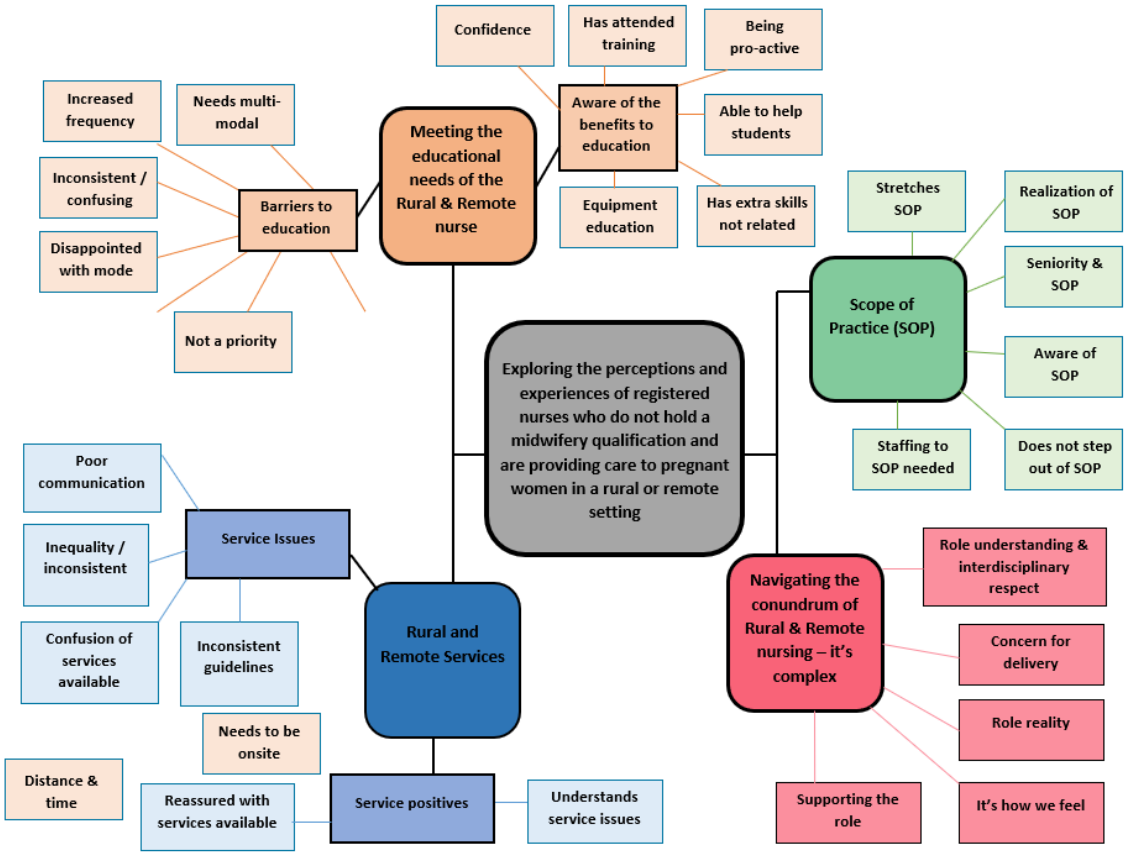

Figure 4.5 Developing meaning from text – Detailed approach Round 2, stage 1

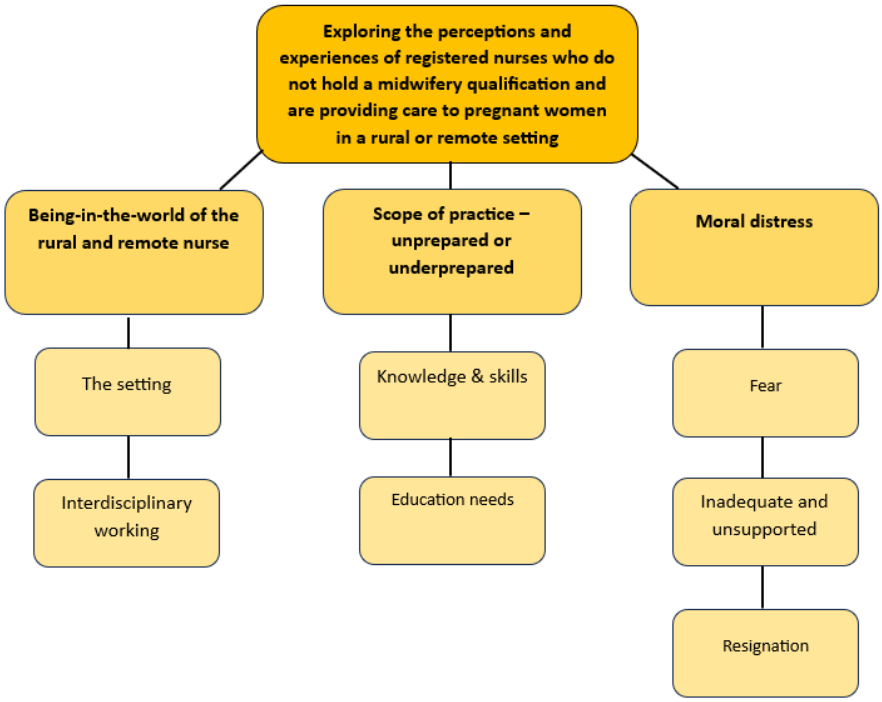

Figure 4.6 Developing meaning from text – Detailed approach Round 2, stage 4

These processes led to the identification of three themes and sub themes and can be seen in Table 4.1. Each of the themes and sub themes were named using interpretation of the data and, in some instances, using the participants' words. Whilst each theme is discussed separately in the coming chapters, they are all interwoven to represent my interpretation of the experiences and perceptions of nurses caring for pregnant women in a rural and remote environment in North Queensland.

Table 4.1 Theme generation stages

<table>
<tr><th colspan="4">Theme generation stages</th></tr>
<tr><th>Phase 1</th><th>Phase 2</th><th>Phase 3</th><th>Phase 4</th></tr>
<tr><td rowspan="2">Education:
Needing education

Getting education</td><td rowspan="2">Meeting the Educational needs of the R & R nurse</td><td>Barriers to education</td><td rowspan="11">Theme 1
Being-in-the-world of the rural and remote nurse
Sub themes
• The setting
• Interdisciplinary working

Theme 2
Scope of practice – unprepared or underprepared
Sub themes
• Skills and Knowledge
• Education needs

Theme 3
Moral distress
Sub themes
• Fear
• Inadequate and unsupported
• Resignation</td></tr>
<tr><td>Aware of benefits to education</td></tr>
<tr><td rowspan="2">R & R nurses</td><td rowspan="2">R & R services</td><td>Service issues</td></tr>
<tr><td>Service positives</td></tr>
<tr><td rowspan="6">R & R nursing:
The rural and remote nurse</td><td rowspan="6">Scope of practice</td><td>Stretches SOP</td></tr>
<tr><td>Does not step out of SOP</td></tr>
<tr><td>Realisation of SOP</td></tr>
<tr><td>Seniority & SOP</td></tr>
<tr><td>Aware of SOP</td></tr>
<tr><td>Staffing to SOP needs</td></tr>
<tr><td rowspan="5">Human resources</td><td rowspan="5">Navigating the conundrum of
R & R nursing</td><td>Role understanding & interdisciplinary respect</td></tr>
<tr><td>Concern for delivery of care</td></tr>
<tr><td>Role reality</td></tr>
<tr><td>It’s how we feel</td></tr>
<tr><td>Supporting the role</td></tr>
</table>

4.9 Methodological rigour

The validity of a phenomenological study lies in the uniqueness of the interpretation and accuracy of that process demonstrated in the findings (van Manen 2014). Providing rigour in qualitative research is not, according to Cohen et al. "stiff or linear but rather well examined or well explained" (2000, p. 95). Testing the preconceptions of the researcher through a rigourous inquiry began with a reflexive journey. Demonstrated throughout the study, the researcher has addressed and challenged any assumptions and beliefs. Rather than bracketing out researcher bias, as discussed in chapter 3, this study was borne from subjective motivation from the researcher. Critical regard of the influences the researcher may have on the study was managed, controlled and understood with the researcher moving beyond the data to offer an interpretation of the experiences.

Each decision made in the methodological process is presented in a transparent way that allows the reader to follow the journey. There were a number of strategies implemented to convey the rigour of this study. These included the use of purposive sampling with eligibility criteria, use of the researcher's prior knowledge of the population was to pursue those most likely to have experienced the phenomenon (Dyar, 2022) and interviewing continued until saturation had been achieved. Data analysis, concurrent with data collection, involved a lengthy, rigourous process. Intentionally moving back and forth between audio, transcripts, reflections and text, brought with it a deep level of immersion in the data and, as suggested by Dyar (2022), a multidimensional view of the phenomenon.

4.10 Conclusion

This chapter has presented the methods used in the interpretive phenomenological study of rural and remote nurses experiences and perceptions of caring for pregnant women. It has shown how van Manen's (1990) six-step method was used, alongside an adapted hermeneutic circle (Cushing, 2020; Gadamer, 2006) to guide the process. Methods of data collection and analysis along with ethical considerations were also discussed. The following chapter will introduce the participants and locations of this study.

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Chapter 5: Results - The participants and locations

As with the previous chapter, some discussion regarding methods undertaken will necessitate the use of first-person language.

5.1 Introduction

This study explored experiences and perceptions of Registered Nurses (RNs), who do not hold a midwifery qualification, providing care to a pregnant woman in a rural and remote setting. A void in the literature guided the researcher to a phenomenological methodology to understand the lived experiences associated with a previously unexamined phenomenon.

This chapter introduces the participants of the study and gives an overview of their personal and professional life in the context of the rural and remote backdrop. Details of the interview process and reflections from my diary leading up to, at the time of, and following the interviews will be outlined. Quotes will reference the transcript line, e.g., Line 12 will be written as L12. Secondly, an outline of the facilities where the participants were recruited from will be given to enable context to be drawn from the geographical locations.

5.2 Participant overview

Participants were purposively recruited from rural and remote facilities within one hospital and health service (HHS) in North Queensland. The facilities were specifically chosen due to their lack of maternity services. Additionally, all facilities were known to me from my previous work as a midwifery educator and the ad-hoc conversational debriefs that occurred because of this role. Whilst I had previously worked within this health service, at the time of this study there was no employment connection and therefore no potential for pressure to participate or any power imbalance between myself and participants.

Participant recruitment was initiated from information given via flyers (Appendix 7) posted in each facility and followed up with either Zoom™ sessions or telephone conversations organised with the Directors of Nursing. Nurses interested in participating were invited to contact me to arrange a suitable date and time for an interview to be conducted on the Zoom™ platform. Interviews were conducted over a two and a half month period.

There was a total of eight participants, seven female and one male, recruited and interviewed, representing four of the seven facilities within the targeted HHS. Due to the size of the HHS and facilities, it was felt that distinguishing between male and female participants would potentially threaten anonymity. Therefore, all participants were assigned a non-gender-specific pseudonym to uphold privacy and confidentiality. In conjunction with this, the pronoun 'she' will be used for all.

Three participants were already known to the principal investigator. Interviewing acquaintances can enhance trust, openness, and communication, often resulting in more detailed narratives. However, this familiarity also introduces notable pitfalls—participants may engage in "frame shifting," tailoring their responses to align with perceived expectations or shared history, which can obscure genuine insights into their lived experience (Aarsand & Aarsand, 2018). Such relational dynamics risk introducing inconsistencies, social desirability bias, or a lack of authenticity in the data, ultimately complicating interpretation and threatening the integrity of qualitative findings. Potential limitations inherent in the study were addressed through the implementation of a semi-structured interview protocol, triangulation of data as well as the principal investigator's engagement in reflexive practices to systematically identify and minimise potential biases.

Whilst phenomenological research does not set out to generalise findings, some demographic information was asked of the participants at the beginning of each interview. This information assisted in gaining context into the experience of the nurse in relation to the rural and remote setting and the lived experiences being explored. This information is shown in Table 5.1. Seven of the eight nurses interviewed had been practicing for 11 or more years, with three nurses having over 35 years of experience. The shortest length of time employed in a rural or remote facility was three years, with five participants working for eight years or over. Two participants had worked their whole careers in a rural or remote location. General nursing was consistent among all the participants, with four nurses practicing in more than one other nursing specialty. Two nurses had specialist experience in trauma and orthopaedics, two in paediatrics, and two had been nurse educators. Six of the participants held senior nursing roles.

Whilst the duration of interviews varied, I found that this was largely attributed to differences in participants' communication styles—some were more concise and direct in expressing their views, while others engaged in more conversational or reflective

dialogue. As such, the duration did not necessarily correlate with the quality of the data, as both shorter and longer interviews yielded valuable insights in their own ways.

Table 5.1 Participant information

Participant pseudonym	Has cared for a woman in labour	Has cared for a pregnant woman not in labour	Overall nursing exp (yrs.)	Rural & Remote nursing exp (yrs.)	Specialty nursing roles – other than general	Permanently lives at workplace with - partner / dependent children (no.)/Adult children (no.)
Riley	Yes	No	28	6	0	No / 0 / 1
Kai	No	Yes	12	8	1	No / 0 / 0
Ash	No	Yes	41	9	3	No / 0 / 1
Charlie	No	Yes	3	3	3	No / 0 / 0
Frankie	No	Yes	11	11	0	Yes / 2 / 0 Lives locally off workplace site.
Alexis	No	No	39	10	5	No / 0 / 2
Stevie	No	Yes	39	9	2	No / 0 / 2
Lesley	Yes	No	20	3	0	No / 0 / 0

5.2.1 Participant 1: Riley

Riley graduated as a RN in 1994. Riley had previously worked on a general nursing ward in a rural hospital that had Clinical Service Capability Framework (CSCF) (Queensland Government, 2018) Level 3 maternity services and as an RN at a number of Australian immigration detention centers caring for refugees. One of these centers provided birthing facilities. Riley has been in her current role for four months, lives alone in hospital accommodation and has one adult child that lives interstate.

I had been contacted by Riley's predecessor who had expressed an interest in partaking in the research as a participant. However, when further contact was not made over the coming month, I contacted the facility to speak with her. Riley advised that this person had left and that she had taken over the role. Riley also advised that she had actually

been intending to contact me as she had seen the research poster in the facility and asked for further information. Following a 30-minute telephone conversation where I gave her information about the study, Riley very enthusiastically expressed a desire to be part of the research. We made an appointment for a week later to conduct the interview over the Zoom™ platform.

I noted in my reflective diary that as this was my first participant interview and despite conducting practice interviews, I felt nervous. However, Riley showed no signs of being nervous or uncomfortable by her relaxed posture and welcoming demeanor. Riley communicated freely from the onset of the interview, requiring very few prompts. The interview lasted 27 minutes. Early in the interview Riley expressed that in a previous role she had been involved in a flight transfer of a pregnant woman. Riley said the fear she felt during this episode was suppressed until she started her current role. Riley appeared to have come to the realisation that working in a remote location was different to her previous roles and was keen to discuss these differences.

5.2.2 Participant 2: Kai

Kai graduated as an RN in 2010. After initially working on a medical ward in a tertiary hospital, Kai moved to a rural location eight years ago. During the last eight years she had held a number of different roles. Kai lives alone in hospital accommodation and has no children. Kai was the first participant to contact me after seeing the recruitment poster for this research displayed at the facility in which she was working. Kai expressed enthusiasm for participating in the research. She stated that in a previous position, she had discussed with the midwifery educator about the roles nurses take in caring for pregnant women in a rural and remote setting and was keen to share her experiences.

Kai contacted me via telephone and a Zoom™ interview was arranged for two weeks later. Kai appeared very relaxed and spoke freely about her experiences during the interview that lasted 33 minutes. There were no technical issues. Kai stated that her viewpoint was influenced from her experiences in education roles declaring *"I think coming from an education background for so long, I think you get a different perspective"* (L68). During the interview, this statement was expressed in several comments, but not all were related to the research topic. Therefore, it was necessary to intermittently utilise prompts to gently steer the conversation back to the research question.

5.2.3 Participant 3: Ash

Ash was the most experienced RN participant with 41 years of service since graduating in 1981. Ash trained overseas under a hospital-based training program and later completed a Bachelor of Nursing. Ash's nursing background was in general, trauma and orthopaedic nursing. She had been employed in senior nursing roles for the last 25 years. Ash lives alone in hospital accommodation and has one adult daughter that lives overseas. Ash and I had previously met during an education session that I was conducting. Having commonalities of both emigrating to Australia, we bonded over stories of challenges we had encountered in this process. Following this initial meeting, our paths crossed several times over the coming years, and we developed a friendly professional relationship. During our previous encounters, Ash expressed on many occasions that midwifery was not a career path she would ever venture down and these feelings were again evident in the interview.

Ash contacted me via email after receiving the information poster at the facility in which she worked. My initial contact with this facility was with another nurse who was relieving as Ash had been on leave. A Zoom™ interview was arranged for Ash's day off, which was four days later. Unfortunately, on the day of the interview the internet server at the facility was down. After trying to connect for 10 minutes, Ash telephoned me to let me know what the issue was and why I could not get through. We discussed either postponing the interview to another day, when hopefully there would not be internet issues or conducting the interview over the telephone. Ash was keen for the interview to go ahead that day, so I recorded the interview using a hand-held voice recorder with the speaker function on the telephone enabled, a technique that had been tested in the practice interviews.

During a 53-minute telephone interview, Ash's tone and clarity indicated confidence despite no visual confirmation. She strongly expressed her views on the research topic with minimal prompts needed. With years of experience in high-stress specialties, she considers herself highly skilled, saying, "*an absolutely fantastic nurse, I have got this huge armoury of skills within nursing*"(L9). However, she has a long-standing aversion to obstetrics due to the fear of litigation in that field, which began during her student days.

5.2.4 Participant 4: Charlie

Charlie was the least experienced nurse interviewed, graduating in 2019. Charlie had worked in rural and remote areas and in a number of specialist areas. Charlie currently

works in a remote location; she lives alone in hospital accommodation and has no children. Charlie has registered with a university to commence a postgraduate midwifery qualification and was very interested in partaking in this study when she saw the poster in her workplace. Charlie contacted me via email after attending one of the Zoom information sessions and we arranged an interview date and time for a later date.

During the 37-minute Zoom™ interview, Charlie was relaxed and very keen to share her experiences and perceptions. There were some prompts needed during the interview as the conversation veered towards midwifery as a profession rather than the research topic and it was evident that Charlie was very excited at the prospect of becoming a midwife in the future. Charlie believes that she feels more comfortable as a nurse looking after a pregnant woman because she had an interest in midwifery *"But I think I've always sort of had some what, you know, a liking to it…if you didn't have any liking to it, because a lot of people don't as nurses, it freaks them out"* (L81). Charlie wants to continue to work in a rural and remote setting after completing her midwifery degree.

5.2.5 Participant 5: Frankie

Graduating in 2011, Frankie has worked her whole career as a RN in the rural and remote environment. During this time, Frankie has worked in three of the sites within the chosen HHS performing many in-charge positions. She also had breaks from her career to raise her children. Currently Frankie lives with her partner and two children on a remote station. Frankie and I knew each other from previous education interactions, and she was aware of my interest in this topic. After seeing the information poster, Frankie contacted me and was very keen to be included in the research despite only currently working on a casual basis at one of the remote sites.

A Zoom™ interview date was set, however, on the day internet issues made it impossible to continue past a very brief introductory discussion. Therefore, another date was set for ten days later. The new interview date went ahead as planned. The interview lasted 71 minutes and we experienced some minor technical issues. The connection froze a few times and sped up when re-connecting. Despite these technical issues the flow of the conversation was only minimally affected. However, these issues, as well as some interruptions from one of Frankie's children, extended the interview time, making this the longest interview undertaken.

Of all the participants, Frankie needed the least amount of prompting within her interview. Having cared for a number of pregnant women throughout her career,

Frankie was very enthusiastic in her recollections, thoughts and feelings. She stated: *"over the course of my career out here I have looked after many, many, many pregnant women, I guess with complications mostly"* (L34). Frankie expressed concerns about having to care for pregnant women; however, she also discussed possible solutions for these encounters. She was passionate about the community in which she lived and worked and was keen to help me understand her experiences as a nurse, caring for pregnant women in a remote location.

5.2.6 Participant 6: Alexis

Alexis trained under a hospital system, graduating as an RN in 1983. She later obtained her post registration bachelor's degree. Alexis has always worked in adult nursing in varied specialties such as emergency nursing, orthopaedic, spinal, transplant and surgical. She has a strong history in triage nursing and has undertaken further education in this area. Alexis moved to rural and remote nursing 13 years ago and in that time has worked in various locations, both within the HHS for this study, and in other locations around Australia. During Alexis' time in the rural and remote setting she has worked as an RN, nurse in charge and DON (Director of Nursing). She is currently employed as a DON within the research HHS. Alexis lives alone, in hospital accommodation and has two adult children.

Alexis is known to one of the other participants (Stevie) and was informed of the research study by them prior to seeing the information poster herself. A conversation with the other RN, who had already agreed to be a participant, prompted Alexis to get in touch, which she did via email, and we arranged a suitable date and time for her interview. The first interview date needed to be rearranged as Alexis was unwell. Unfortunately, the second date arranged, two days later, there were internet issues. Subsequent to this, Alexis and Stevie both suggested that they do the interview together. Despite my initial reservations, both participants were keen for this to happen. From my knowledge of the other participants' career, I knew they had both worked in different locations so agreed this could be done.

On the arranged day of the interview, there were internet issues again. However, the interview went ahead as planned via telephone and was audio recorded. I was easily able to separate the transcript to identify answers from each participant. The interview lasted 28 minutes and there were very few prompts needed. Whilst unable to view both participants due to being a telephone conversation, they both spoke clearly without

apparent hesitation. It was clear that the participants were prompting each other as the conversation flowed freely.

Alexis is a very experienced nurse who, despite being DON in a remote location where there were pregnant women in the community, had never experienced caring for a pregnant woman. During the interview, Alexis spoke very passionately about never wanting to be put in a position that was outside of her scope of practice. She stated: "*I would have to seriously think if I was going to an area that had a lot of young mums. I don't know that I would accept [a job], with young mums. But the older people, chronic conditions, they're fine. Yeah, it would probably determine where I worked"* (L64).

5.2.7 Participant 7: Stevie

Stevie graduated from hospital training in 1983 as a RN and returned to complete her paediatric nursing a few years later. After working overseas for a number of years, Stevie returned to Australia and commenced working in the rural and remote location eight years ago. In that time, she has been employed as a paediatric nurse, a nurse educator and DON in a number of facilities within the targeted HHS and other rural and remote locations in Australia. Stevie is married and is currently employed as a contract nurse, mostly in DON roles for 12 weeks at a time and lives in hospital accommodation alone during these contracts. She has two adult children who live interstate.

Stevie contacted me via email after seeing the information poster in her place of work. Stevie was the other participant that was interviewed with Alexis. The group interview was done over the phone at their request, due to internet issues on the day. During the interview, Stevie was very comfortable speaking about her experiences and feelings about caring for pregnant women. As a previous educator, Stevie had worked alongside a midwifery educator and discussed, on numerous occasions, issues surrounding maternity care in the rural and remote environment. Stevie had also picked up on how conditions can affect women in pregnancy. She stated: "*I knew that UTIs [urinary tract infections] could bring on labour from working with the midwifery educator"* (L26).

As a previous educator, Stevie also had very strong thoughts about the delivery of education, particularly for maternity care in the rural and remote environment. She was very passionate about the need for multifaceted learning that encompassed both theoretical and practical components. Stevie was keen to share that despite attending theoretical education in maternity care, she did not feel any more comfortable when she had to care for a pregnant woman.

5.2.8 Participant 8: Lesley

Lesley graduated as a RN with a bachelor's degree in 2002. Following her education, Lesley worked in a medical ward of a tertiary hospital as a general nurse and moved to her current role as DON in a remote location three years ago. Lesley lives alone in hospital accommodation and has no children. Due to Lesley's position as the DON, I contacted her myself to inform her about the study. Working in a very small facility, there had been a telephone conversation about the study that did not warrant further information sessions. During this discussion, Lesley had expressed an interest in participating, and we had arranged an interview straight away.

The interview was conducted over the Zoom™ platform without any issues on the arranged date and time and lasted 22 minutes. During the interview, Lesley appeared very comfortable discussing her experiences and perceptions. Being relatively new to the rural and remote environment, Lesley had actively sought out education in maternity care. However, at times during the interview the conversation veered off track as Lesley, who knew my background, asked for pieces of advice about maternity care topics. Whilst wanting to help Lesley, I was also aware of the interview protocol. I was able to give minimal advice before gently guiding her back to the research topic.

5.3 Locations

This study was focused on seven facilities within one HHS that did not provide maternity birthing services. All these facilities were targeted for recruitment and four were represented by the participants. The fifth facility discussed in the results chapter represents the base hospital within the HHS. The geographical location of services is pivotal to the complexity of rural and remote nursing in this study. To enable a visual comparison to demonstrate this, the following maps have been drawn. Each map shows a driving distance starting and ending in the same place. Map 1 is located in Victoria and starts and ends in Melbourne as shown in Figure 5.1. Map 2, as shown in Figure 5.2, is located in the study area in Queensland and starts and ends with the base hospital (the red dot on the map). In Map 2, place names and the descriptor names (locations 1 - 7) of the areas in the study given below, have purposely been removed to maintain confidentiality and do not correlate with the represented location names (Locations 1 – 5) in the results themes of this study.

According to an AIHW (2019) report, the average available beds per 1,000 population for the location of Map 1 (Victoria) is around 2.75 and for Map 2 is around 2.7. Whilst these figures appear to meet the needs of the rural and remote population, what they fail to illustrate is the distances people need to travel to access a health service, bearing in mind that these may be a primary health clinic rather than a hospital and therefore with no maternity services. A study by Barbieri and Jorm (2019) calculated, using population-weighted averages, the travel time to a hospital for people in Map 1 to be between 0 and 1 ½ hours as opposed to Map 2 being between 1 ½ and 3 ½ hours.

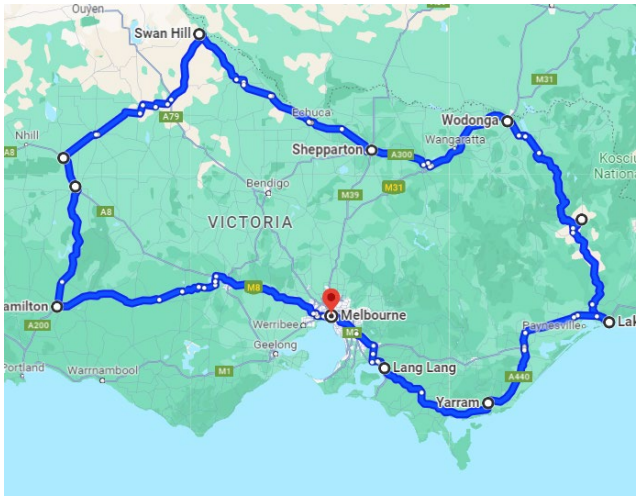
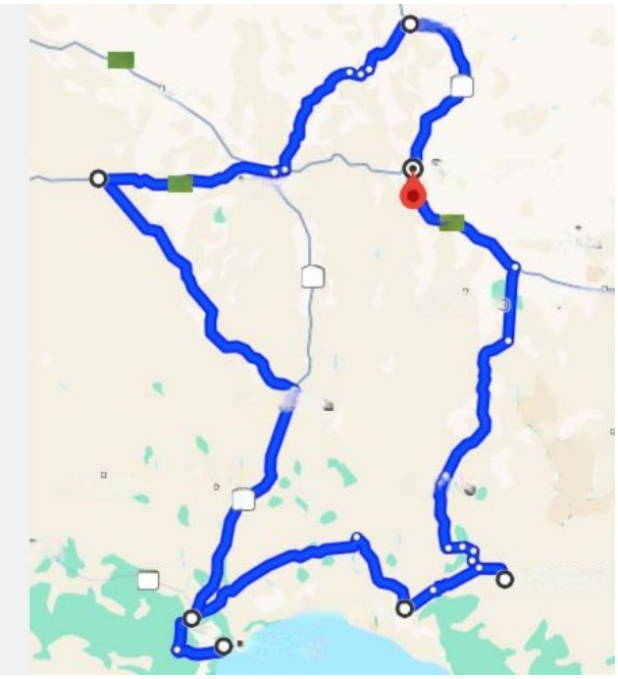


Figure 5.1 Map 1 in Victoria - 104,897 km2

Source: (Google Maps, n.d.-b)

In Map 1, the total distance travelled between each of the points in the image is 1792km. Within this area (periphery and internal) there are over 250 hospitals. There are 37 hospitals that provide birthing maternity services, 15 within the Melbourne inner city and 22 outside the city limits. Whilst it is difficult to estimate the population for the map area used, census data (ABS, 2023-24) indicates a population of 6,503,491 for the whole of Victoria.



Symbol	Meaning
White squares:	Road/highway names
Green rectangles:	Road/highway names
White circles:	Town names
Red dot:	Base hospital

All road and town names removed from map to protect participant anonymity.

Figure 5.2 Map 2 in Queensland - 112,014 km2

Source: (Google Maps, n.d.-a)

In Map 2, the total distance travelled between the points in the image is 1805km, similar to Map 1. Within this area (periphery and internal) there are seven facilities. These facilities demographics are shown in Table 5.2: three hospitals, one Multipurpose Health Service (MPHS) and three Primary Health Clinics (PHC). One of the hospitals provides birthing maternity services (base hospital, which was not included in recruitment) and one hospital provides ante-natal and postnatal maternity services only. One of the facilities (hospital) targeted is not represented on map 2 as it cannot be accessed via road. The HHS used for this study serves around 32,000 people.

Table 5.2 Overview of the facilities within the HHS from which participants were recruited

Location and service descriptor	1 PHC	2 Hospital	3 PHC	4 PHC	5 MPHS	6 Hospital	7 Hospital
CSCF maternity level	1	2	1	1	2	2	2
Staff numbers	3 including DON, RN and an AHW	18 including MO, DON, RNs ENs and AHW	2 including DON, AHW	3 including DON, RN and an AHW	8 including MO, DON and RN	15 including MO, DON, RN and AHW	16 including MO, DON, RN and AHW
Population serviced (number)	240	1250	190	550 increasing up to 3000 in winter	510	1400	1005
Percent identified as Aboriginal and/or Torres Strait Islander	40%	60%	60%	13%	4.8%	93.7%	88%
Visiting Services	Women's health, Cardiology, Endocrinology, Diabetes NP, Ophthalmology, Breast screening.	Women's & sexual health, Deadly ears, Diabetes, Mental health.	RFDS, Endocrinology, Cardiology, Child health, Women's health, Dentistry, Diabetes NP, Podiatry.	Women's health, Chest physician, Dietitian, Physiotherapist, Podiatrist, Mental health.	Aged care, Dental, Mental health, Optometry, Women's health, Diabetes.	Women's & sexual health, Maternal health, Deadly ears, Cardiology Diabetes, Mental health, Midwifery/ obstetrics, Paediatric Alcohol & drug counselling, Dermatology, Oral health, Speech therapy	Maternal health, Mental health, Diabetes, Dental.

Legend: RN (Registered Nurse); DON (Director of Nursing); AHW (Aboriginal Health Worker); NP (Nurse Practitioner); EN (Enrolled Nurse); MO (Medical Officer)

5.4 Conclusion

This chapter has provided a description of both the participants in this study and the locations they came from. Basic information surrounding each participant, including details of their recruitment to the study and subsequent interview was provided from data obtained directly from the participant and the researcher's journal notes. This information, alongside descriptions of the facilities in which they work, were given to add context to the information interpreted from the interview transcripts. The following chapter will discuss the phenomenological themes identified from these interview transcripts.

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Chapter 6: Results – Presentation of themes

As with previous chapters, some discussion will necessitate the use of first-person language.

6.1 Introduction

The key findings from this study have been published in the journal of Rural and Remote Health and the paper has been reproduced in this chapter in full. The decision regarding which examples to include in the publication was guided by both the number of instances supporting each theme and the strength of their contribution to thematic development. Many examples overlapped or conveyed similar insights, necessitating a selective approach to avoid redundancy while preserving analytical depth. For completeness, additional results, that were unable to be included in the published manuscript due to word count restrictions, will be presented at the end of this chapter. Consequently, there may be some slight repetition of the description of themes and subthemes, but this is needed to ensure clarity.

The full reference for the published paper is:

McElroy, M., Wicking, K., Harvey, N., & Yates, K. (2024). The experiences and perceptions of rural and remote nurses who provide care to pregnant women in the absence of midwives. *Rural And Remote Health*, *24*. https://doi.org/10.22605/RRH8721

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6.2 Publication

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ORIGINAL RESEARCH

The experiences and perceptions of rural and remote nurses who provide care to pregnant women in the absence of midwives

AUTHORS


Michelle McElroy* Graduate Certificate , PhD Candidate, Midwifery Lecturer * [https://orcid.org/0000-0001-7181-7649]


Kristin Wicking* PhD, Senior Lecturer [https://orcid.org/0000-0002-5996-6518]


Nichole Harvey[1] PhD, Associate Professor, nikki.harvey@jcu.edu.au [https://orcid.org/000-0003-0044-8860]


Karen Yates[1] PhD, Senior Lecturer

CORRESPONDENCE

*Ms Michelle McElroy michelle.mcelroy@jcu.edu.au

AFFILIATIONS

[1] Centre for Nursing and Midwifery Research, James Cook University, 1 James Cook Drive, Douglas, Qld 4811, Australia

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ABSTRACT:

Introduction: Maternity unit closures in rural and remote settings of Australia have left a substantial gap in services for pregnant women. In the absence of midwives, and when women are unable to attend a maternity facility, registered nurses (RNs) are required to fill the void. While maternity education can attempt to prepare RNs for such encounters, there is little documented to suggest it meets all their physical and psychological needs. The existing challenges for health professionals, practising a vast generalist scope of practice while living and working in a rural and remote location, have been well researched and documented. How nurses feel about the expectation that they work outside their scope of practice to provide maternity care in a rural and remote setting in Australia has not been asked until now. This study explores the perceptions and experiences of RNs who find themselves in this situation.

Methods: The study utilised a hermeneutic phenomenological methodology to examine the experiences and perceptions of rural and remote nurses providing care for pregnant women. RNs

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working in rural and remote health facilities that had no maternity services were recruited by a purposive sampling method. Semistructured conversational interviews were recorded and transcribed verbatim. Data analysis was guided by van Manen's analytical approach.

Results: Eight nurses participated, and from the data three themes, each with several subthemes, emerged: 'being-in-the-world of the rural and remote nurse' – described how participants viewed rural and remote nursing as an entity with unchangeable aspects that could not be considered in isolation; 'scope of practice – unprepared or underprepared' described how, despite their existing and extensive nursing skills, participants felt ill-equipped theoretically, practically and mentally to care for pregnant women; 'moral distress' – participants expanded their feelings of unpreparedness to include inadequacy, fear, and appropriateness of care delivery.

Discussion: The realism of rural and remote nursing practice demonstrates that at some point in their career, rural and remote nurses will care for a labouring and/or pregnant woman at high risk for complications. Participants in this study appeared open and honest in their interviews, displaying pride at their extensive nursing skills and job satisfaction. However, they were unanimous in their discussions of what being a nurse and providing maternity care in a rural and remote setting meant to themselves and to pregnant women. They suggested care was fragmented and inadequate from a workforce that is inadequately prepared and stressed.

Conclusion: This study has highlighted another concerning aspect of rural and remote midwifery care – the experiences and perceptions of eight nurses delivering care that has previously been overlooked. The united voice of the RNs in this study warrants a platform to speak from and deserves acknowledgement and attention from government and midwifery policy drivers. These nurses, and the women receiving their care, deserve more.

Keywords:

Australia, nurses, pregnancy, rural and remote nursing, rural maternity services, scope of practice.

FULL ARTICLE:

Introduction

Australia is a vast country with approximately 28% of the population residing outside of a major city[1]. In Australia, a model to help classify the remoteness of a location is the Modified Monash Model (MMM)[2]. This model has seven classifications, with MM2 (regional centres) to MM7 (very remote communities) considered to be rural and remote locations[2]. People residing in rural and remote locations have poorer access to health care, and nurses working in these settings play a crucial role, and are often the first point of contact, for people needing care[3].

In 2011, the Commonwealth of Australia produced the National Maternity Services Plan[4]. This report reviewed maternity services in Australia, highlighting inadequacies in access to, and choice of, maternity care for women living in rural and remote communities and made recommendations aimed at improving access and choice for these women. Despite these recommendations, there has been a staggering 43% closure of rural maternity services in Queensland over the past two and half decades, resulting in a decrease in access and choice for rural women[5]. Concomitant with the closure of rural maternity units is the expectation and associated stress placed on rural nurses to provide care to pregnant and labouring women.

Preparing nurses for these encounters will always be challenging and courses like CRANAplus and the Imminent Birth Program[6,7], developed to address these needs, help to improve remote area nurses' practical skills but do not focus on addressing psychological concerns. A remote area nurse's psychological wellbeing, under the additional stress of caring for pregnant women, has not previously been addressed in the literature, despite evidence showing that the state of a remote area nurse's health and wellbeing can positively or negatively affect the care they deliver[8,9]. The aim of this study was to provide an in-depth description of the lived experience of remote area nurses who cared for pregnant women in their role.

Methods

Design

Phenomenology, as applied in this context, serves as a methodological approach that facilitates a profound exploration of Heidegger's Dasein concept, 'being-in-the-world'[10]. The world in this context is that of the rural and remote nurse who must care for pregnant women or who live with the anticipation of having to do so in their role. Rooted in the philosophy of phenomenology, hermeneutics emphasises the interpretive nature and importance of understanding the 'lived experiences' within the broader context of meaning-making. The term 'lived experiences' refers to the first person; however, subjective encounters of being-in-the-world, such as a person's perceptions, feelings and interpretations of a phenomenon are equally important[11].

Acknowledging and embracing the four researchers' prior knowledge and pre-understanding of the rural and remote nurses' world, hermeneutic phenomenology recognises that researchers bring their own perspectives and interpretive frameworks to the study[10]. Two of the researchers for this study were RNs and midwives, one was a midwife only, and one was an RN only. Three of the researchers had worked in rural and remote locations in Australia. This acknowledgement is crucial in ensuring transparency and promoting reflexivity throughout the research process[12]. Reflexivity becomes a key methodological tool within hermeneutic phenomenology, allowing researchers to critically examine and address their own assumptions, biases and perspectives. By engaging in reflexive practices, researchers can navigate the subjective aspects of interpretation, contributing to a more nuanced and contextually rich understanding of the lived experiences of rural and remote nurses caring for pregnant women[11].

Recruitment

Purposive sampling was used for this study[13]. Nursing participants (who were not midwives) were recruited from a potential 12 healthcare facilities within one rural and remote Hospital and Health Service (HHS) in Queensland, Australia. Only facilities that did not provide maternity services were included (seven in total). A recruitment flyer was posted in each facility and follow-up information sessions via Zoom™ or telephone were conducted

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with the Directors of Nursing. Nurses interested in participating were invited to contact the primary investigator (PI) to arrange a suitable date and time to be interviewed.

Data collection and analysis

Three pilot interviews were conducted to refine the interview protocol developed by the research team. Semistructured interviews were conducted by the PI by Zoom or telephone and lasted between 22 and 70 minutes. Interviewing by Zoom or telephone offered the PI and participants convenience, efficiency, flexibility, cost-effectiveness and risk avoidance, during the COVID-19 pandemic. Open-ended questions (Table 1) allowed participants to describe their experiences or perceptions of caring for a pregnant woman. All ethical requirements were adhered to stringently, including obtaining informed consent from participants.

Interviews were audio recorded and transcribed verbatim by the PI, who also maintained a reflective journal during and following the interviews. The PI was immersed in the data, reading and re-reading the transcripts while concurrently listening to the audio to gain a deep understanding of the interview in its entirety[14]. The reflective journal notes were often referred to and built on during this phase. Reflecting on the transcripts alongside writing and re-writing, as suggested by van Manen[14], enabled the PI to recognise patterns in the data and commence theme identification. Reflective journalling, copying/transferring of significant text in NVivo v12 (Lumivero; https://lumivero.com/products/nvivo), handwritten index cards, Post-it notes, concept maps and team discussions were all used as valuable tools to aid in data analysis and theme generation. The PI and one other researcher independently coded the data, and all four researchers discussed the data and reached consensus on the final themes.

Table 1: Open-ended interview questions

1	Can you tell me if you have ever cared for a pregnant or labouring woman in a rural/remote facility without a midwife or obstetrician being there?
2	Can you tell me about that experience? ▪ Can you elaborate on that point? ▪ How did that make you feel? ▪ Did you get chance to reflect/debrief? ▪ What, if anything, could have been done differently?
3	If you have not actually cared for a pregnant or labouring woman in a rural/remote facility without a midwife or obstetrician being there, what are your perceptions and thoughts about providing that care? ▪ Can you elaborate on that point? ▪ What has made you feel that way?
4	Have any of these experiences and/or perceptions altered your practice? ▪ Can you elaborate on that point? ▪ What has made you feel that way?
5	Have any of these experiences and/or perceptions changed how you feel about remote area nursing? ▪ Can you elaborate on that point? ▪ What has made you feel that way?

Ethics approval

Ethics approval was received from Research and Ethics Committees of Townsville Hospital and Health Service (HREC/QTHS/66469) and James Cook University (H8464). Site-Specific Application of Governance was obtained for the seven facilities from the HHS in which data collection occurred.

Results

Participants and themes

Eight nurses were recruited and interviewed, representing four of the seven facilities (with no maternity services) within the targeted HHS. Data saturation was reached at interview 7 and one more interview was conducted to verify this. To protect anonymity and confidentiality, the four facilities were appointed as locations 1–4, and the maternity hospital in this HHS was termed location 5. All participants were assigned a non-gender specific pseudonym and the pronoun 'she' was used for all participants. Table 2 provides a demographic profile of participants. Three major themes were derived from the data: 'being-in-the-world of the rural and remote nurse'; 'scope of practice – unprepared or underprepared'; and 'moral distress'.

Table 2: Demographic profile of study participants

Participant pseudonym	Total years of nursing experience	Years of rural or remote nursing experience	Has cared for a pregnant woman in a rural or remote setting	Lives alone in hospital accommodation	Dependent children (no.)/ adult children (no.)
Riley	28	6	No	Yes	0/1
Kai	12	8	Yes	Yes	0/0
Ash	41	9	Yes	Yes	0/1
Charlie	3	3	No	Yes	0/0
Frankie	11	11	Yes	No	2/0
Alexis	39	10	No	Yes	0/2
Stevie	39	9	Yes	Yes	0/2
Lesley	20	3	Yes	Yes	0/0

Theme 1: Being-in-the-world of the rural and remote nurse

This theme reflects the complexities of living and working as a

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nurse in a rural and/or remote location. Interconnected and often unchangeable conditions, such as weather, long distances and lack of resources contributed to the intricacies of the nursing role. Within this theme, 'the setting' and the importance of 'interdisciplinary teamwork' were prominent.

Subtheme: The setting: The setting refers to the physical and psychological impact the geographical isolation of the health facility had on nurses who worked there. The rural and remote setting was often viewed as unpredictable and stressful by participants for myriad of reasons. Often necessary resources were long distances away, inaccessible because of poor weather or limited technology, and the nurse was often working on her own. While caring for a pregnant woman was not an everyday occurrence, for many in this study, the anticipation of it occurring was an added stressor. Within the rural context, the reality of long distances to a tertiary health facility played a significant role in creating additional stressors for rural and remote nurses, as supported by the following quotes.

> *Working in a remote setting, you don't know what's going to come through that door. (Lesley)*

> *... if I had any issues [in previous non-rural workplaces], I just go round to maternity to ask the NUM [Nurse Unit Manager] and all the midwives and they're awesome, but you just don't have that here (Riley). Because up here in [location 2], we have no birthing facilities and [location 1] doesn't either, so we fly them all out [aeromedical retrieval to a tertiary facility]. (Riley)*

> *You could get telehealth during the day on those computers, but how you'd move those computers around, it would be so impractical for if you were birthing ... You could ring the doctors there's no doubt about it. You could ring them but you were on the phone, you can't tell anybody what you're actually seeing. (Ash)*

Having little face-to-face access to help and advice, in the form of midwives or doctors, was also concerning for some participants. Frankie considered how the inconsistency of visiting midwifery services affected care in their setting:

> *It would have been good to have had access to a midwife in a place like [location 3] (Frankie) ... I think sometimes there was a midwife that came up to Medicare local, sometimes there was not. (Frankie)*

The setting also played a factor in some participants' ability to attend maternity training and education. Physically travelling to, and the availability, of training in the rural and remote workplace was limited or non-existent, which caused frustration and physical fatigue for some participants. Lesley offered a good suggestion for a more balanced approach to help alleviate the need for rural nurses to have to travel as much:

> *... we have to travel to [location 5] for each imminent birth course ... Obviously, the distance, you know, it's three days, a six-and-a-half-hour drive to [location 5], then do an eight-hour course and then six-and-a-half-hour drive home. It's taking staff away from the clinic, the long drive going down there and obviously doing it, and then by the time we get back you're pretty flustered. Then the next few weeks, you kind of sometimes forget what you've learned. ... some kind of physical hands-on in the place that you're working, so somebody's coming out to you rather than you go into a maternity ward. (Lesley)*

Subtheme: Interdisciplinary teamwork: When working in isolated settings and often on one's own, the importance of connecting with other healthcare professionals was seen as vital. It was evident, when talking with participants, the respect and understanding they demonstrated towards their interdisciplinary colleagues and the need to involve the interdisciplinary team early in the care of pregnant women:

> *So there's TEMSU [Telehealth Emergency Management Support Unit] and RFDS [Royal Flying Doctor Service]. We predominantly use RFDS in the first instance that anything is going wrong they need to be involved [as] they are the ones that are coming so we notify them first. (Lesley)*

> *... we were very inexperienced nurses [at the time], and obviously with no midwifery training but I just think because the RFDS doctor, and RFDS midwife were there we felt like we had, I guess, a bit of a safety net. (Frankie)*

For Charlie, having the support of her interdisciplinary colleague brought opportunities to learn and expand her own knowledge about caring for a pregnant woman:

> *It was actually funny that week, one of the local doctors had been talking about certain assessments, and he'd been talking about abdo [abdominal] assessments in particular, and we'd gone through it. And then this girl actually walked through the door, and I did a proper abdo assessment on her. (Charlie)*

Theme 2: Scope of practice – unprepared or underprepared

This theme explores the participants' experiences and perceptions of feeling underprepared to provide care to a pregnant woman. Subthemes that emerged were 'skills and knowledge' and 'education needs'.

RNs' scope of practice varies depending on their postgraduate qualifications, level of experience and endorsements. Some RNs are extremely experienced clinicians, but this does not mean they feel confident or are competent working in other disciplines, such as midwifery. Because of the close relationship between the disciplines of nursing and midwifery, there is at times an expectation that nurses can care for pregnant women as an extension of their nursing role. The nurses in this study felt underprepared and uncomfortable when these expectations were placed on them, despite being highly experienced RNs:

> *... as DON [Director of Nursing] and senior nurses, everyone expects you to know everything, and it's like well I'm only a registered nurse, like you, I haven't done the midwifery component. (Kai)*

> *... the doctors in [location 3], sometimes they would say, 'Do I need to come over' and you'd be like 'well, this is my assessment, and I'm a nurse' [not a midwife]. (Frankie)*

Subtheme: Skills and knowledge: This subtheme acknowledges that nursing in the rural and remote setting requires extensive generalist skills that often necessitate an extended scope of practice. Participants described both their transferrable existing skills and knowledge and the gaps they see in relation to caring for a pregnant woman. The confidence brought by knowing, even the

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bare minimum, was discussed by several participants. In their nursing roles, they are confident to critically analyse a situation:

> *You know, even when I get normal patients come through and I simply don't know, could be this or that, is ok if not life or death, but when it comes to babies or pregnant women you just think of complications. (Kai)*

> *... [the first time I saw someone] come through with a fishhook hanging out of them, I remember the director at the time going, oh, just look it up or google it, use the PCCM [Primary Clinical Care Manual]. You can fumble your way through that, you can't fumble your way through a birth or a pregnant mum. (Lesley)*

Knowing the basics of maternity care was seen as essential by Alexis and Lesley:

> *So you've got you know the basics, [and] for something where you really don't know the basics [like pregnancy], I wouldn't be comfortable. (Alexis)*

> *... I think it should be some kind of rotation or something you do before coming out here ... even if it's, I don't know, 4 weeks/3-month stint in maternity just to get your basics and have an idea. If you do some kind of rotation program in maternity, then you do learn all these basics of what's normal and what's not. (Lesley)*

Alexis summed up the experience needed to care for a pregnant woman in a rural and remote location when she discussed junior nurses' perceptions:

> *... they don't know enough to know that they're not safe. They're seeing it as just a clinic, they're not seeing the potential of [maternity] issues that can happen. (Alexis)*

Being questioned on their skills and knowledge by healthcare colleagues was confusing for some participants to know what they should and should not do as an RN. Some colleagues were expecting them to have maternity-type skills, whereas other colleagues were not.

> *... the doctor told her [the pregnant woman] to come in and you [the RN] would listen to the [baby's] heartbeat. (Ash)*

> *You do hear comments like, you're not supposed to do that [listen to a foetal heart] because you're not a midwife. I think there is a little bit of a blurred SOP [scope of practice] boundary there, whether you are supposed to do them as an RN. (Frankie)*

To extend their skills and knowledge, many rural and remote nurses undertake extra education, and some obtain certification as a Rural and Isolated Practice Endorsed Registered Nurse (RIPERN).

Kai described the implications of the skills within her extended scope when caring for a pregnant woman in her rural health facility:

> *You know if they're sick or whatever then I've got to be conscious of prescribing something to her as a RIPERN, is it going to affect the baby. (Kai)*

She also spoke about pushing her skills even further, recalling a time when she had been involved in a neonatal resuscitation:

> *... I've never resus'd a child let alone a baby, so I think even though I've got the [theoretical] knowledge of resusing a baby ... it's still different. (Kai)*

Subtheme: Education needs: This subtheme reflects the educational needs of rural and remote nurses and the challenges they face in accessing and attending education related to looking after a pregnant woman, and how this affects their skill acquisition, maintenance, and confidence. Five participants completed the imminent birth training program[15], designed specifically for nurses in rural and remote contexts and found it very useful:

> *I have done imminent birth, you kind of get a general idea of things that can go wrong. (Lesley)*

Attending the Maternity Emergency Care (MEC) course was seen as a priority by Lesley. However, she was having difficulty getting access to the course in a timely manner, despite her desire to better prepare herself. Another participant confessed to feeling overwhelmed with choices and not knowing which maternity course was best to do:

> *I have waited 9 months to do the MEC. (Lesley)*

> *There's a heap of stuff out there. It's just knowing what's important. What's the best [maternity] education package to look at? (Riley)*

Most of the participants felt, even when they received education in maternity care, the education delivery was not meeting their needs:

> *There's [more than] one way you can educate people and do courses. Someone can come to the hospital and have tools, things like that, you can watch videos, you can do it at home yourself or through a hospital. But I really feel strongly, for practical work, experience would be the best way to equip people with education being more hands-on. (Frankie)*

> *... perhaps more practical education in the [maternity] equipment. (Charlie)*

> *I think the [maternity] scenarios need to be activity based; it can't all be theoretical, practical courses need practical components. (Alexis)*

> *The practical [maternity] courses, I think needs practical components ... The last training, I had was on teams. I remember this drug, I remember this thing [aspect of care]. But it's like, I don't know how I'd be in the emergency. I thought it was put too much on [Microsoft] Teams. (Stevie)*

> *I think more hands-on [in maternity] kind of stuff. (Lesley)*

Theme 3: Moral distress

This theme explores the moral distress displayed by participants in this study because they felt pregnant women were not receiving appropriate care. Moral distress or injury is when ineffective care, lack of knowledge and lack of support[16] threaten deeply held beliefs and trust[17]. Being unable to fulfil a fundamental ethical principal, 'do no harm', led to moral distress for nurses in this study[18]. The nurses reflected on their professional accountability and appropriateness of the care they delivered. Subthemes that emerged were 'fear', 'inadequate and unsupported' and 'resignation'.

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Subtheme: Fear: This subtheme reflects the fear nurses felt when they cared for a pregnant woman, or the anticipated fear associated with having to provide care in the future. All participants in the study, irrespective of their level of nursing experience in the rural and remote context, displayed, through verbal expressions and body language, a level of fear and anxiety in relation to caring for a pregnant woman:

> *I was a nervous wreck in case anything went wrong ... that was terrifying now that I think about that experience. (Riley)*

> *... it was the premmy [premature] birth, and what could happen with this tiny little baby and that was a bit scary more so than the actual labour process ... I remember she was bleeding so much ... And I remember being so scared for her because she was so scared ... It is very scary, especially when there's no doctors around that's when it's really, really scary ... it gets really complicated really, quickly and that's what I think was the scariest thing. (Frankie)*

While many of the participants had not actually experienced caring for a pregnant or labouring woman, their feelings about this being a possibility were evident in their interviews. Ash very strongly voiced her feelings about maternity care:

> *I sat there for 10 hours going through it [imminent birth training], I thought I was going to throw up. (Ash)*

> *I think the only time I ever think about litigation is obstetrics. (Ash)*

Likewise, Alexis and Lesley displayed strong feelings of anxiety at the thought of caring for a pregnant woman, and the potential reasons behind some of their fears:

> *You know, everything just clenches because you're like, what could happen? ... I think that I'd be vomiting. (Alexis)*

> *I've experienced myself with labours that have gone wrong from my own births ... I suppose it's the thought of being out here on your own if something did go wrong, just how devastating that that would be ... So the thought of a mum labouring here in [location 3] terrifies me ... Your biggest fears obviously, that of the unknown ... So, anything to do with midwifery I do get nervous about because I'm not comfortable with that ... I get nervous about what you don't know when that's not your area ... it is one of my biggest fears. (Lesley)*

While Lesley had not experienced a pregnant woman in labour herself, her anxiety had developed from hearing about the experiences of others in her remote setting:

> *Just before I came here, was the last birth where the mum couldn't wait ... she actually birthed in the clinic and she's pregnant [again] at the moment. So that does make me quite nervous. (Lesley)*

Kai's anxiety stemmed from the pressure of her senior role and potential consequences:

> *... being the most senior on shift I need help with this [caring for a pregnant woman] I'm not comfortable because it's not something I've done or really have any interest in ... it is a little bit daunting as well, and you don't want to do the wrong thing ... I think a little bit anxious you know you're not only caring for the sick mum, but you've got to be also mindful of the child ... I think the pressure of having to know lots of stuff is quite hard and it feeds my anxiety as well. (Kai)*

Subtheme: Inadequate and unsupported: This subtheme examines how the participants, despite their extensive knowledge and scope in the field of nursing, felt inadequate, unsupported and alone in providing care to a pregnant woman.

Most participants felt inadequate when having to provide care to a pregnant woman:

> *I think you are talking to the worst person in the world with regards obstetrics, women would be better off coming in to see the cleaner than me. (Ash)*

> *She came in and she said to me, the doctors told me I've got to come in you've got to listen to my baby's heartbeat ... So, I thought well, where am I going to look for this baby's heartbeat? because I don't know ... they [the parents] didn't notice that I didn't know what I was doing ... eventually I found it [the foetal heartbeat] and it took me 25 minutes. (Ash)*

> *I'm not a midwife trained and no mid experience ... it's just fill in gaps and fumbling along, so not really doing everything that they need done. (Lesley)*

> *Not really knowing about what is suitable for pregnant ladies and things like that. (Kai)*

> *You know, if I didn't know that I didn't know enough, I'd probably be clueless and fine, but I know I don't know enough. (Alexis)*

The feelings of inadequacy for Frankie involved concern for the pregnant women:

> *I just think that I like to be able to give people [pregnant woman] the best chance that they have to be healthy ... If I'd done four weeks on a maternity ward, I would have felt a little bit better about looking after these patients. (Frankie)*

Riley discussed the issue of support, suggesting it needed to be accessible and consistent:

> *Somebody out there specifically for the remotes, it's not just you pick up a midwife that's on shift who might, you know, either know, or have something different to the person that you talked to last week ... just having that person out there to contact it'd be good to have a support person or group where we can just tap into. (Riley)*

> *I don't want to be at this hospital anymore [on my own] I just felt no support. (Frankie)*

> *We are kind of on our own. (Lesley)*

Subtheme: Resignation: This subtheme displays the participants' understanding of the realities of working in a rural and remote setting and how this affects the care they are able to deliver. They appeared to be resigned to the fact they would have to care for a pregnant woman, and when that happens, they would do the best they could with the knowledge and skills they had. This did not mean they wanted to be a midwife or would enjoy the experience, but they knew their professional integrity and their desire to help others would mean they would do what was necessary, despite

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feeling afraid or distressed by the situation:

> *I don't like obstetrics; the enormity of the responsibility hits me. But it doesn't mean that I couldn't guess, I would cope though I wouldn't enjoy it. (Ash)*

> *... I mean, you do what you have to do. (Lesley)*

> *I think I just like to be able to give people [pregnant women] the best chance that they have to be healthy. (Frankie)*

> *I think, going in these remote hospitals, there's such a high staff turnover that you are often nurse in charge at such a very young [sic] time in your career ... the doctors are changing every week as well. These communities need continuity ... because I guess it is all about putting the right person [a midwife] in the right job. And I guess the funding is that big, big word. (Frankie)*

Discussion

The aim of this study was to investigate the experiences and perceptions of rural and remote nurses, who are not midwives, when caring for pregnant women. Rural and remote maternity unit closures have prompted research that has been focused mainly on maternity service provision[19,20] and maternity choice for women[21,22]. This is the first article to present a new perspective on rural and remote maternity services from the explicit voices of the nurses who are providing care in the absence of midwives.

The specific, unique and complex nature of rural and remote nursing found in this study supports previously published research[23,24]. The geographical location has formerly been shown to be professionally isolating[6] and this was also highlighted in this study. Participants discussed the negative impact of the setting on communication with, and support from, colleagues in the specialty of midwifery when assistance was sought. The physical distances involved in working rural and remote was identified by some participants as a hindering reality. Travelling long distances to attend education incurred expense and affected the quality of skill acquisition and caused issues with covering leave, all points previously identified in the research[7,25,26].

The findings of this study show the professional teamwork displayed by the participants and their respect for colleagues. As described in previous research, interdisciplinary practice is essential in the rural and remote setting[23,27]. Participants in this study acknowledged the high levels of skills and knowledge provided by the interdisciplinary team that they needed to access for advice and learning opportunities. Perinatal statistics show the occurrence of women birthing outside a maternity facility, rising from 702 in 2013 to 1856 in 2021[28] confirming the reality of nurses potentially caring for a pregnant or birthing woman[20]. Feeling underprepared for such events was a significant concern conveyed by the participants in this study. As described previously in the literature, the existing generalist nature and extended skills required by the rural and remote nurse[8,29] was also echoed by some of the participants. However, the participants did not believe the implications and applicability of these skills extended to pregnancy care, a sentiment consistent with previous findings[30]. Despite acknowledging the boundaries of their scope of practice, participants disclosed they felt compelled to work outside their scope to try and meet the needs of pregnant women, when no one else was available. This attitude is supported in the literature[8,27,29].

Rural and remote nursing often brings advancement into senior roles and a subsequent increased accountability for nurses much sooner than for their metropolitan counterparts[8]. Corresponding with other research[31], a number of participants in this study referred to there being a misalignment between their knowledge and skills and the position they hold within the service, particularly in relation to caring for pregnant women. Participants' confidence in acquired and transferrable skills did not always relate to competence when caring for a pregnant woman, a finding concurred with in other studies[29,32].

Acquisition and maintenance of maternity skills was an area where all participants in this study felt improvements could and should be made. Acknowledgement of the need for maternity education was in agreement with previous research[7,8,33-35]. However, while grateful for the availability of maternity courses[15,30,36] participants in this study felt their educational needs were not met due to difficulties with accessing courses and inappropriate modes of delivery. While these findings were not in themselves new[3,6,9,35], participants in this study overwhelmingly felt that hands-on practice and face-to-face learning was imperative for preparedness and capability in this area.

The participants in this study displayed feelings of anxiety, fear and inadequacy when discussing care of pregnant women. Research in Canada, despite the nursing education system differing significantly from that in Australia, found similar feelings from nurses and an underlying 'fear of a pregnant woman'[37,38]. There were compelling feelings displayed by participants, both in their verbal responses and in their body language, towards maternity and obstetrics that went beyond the actual experiences to the perceived complications. However, despite feeling scared and underprepared, participants displayed a sense of professional resignation and acceptance for rural and remote nursing.

Although considerable research has explored nursing and midwifery in rural and remote Australia[8,39], none has been conducted specifically from the viewpoint of the nurse providing care to pregnant women. The focus for the future provision of rural and remote midwifery services needs to be policy driven and woman focused. However, current care delivery being provided by nurses needs to be acknowledged and addressed through research into maternity education delivery and fitness for purpose. Practitioners providing this care need to be listened to when they say 'there is more than one way to educate but practical courses need practical components' (Frankie). The added stressor of caring for a pregnant woman, brought to an existing extensive list for rural and remote nurses[8,25,40], cannot be ignored in a climate where nursing recruitment to a rural and remote location is failing[41,42].

Study limitations

Despite being sufficient for phenomenological research, the small study size gives a detailed yet HHS-specific view of rural and remote nurses, so it is possible that nurses in other rural and remote locations throughout Australia may have different experiences from the participants in this study. Conducting interviews by Zoom and telephone became necessary because of COVID-19 restrictions. Despite this limitation, all participants were comfortable being interviewed in this way and appeared to speak freely. Research into the use of Zoom technology for qualitative data collection found benefits of convenience, efficiency, flexibility

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and cost-effectiveness and no difference in quality of data[43].

Conclusion

Midwifery services in rural and remote Australia are diminished and inadequate. The findings of this study highlighted three key themes: 'being-in-the-world of the rural and remote nurse', 'scope of practice – unprepared or underprepared' and 'moral distress'. Nurses elaborated on the complex nature of working in a rural and remote setting and the associated isolation. Nurses spoke of feeling stressed, fearful, inadequate, lacking in knowledge and skills, and working outside their scope of practice, in relation to caring for a pregnant woman. Acknowledging nurses' fears and addressing their concerns will better support them in their complex role. Recognition for the significant contribution rural and remote nurses make to the care of pregnant women should be given.

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Conflicts of interest

The authors report no conflicts of interest.

REFERENCES:

1 Australian Bureau of Statistics. *Regional population.* Available: web link (Accessed 1 September 2023).

2 Australian Institute of Health Welfare. *Rural and remote health.* Canberra: Australian Institute of Health Welfare, 2022. Available: web link (Accessed 24 August 2023).

3 Lenthall S, Wakerman J, Dollard M, Dunn S, Knight S, Opie T, et al. Reducing occupational stress among registered nurses in very remote Australia: a participatory action research approach. *Collegian* 2018; **25(2):** 181-191. DOI link

4 Commonwealth of Australia. *National Maternity Services Plan.* Canberra: Australian Health Ministers' Advisory Council, 2011.

5 Kildea S, Gao Y, Rolfe M, Josif C, Bar-Zeev S, Steenkamp M, et al. Remote links: redesigning maternity care for Aboriginal women from remote communities in Northern Australia – a comparative cohort study. *Midwifery* 2016; **34:** 47-57. DOI link, PMid:26971448

6 CRANAplus. *Factors effecting engagement or disengagement for rural nurses: a literature review.* Adelaide: CRANAplus, 2016.

7 Connell J, Kelly J, Nagle C. Imminent birth education for rural and remote settings: an evaluation study. *Australian Journal of Rural Health* 2019; **27(5):** 405-411. DOI link, PMid:31334900

8 Adams M, Lazarsfeld-Jensen A, Francis K. The implications of isolation for remote industrial health workers. *Rural and Remote Health* 2019; **19(2):** 5001. DOI link

9 Warburton J, Moore M, Clune S, Hodgkin S. Extrinsic and intrinsic factors impacting on the retention of older rural healthcare workers in the north Victorian public sector: a qualitative study. *Rural and Remote Health* 2014; **14(3):** 2721. DOI link, PMid:25160873

10 Harman G. *Heidegger explained: from phenomenon to thing.* Chicago: Open Court Publishing. 2007.

11 van Manen M. *Researching lived experience: human science for an action sensitive pedagogy.* Albany: State University of New York Press, 1990.

12 Zhongwei LI. Husserl on intentionality as an essential property of consciousness. *Frontiers of Philosophy in China* 2014; **9(1):** 87-108.

13 Mapp T. Understanding phenomenology: the lived experience. *British Journal of Midwifery* 2008; **16(5):** 308-311. DOI link

14 van Manen M. *Phenomenology of practice: meaning-giving methods in phenomenological research and writing.* Walnut Creek: Left Coast Press, 2014.

15 Queensland Health Clinical Excellence Queensland. *Imminent Birth Education Program.* Queensland Government, 2020. Available: web link (Accessed 14 June 2020).

16 Salari N, Shohaimi S, Khaledi-Paveh B, Kazeminia M, Bazrafshan MR, Mohammadi M. The severity of moral distress in nurses: a systematic review and meta-analysis. *Philosophy, Ethics, and Humanities in Medicine 2022;* **17(1):** 13. DOI link, PMid:36348378

17 Williamson V, Murphy D, Phelps A, Forbes D, Greenberg N. Moral injury: the effect on mental health and implications for treatment. *The Lancet* 2021; **8(6):** 453-455. DOI link, PMid:33743196

18 Čartolovni A, Stolt M, Scott PA, Suhonen R. Moral injury in healthcare professionals: a scoping review and discussion. *Nursing Ethics* 2021; **28(5):** 590-602. DOI link, PMid:33427020

19 Tran T, Longman J, Kornelsen J, Barclay L. The development of a caseload midwifery service in rural Australia. *Women and Birth* 2017; **30(4):** 291-297. DOI link, PMid:27931780

20 Barclay L, Kornelsen J. The closure of rural and remote maternity services: where are the midwives? *Midwifery* 2016; **38:** 9-11. DOI link, PMid:27046265

21 Dahlen HG, Ormsby S, Staines A, Kirk M, Johnson L, Small K, et al. A comparison of the Woman-centred care: strategic directions for Australian maternity services (2019) national strategy with other international maternity plans. *Women and Birth 2023;* **36(1):** 17-29. DOI link, PMid:35430186

22 Fawsitt CG, Bourke J, Greene RA, McElroy B, Krucien N, Murphy R, et al. What do women want? Valuing women's preferences and estimating demand for alternative models of maternity care using a discrete choice experiment. *Health Policy* 2017; **121(11):** 1154. DOI link, PMid:28965792

23 Smith J. *Australia's Rural, Remote and Indigenous health.* 3rd edn. Philadelphia: Elsevier, 2016.

24 CRANAplus. *Framework for remote and isolated practice.* 2018.

25 Kidd T, Kenny A, Meehan-Andrews T. The experience of general nurses in rural Australian emergency departments. *Nurse Education in Practice* 2012; **12(1):** 11-15. DOI link, PMid:21621463

26 Terry VR, Graham CJ, Rogers C, Craigie M, Hegney DG, Rees CS, et al. Building resilience among rural and remote nurses in Queensland, Australia. *Collegian* 2020; **27(3):** 265-270. DOI link

27 Parker V, McNeil K, Higgins I, Mitchell R, Paliadelis P, Giles M, et al. How health professionals conceive and construct interprofessional practice in rural settings: a qualitative study. *BMC Health Services Research* 2013; **13(1):** 500. DOI link, PMid:24289815

Intentionally Blank

28 Australian Institute of Health Welfare. *Australia's mothers and babies.* Canberra: Australian Institute of Health Welfare, 2023.

29 Whiteing N, Barr J, Rossi D. The practice of rural and remote nurses in Australia: a case study. *Journal of Clinical Nursing* 2022; **31(11-12):** 1502-1518. DOI link, PMid:34396616

30 Kildea S, Kruske S, Bowell L. Maternity emergency care: short course in maternity emergencies for remote area health staff with no midwifery qualifications. *Australian Journal of Rural Health* 2006; **14(3):** 111-115. DOI link, PMid:16706879

31 Wakely L, Wolfgang R, Wakely K. Powerless facing the wave of change: the lived experiences of providing services in rural areas under the National Disability Insurance Scheme. *Rural and Remote Health* 2019; **19:** 5337.

32 Noone DJ. Review of 'The Silent Dialogue: A study in the social psychology of professional socialization'. VL Olesen and EW Whittaker. *Journal of Health and Social Behavior* 1969; **10(2):** 154-155. DOI link

33 Lea J, Cruickshank M. The support needs of new graduate nurses making the transition to rural nursing practice in Australia. *Journal of Clinical Nursing* 2015; **24(7-8):** 948-960. DOI link, PMid:25345730

34 Smith T, McNeil K, Mitchell R, Boyle B, Ries N. A study of macro-, meso- and micro-barriers and enablers affecting extended scopes of practice: the case of rural nurse practitioners in Australia. *BMC Nursing* 2019; **18(1):** 14. DOI link, PMid:30976197

35 McElroy M, Wicking K, Harvey N, Yates K. What challenges and enablers elicit job satisfaction in rural and remote nursing in Australia: an integrative review. *Nurse Education in Practice* 2022; **64:** 103454. DOI link, PMid:36162301

36 Connell J. Imminent Birth Education Program. *Australian Nursing and Midwifery Journal* 2018; **26(1):** 46.

37 MacKinnon KA. Labouring to nurse: the work of rural nurses who provide maternity care. *Rural and Remote Health* 2008; **8(4):** 1047. DOI link, PMid:18950253

38 Brewer C, Ranse J, Hammad K, Hutton A. Experiences of rural and remote nurses during and following disasters: a scoping review. *Rural and Remote Health* 2022; **22:** 7230. DOI link, PMid:36315959

39 Smith S, Sim J, Halcomb E. Australia's rural hospital nurses. *Australian Nursing and Midwifery Journal* 2018; **October:** 46.

40 Paliadelis P, Parmenter G, Parker V, Giles M, Higgins I. The challenges confronting clinicians in rural acute care settings: a participatory research project. *Rural and Remote Health* 2012; **12(2):** 2017. DOI link, PMid:22803581

41 National Rural Health Commissioner. *National Rural and Remote Nursing Generalist Framework.* Australian Government, 2022.

42 Australian Institute of Health and Welfare. *Health workforce.* 2022. Available: web link (Accessed 12 September 2023).

43 Archibald M, Ambagtsheer R, Casey M, Lawless M. Using Zoom videoconferencing for qualitative data collection: perceptions and experiences of researchers and participants. *International Journal of Qualitative Methods* 2019; **18.** DOI link

6.3. Additional data supporting themes and sub-themes

The above paper published in the Rural and Remote Health journal highlighted the key themes and sub-themes of this study, as seen in Table 6.1. For completeness, additional data relevant to each theme will be presented below so that a comprehensive picture can be painted.

Table 6.1 Key themes and sub-themes

Themes	Sub-Themes
Being-in-the-world of the rural and remote nurse	▪ The setting ▪ Interdisciplinary teamwork
Scope of practice – unprepared or underprepared	▪ Skills and knowledge ▪ Education needs
Moral distress	▪ Fear ▪ Inadequate and unsupported ▪ Resignation

6.3.1 'Being-in-the-world of the rural and remote nurse'

As discussed in the published article, there are numerous complexities relating to residing and practicing as a nurse in rural and/or remote areas. The implications that the physical remote setting had on the working environment was seen to negatively impact recruitment by a number of participants. Frankie spoke about the ability to attract permanent staff and the effect this had:

> *The services in [location 3] are more proactive and they have a lot more staff, it is easier to attract staff here close to [location 5] (Frankie/L193). I think there is such a high turnover in these little remote hospitals, they are often agency staff (Frankie/L174). You get burnt out so quickly, in these small remote hospitals on skeleton staff (Frankie/L180).*

Lesley and Frankie also highlighted problems encountered with staff retention. Having a quick turnaround of high-level staff brought inconsistency to a workplace that Lesley considered detrimental to a health facility. Aspects of the DON role that were open to interpretation would see personality traits in the senior nurse change things that led to confusion for other staff:

> *We had seven DONS here [location 1] in 2 years and each one had their own ideas and personalities, and one would come in and just completely gut the place and throw everything out and then another time you had to kick (sic) something that went out of date in 2009, it's just all over the place, without consistency (Lesley/L40).*

Whereas Frankie spoke about the extra level of work necessary for permanent staff when agency staff were employed. She exhibited frustration that agency nurses did not have access to simple things like the computer programs necessary to complete patient care:

> *And now you are working with a bunch of agency nurses… it puts stress on the permanent staff, so the retention of nurses in these districts is such a big deal (Frankie/L181).*

Some participants were concerned about the limited consistent face-to-face access to help and advice from midwives or doctors. Riley mentioned that having a reliable, familiar contact would help build confidence:

> *…it's not just, you pick up a midwife that's on shift who might, you know, either know, or have something different to the person that you talked to last week, you know, just that continuous continuity … through the same sort of person… just having that person out there to contact I mean, even if we don't have to do it, you know, on a weekly, monthly yearly basis, at least, you know, you've got someone to contact (Riley/L41).*

Whereas Frankie considered how being so far away from the maternity facility, and without having electronic medical records, hindered patient care:

> *So, if someone came into ED in an acute stage it would be really hard to then get their midwifery care record and it would be really hard to get that info, because often they come in after hours (Frankie/L219).*

Many of the experiences voiced by participants about working in multidisciplinary teams were positive. Kai felt that her previous interactions working with a small team of interdisciplinary professionals (that had included midwives) had built a level of respect but also increased her vocabulary and comprehension of terminology and skills. In Riley's and Frankie's case, actually working with midwives in the clinical area had increased their confidence. However, they both acknowledged the fact that these instances were often fortuitous as unplanned:

> *Our nurse practitioner is a midwife, so that's good but she's not always here (Riley/L14).*

> *I had another lady come in with a bit of bleeding in [location 3] … I was just an extra set of hands. The visiting midwife had it all under control, I think she's a super experienced midwife. She does a wonderful job; she's a real credit to the district. I think having her there like that, and she was sort of teaching me a couple of things and showing me a few things just having someone like that around is just incredible (Frankie/L164). We actually were fortunate at the time, just by chance to have had a midwife working at [location 3] … it was just sort of convenient that she happened to be a midwife, because there was never one employed in the hospital ever (Frankie/L38-39).*

Lesley acknowledged her gratitude to the retrieval services that also highlighted the unpredictability of maternity patients:

> *The RFDS plane flew to get her and they said to bring her out to the tarmac [sic] but they brought her back and she actually birthed in the clinic (Lesley/L54).*

Frankie also discussed the pressure on dual registered midwives when they were employed. She recalled an occasion where an agency nurse/midwife who had already worked a double shift was called back in whilst waiting for the retrieval team as she was the only midwife.

However, not all experiences of multidisciplinary interactions were positive. Lesley talked about calling to ask for advice from midwives and feeling nervous due to previous hostility towards her:

> *…it's random whoever answers the phone (Lesley/L47).*

Both Riley and Frankie acknowledged the workload of their medical colleagues did sometimes negatively impact on interactions they had with them. At times, Frankie and Alexis were frustrated with the attitude displayed towards their consultation:

> *…twice in my career, I've had to write [sic] in the patient progress [notes] doctor refused to come over and see the patient… getting another nurse to listen to that conversation with the doctor and then co-sign those notes to say that the doctor was heard saying he would not come over to review that patient (Frankie/L185).*

Alexis had a similar situation when asking a doctor to come a see a patient, the doctor asked:

> *Do I have to hurry? (Alexis/L8).*

6.3.2 Scope of practice – unprepared or underprepared

In referencing skills and knowledge, several participants highlighted the confidence gained from even minimal knowledge of knowing the basics of maternity care. Frankie recalled how her nursing training, albeit over a decade ago, had at least given her some knowledge preparation that she felt more confident about as she had gained it hands-on:

> *…we did a fair component of maternity and I guess infant care in my training (Frankie/L104).*

Similarly, Ash believed skills she had gained were more easily embedded from being applied:

> *I've been around longer than most people, to learn something you have to experience it (Ash/L1).*

Most of the participants believed that education was critical for them in relation to caring for a pregnant woman and the imminent birth program (Clinical Excellence

Queensland, 2020) being free and available through Queensland Health in particular was appreciated:

> *I had done my imminent birth training. Yeah, in [location 5]… that was really good (Charlie/L36). I've done it once when [the midwifery educator] came out… after that, I felt okay (Alexis/L48). Imminent birth took me 10 hours (Ash/L10). we had done the imminent birth before maybe only once (Frankie/L60).*

Riley also believed that as a senior nurse she has an obligation to junior nurses and students to be prepared to enable her to provide adequate support. She stated:

> *Once I have done imminent birth and CRANA [MEC] I might be able to give them a bit more guidance on what's important (Riley/L21).*

Lesley had been guided to the Maternity Emergency Care (MEC) course (CRANAplus, 2024a) by a colleague who had praised the teaching style and the confidence that had brought:

> *A colleague from RFDS they've done it [MEC], and they said the way that is done… just makes you not feel stupid, and you walk away [sic] feeling so much better (Lesley/L69).*

Unfortunately, getting a positive experience from maternity training was not the same for all participants. Alexis discussed her second experience of attending the imminent birth course stating the online version of the training was not as useful as the face to face:

> *But last year, I did it [imminent birth] online… on Teams™ and thought I really didn't get a lot out of that because she [midwifery educator] was doing Teams™ with a few other facilities as well. I didn't get as much out of it… you're all just on computer screen (Alexis/L48).*

In a previous education role, Kai had observed the delivery of the imminent birth training but had not been an active participant in the learning. She had attended the facility to cover for the nurses in the clinical area whilst they attended the education but had been able to catch most of the session as there were no patients. She expressed dismay at assumptions being made around her level of knowledge in this area as an educator, despite not being qualified as a midwife to deliver the training herself.

The availability of face-to-face education was also discussed by Charlie and Stevie, in relation to changes since the Covid-19 pandemic. Whilst they recognised the need for remote training during the pandemic, they saw its continued use, after the pandemic, as an excuse:

> *Education really, isn't put to the, I feel like, put to the forefront of the moment… the excuse of Covid-19 now, which has been going on for two and a half years, is a bit old… having in-services or training courses is not being prioritised. (Charlie/L100, 116). I haven't had any training there for ages. And kept getting told all because of Covid-19 (Stevie/L41).*

A number of participants were keen to share their thoughts on ways they saw education could be improved for them in their setting. The acquisition, recurrence and consistency of the maternity education was discussed by Frankie who stated her starting point in this area:

> *...sometimes I think you can have the education at Uni but I think if you don't sort of get any further follow-up for a couple of years, you kind of do forget what things are (Frankie/L92).*

Lesley believes that gaining experience on a maternity ward prior to moving into a rural or remote role would be the most beneficial, however she also recommends that maternity theory and practical training should be mandated to be within the first 12 months of employment. In regard to skill maintenance she stated:

> *…definitely some education [maternity] that I would like to feel more comfortable and confident in. How often should that happen? I think… there should be a refresher. You know, we do it annually, supposed to, but that isn't always happening. I think there should be a refresher every six months…If they are not going to do the training more than yearly, then they need to come out and do scenarios (Lesley/L41, 43).*

Riley believed the interpersonal relationships developed through a consistent approach to education would help her learning. She remarked:

> *…it'd be just good to have a support person or group where we can just tap in to (Riley/L41).*

Lesley was enthusiastic about the potential for change. She discussed a conversation she had with a midwifery educator about the potential introduction of a Virtual Reality (VR) system that enabled delivery of maternity education in real time with an educator remotely through the participant wearing VR goggles:

> *And the education team told me that they had just received funding for a virtual reality. Goggles and programme for the remote facilities -you know, we get these goggles and the programmes for maternity training (Lesley/L41).*

6.3.3 Moral distress

Moral distress has been described as negative and undesired and can manifest in irrational fear or aversion (Tigard, 2019). The fear of the actual or unknown for the participants in this study was deeply held and articulated and displayed strongly:

> *I was always a little bit nervous if someone did say they were pregnant…I knew that UTIs [urinary tract infections] could bring on labour, and I've never delivered a baby and I'm not a midwife, and it scared the shit [sic] out of me… I just hoped that I wouldn't be there (Stevie/L25, 34, 38).*

> *Just before I came here, was the last birth where the mum couldn't wait… she actually birthed in the clinic and she's pregnant [again] at the moment. So that does make me quite nervous (Lesley/L54).*

> *Anxious because, like again, you know you're not only caring for the sick mum, but you've got to be also mindful of the child (Kai/L18).*

Charlie summarised how she thought rural and remote nurses felt, giving further explanation to potential reasoning for some of the anxiety:

> *If you didn't have any liking to it [midwifery], because a lot of people don't as nurses, it freaks them out (Charlie/L 81).*

> *They might have the panda, [neonatal resuscitaire] or the isolette [neonatal incubator] or whatever they have got… but you actually don't know what you are doing with it (Charlie/L90).*

For many participants in this study there was a chasm between how they would like to have performed according to their professional duty and obligations as nurses versus

the reality of actual or perceived provision of care for pregnant women. Despite some of the challenging conversations in these interviews, an overwhelming sense of pride and love for their jobs was displayed by the participants. This was particularly evident in their display of resignation at the reality of working in a rural or remote location:

> *you know, like it's just getting used to a totally different world of nursing [rural and remote nursing] (Riley/L8).*

Lesley sums up her feeling of resignation, discussing the options she would have when a pregnant woman presents. She did not have an answer to her own question:

> *What are you supposed to do in this situation, what do you do when that happens? (Lesley/28).*

6.4 Conclusion

This chapter has provided an interpretation of excerpts from the participants' narratives. The three main themes derived from the data—'Being-in-the-world of the rural and remote nurse,' 'Scope of practice – unprepared or underprepared,' and 'Moral distress'—have been described. Additionally, subthemes: 'the setting,' 'interdisciplinary teamwork,' 'skills and knowledge,' 'education needs,' 'fear,' 'inadequate and unsupported,' and 'resignation' have all contributed to revealing insights into the experiences of rural and remote nurses when caring for pregnant women. The following chapter will discuss these findings in relation to current literature.

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Chapter 7: Discussion

7.1 Introduction

The objective of this study was to explore the experiences and perceptions of Registered Nurses (RNs) caring for pregnant women in rural and remote areas of North Queensland. The research question, "What are the experiences and perceptions of RNs working in a rural and remote setting who provide care to pregnant women in the absence of midwives?" was examined using hermeneutic, interpretive phenomenology based on van Manen's (1990) six step method. As discussed in previous chapters, analysis of participants' interview data informed the development of three major themes. These were: (i) Being-in-the-world of the rural and remote nurse; (ii) Scope of practice – unprepared or underprepared; and (iii) Moral distress.

Within these themes and sub-themes, new findings revealed that the rural and remote nurses interviewed felt inadequate and underprepared to care for pregnant women. Their confidence in their nursing knowledge and skills did not extend to maternity care, which instead caused stress, and fear of working beyond their scope of practice. Whilst some of this information has been previously identified in general, it specifically emerged in relation to caring for pregnant women, highlighting the unique challenges faced in maternity care. Participants also highlighted the complexities inherent in working in a rural and remote setting emphasising the professional and geographical isolation associated with these settings.

Chapters Three and Four discussed that this study, following Heidegger's interpretive phenomenological research, asserted that rather than 'bracketing' my own background and beliefs, as with Husserlian phenomenology, I embraced and acknowledged them. Utilising the hermeneutic circle throughout this research allowed me to further develop my own personal philosophy and how this potentially influenced my interpretation of the data. My knowledge of and experience in the topic went beyond that of being a health professional who has worked in a rural and remote setting. During the analysis and results writing phases of this study and in consideration of this discussion, it became evident that my being in the world of education was eliciting theoretical links within the theme development. Accepting this enabled me to understand further the importance

of van Manen's (2014) concept of relationality and how listening to the participants influenced and challenged my interpretation by my being in the world.

This chapter will discuss the themes that emerged in relation to existing literature to situate them within the broader field of knowledge, whilst also highlighting new knowledge. In order to develop a deeper, logical interpretation and link any causal pathways of these themes, they will be presented through two theoretical framework lenses: Maslow et al.'s (1982) adapted hierarchy of needs and Knowles (1984) theory of andragogy. Maslow's hierarchy of needs framework describes the individual's behavioural motivation as a pyramid, with eight levels as shown in Figure 7.1.

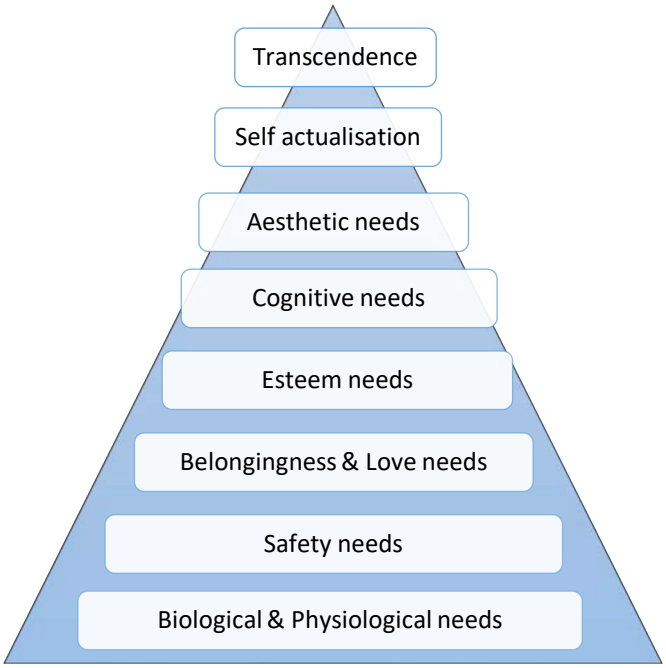


Figure 7.1 Representation of Maslow's hierarchy of needs

Source: (Maslow et al., 1982)

In his work, Maslow states the appearance of one need is related to and reliant upon the state of satisfaction or dissatisfaction with other prepotent needs (Maslow et al., 1982). In this later eight needs model, Maslow has added new layers with transcendence at the peak. Ward and Lasen (2009, p. 7) discuss this level as representing "the realisation of the being for the goodness of others as well as oneself". In applying this framework to nursing practice, Chinnis et al. (2001) suggest that nurses not attaining lower levels of need lack motivation and are less likely to achieve higher-level functions. Therefore, it is logical that nursing research has utilised Maslow's framework, and adapted versions to

assess nursing needs (Chinnis et al., 2001; Mokoka et al., 2011; Staempfli & Lamarche, 2020; Terhaar & Paris, 2010; Terry et al., 2021).

Knowles' framework recognises andragogy as a concept for explaining and acknowledging the distinctions between educational settings and the principles of adult learning, a visual representation is shown in Figure 7.2 (Knowles et al., 2012).

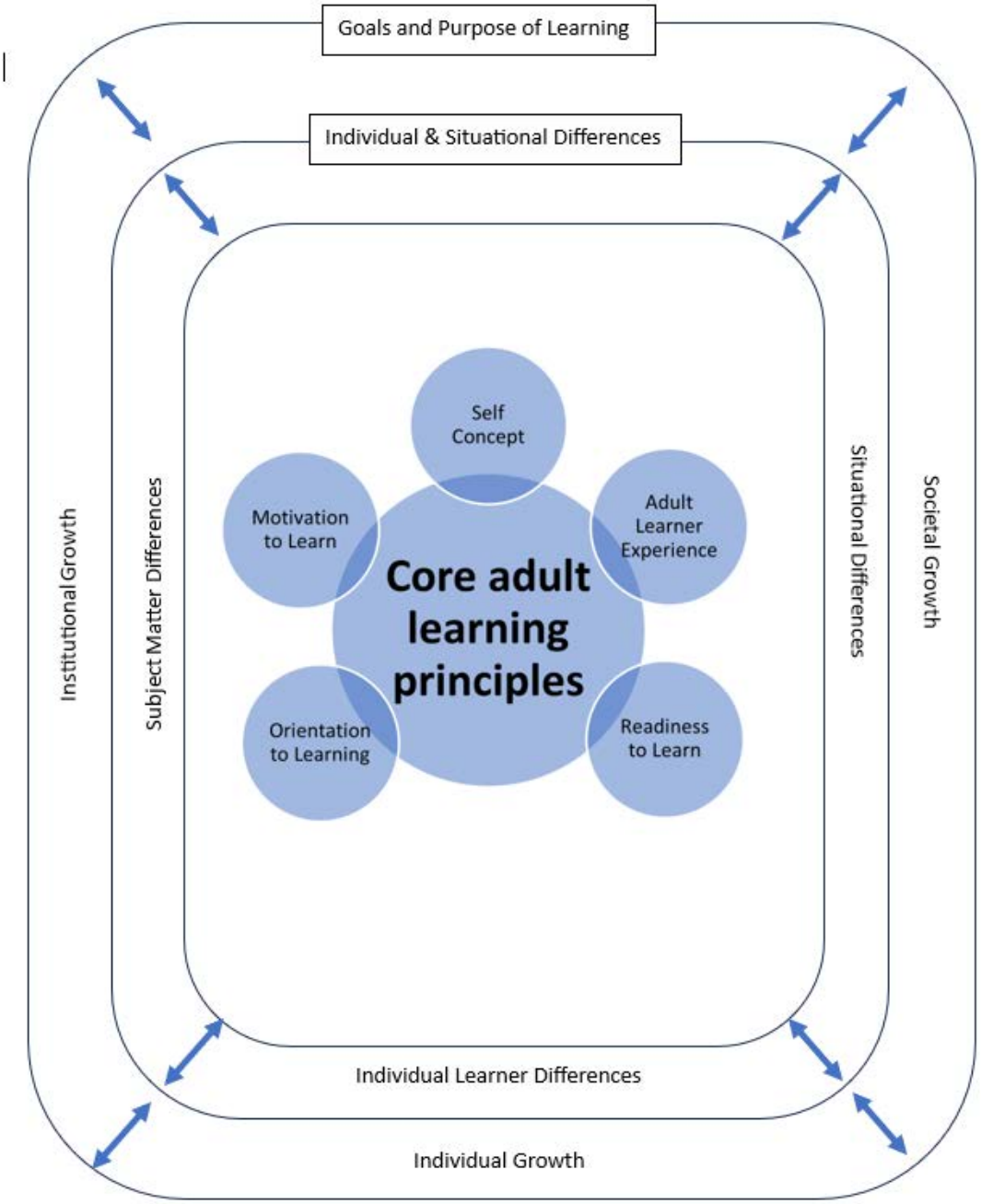


Figure 7.2 Representation of Knowles' andragogy in practice

Source: (Knowles et al., 2012).

As adult learners, the application of Knowles' framework to nursing education is self-explanatory and has been discussed in nursing terms of undergraduate (Aliakbari et al., 2015; Decelle, 2016; Levett-Jones, 2005), postgraduate, professional development (Belton et al., 2010; Cooper, 2009; Curran, 2014) and nursing educator roles (Booth et al., 2016; Christensen & Simmons, 2019; Salminen et al., 2013). Indeed, within the conversational interviews of this study, participants recognised, albeit not directly relating to Knowles, the need for alternative education styles and recognised that learning needs vary depending on the situation, subject matter, and individual differences.

It is important to note that the frameworks of Maslow and Knowles were explored for their relationship and appropriateness with the data as opposed to 'fitting' the data to the frameworks. Therefore, not all data under the three major themes will be discussed in relation to these frameworks. Where appropriate, links with the data will be made to one or both frameworks to aid in the understanding and discussion of the findings.

7.2 Overview of themes

The themes identified from the data each comprise a main focus with a number of sub-themes. Whilst they will each be discussed individually, it is pertinent to observe that the themes are all intertwined and, like Maslow's hierarchy of needs, often dependent upon each other. The intertwined and dependent nature of the themes highlights the complexity of the world in which the rural and remote nurse lives and works. This intertwining fits nicely with and reflects van Manen's view that the 'meaning' of a phenomenon is never straightforward (van Manen & van Manen, 2021). The three main themes were: 'Being-in-the-world of the rural and remote nurse', 'Scope of practice - unprepared or underprepared', and 'Moral distress'.

7.3 Being-in-the-world of the rural and remote nurse

This theme comprised the sub-themes of the setting and interdisciplinary working. The complexity of rural and remote living and working is unique in nature. Many multifactorial challenges influence how people in rural and remote contexts access and receive healthcare, with extreme weather conditions being a significant challenge (Dewi et al., 2024). Additional challenges include: how healthcare is planned; the number, qualifications and experience of nurses and other healthcare professionals who work in

these contexts; the demographics of the population who are the recipients of care; the geographical location and degree of isolation; the distance to a major city where tertiary healthcare and specialist doctors are available; and the resources and infrastructure that are available at the rural and remote site. Long and Weinert (1989) suggest that the special needs of the population in these settings require a unique approach that cannot be adequately addressed by urban developed nursing models.

7.3.1 The setting

The sub-theme of the setting derived from the data in this study, can be characterised by quotes from participants Lesley and Riley. These two very experienced nurses expressed how the rural and remote setting impacted their role and was unlike any other nursing they had previously undertaken. Lesley explained that the distance to another health facility meant they had to be prepared for any situation that might arise, and that any training they pursued required long-distance travel. Riley expressed that not having the option to easily access a nearby maternity ward felt like a completely different world of nursing. These sentiments have been echoed by Scharff, who described rural nursing as "being a long way from anywhere and pretty close to nowhere... being independent or perhaps just being alone"(Scharff, 2013, p. 243).

Despite knowing the geographical setting of the healthcare facility when accepting a rural nursing role, the impact the setting had on the delivery of care and the nurses' quality of life, as also identified in research by Adams et al. (2019) was something that some of the nurses in this study had not considered. In their research, Adams et al. described how healthcare staff were unprepared for the demands of the role and extent of the scope of practice leading to a disillusionment attained from a desire to return to a normal (urban) life (Adams et al., 2019). Similarly, Nayda and Cheri (2008, p. 5) explained how participants in their study "were not prepared to cope with the extensive knowledge and skills required of the 'generalist' rural RN role". However, the participants in this study, whilst expressing their surprise at the contrast from nursing in an urban or metropolitan area, also embraced the challenge as needing a period of adjustment that they thought was fully achievable.

The preparedness of nurses to work in rural and remote settings has been examined in relation to both tertiary nursing and midwifery education as well as hospital-based graduation programs (Fowler et al., 2018; Lea & Cruickshank, 2015; Muirhead & Birks,

2020). Both Fowler et al. and Lea and Cruickshank emphasised that early and meaningful exposure to rural and remote environments during nursing education is crucial for the successful transition of nurses into these settings. Several Australian universities such as James Cook University, University of Newcastle, the University of Queensland, Edith Cowan University, and the University of Southern Queensland offer undergraduate nursing placements in rural and remote areas (Edith Cowan University, n.d. ; James Cook University, n.d.-b; University of Newcastle, n.d.; University of Queensland, n.d.; University of Southern Queensland, n.d.). Students are often supported in undertaking these placements through grants and scholarships (Queensland Government, n.d.).

However, placement experience alone is insufficient to fully develop nurses' preparedness for rural and remote practice. Walsh et al. (2023b) argue that building community knowledge and literacy requires not only student engagement and motivation, but also the active involvement of academic staff teaching them. Consequently, a university's capacity to foster both theoretical and practical preparedness depends in part on its ability to effectively engage with the rural and remote communities it serves. This capacity is often achieved by universities that are geographically embedded within such locations, such as Flinders University and James Cook University (Flinders University, n.d.-a; James Cook University, n.d.-b). This concept will be further explored in Chapter Eight.

The attraction and retention of healthcare professionals into rural and remote settings has been a topic of discussion and investigation for many years, indeed, remaining high on the political health agenda (Ward, 2021). Smith (2016) emphasises that recruitment and retention, though often conflated, are distinct issues, much like the difference between rural and remote areas. Recruiting healthcare professionals to rural areas is an increasingly challenging task both nationally and globally—a concern the Australian College of Nursing views as an impending crisis (Ward, 2021).

The WHO (2010) and Queensland Health (2023) have instituted a range of initiatives aimed at enhancing safe working environments, improving living conditions, and providing career development programs. Primary recruitment strategies encompass the educational continuum from student to health professional, with a significant emphasis on financial remuneration. The Department of Health and Aged Care's (2024) Scope of Practice Review Final Report, focuses on achieving sustainability in rural and remote areas through comprehensive reforms and recommendations for the full scope of

practice. In the PI's previous interactions with rural healthcare professionals, financial incentives were frequently cited as a motivating factor for accepting rural contracts. However, none of the participants in this study mentioned financial incentives as a consideration in their decision-making. In fact, a paper on the 'Nursing Community Apgar Questionnaire in Rural Australia (NCAQ) found that lifestyle, availability of necessary materials and equipment, emphasis on patient safety and high-quality care, and perception of quality were among the top factors influencing recruitment rather than monetary enticements (Prengaman et al., 2017).

Potential contributions to the decision-making process of nurses considering a rural or remote role have been shown to include both security and safety needs from the bottom of Maslow's hierarchy, but also moving up to the next level, belongingness and love needs. Consideration for the needs of the families of rural and remote nurses has been discussed in several papers (Buykx et al., 2010; Hemphill & Keulil, 2013; Terry et al., 2021) with Prengaman et al. (2017) citing spouse satisfaction as the number one challenge and availability of schools and daycare in the top ten requirements impacting recruitment of rural nurses. Although most participants in this study did not mention the impact of their remote work decisions on their families, it is notable that seven out of the eight nurses interviewed lived alone in hospital accommodation. Most of these nurses were on short/medium-term contracts, with their partners living elsewhere and either had grown children or no children at all. The demographics of these participants also clearly correlates with statistics that show an ageing and transient workforce (AIHW, 2022a). The one participant with dependent children had grown up in a rural environment, married locally, completed her nurse education locally and continued to live in the area. She spoke about her need to stay in the area because she felt a belongingness to the community, which fits nicely with Maslow's assertion that belonginess and love are important needs. Terry et al. (2021) also discusses this feeling of belongingness in their paper and concurs that people who felt a belongingness to community did stay in the community. This is an important concept when considering workforce planning for rural and remote settings as 'growing your own' workforce in rural places has significant advantages for retention of staff (Naden et al., 2023).

Participants in this study acknowledged their understanding of the difficulties attracting and retaining nurses in the remote setting. They described the multifaceted challenges and pressures they felt from chronic understaffing and the reliance on agency nurses.

Whilst it has not been possible to obtain statistical data around the numbers of agency nurses employed in rural and remote Queensland, a study by Zhao et al. (2017) reported a steady increase of agency nurses employed in remote Northern Territory (NT), plateauing at 20% of the total workforce in 2011. Echoing the perspectives shared by participants in this study, Zhao et al. suggest that increased reliance on short term agency nurses contributes to 'orientation burnout' among permanent staff, alongside heightened anxiety concerning the competence and preparedness of agency staff. Frankie, a participant in this study, discussed this issue, stating that that the lack of education, training and onsite access that agency nurses were given to electronic documentation meant that permanent staff had to fill this gap, thus creating additional work and stress.

Issues of recruitment and retention were further illustrated by Lesley who discussed a turnover of seven Directors of Nursing (DONs) in two years at her facility. This level of turnover underscores the instability that can permeate rural and remote healthcare settings. In their framework for remote and isolated practice report, the Council of Remote Area Nurses of Australia (CRANA) suggest the remote and isolated workplace setting includes factors related to: geographical, social, cultural, professional and environmental isolation as well as setting for practice that need to be considered (CRANAplus, 2018). As will be discussed further throughout this chapter, the correlation of the findings in this study with these factors and how to address them, as opposed to the financial incentive rewards being offered, could present a solution to the dichotomy between recruitment and retention.

Participants in this study spoke about how the setting impacted the resources that were available and included both physical items and people. Ash spoke about the unreliability of internet access and telehealth due to weather conditions, and this was evident during several interviews undertaken during this study. Similarly, Almathami et al. (2020), St Clair and Murtagh (2019) and Bradford et al. (2016) all identified weather conditions alongside internet speed and availability of networks as barriers to online health consultation. Further to this, Bradford et al. (2016) reported the need for familiarisation with the equipment and services available for technical issues as being paramount to telehealth success. This was indeed an issue highlighted by Ash who described technical issues with this equipment outside of business hours making it unavailable to use. In considering rural nurses' access to support when caring for a pregnant woman, these

barriers contributed significantly to the stress of the participants in this study. Without telehealth, nurses are left feeling vulnerable. Ash describes how being able to talk to a midwife or doctor is vastly different to being able to show them what they are actually seeing through a telehealth video call.

Concerns were also raised by a number of participants around the inability to access pregnant women's records if and when they did attend a remote facility. Frankie described a scenario out-of-hours and the difficulty she had accessing maternity records. In their report 'Digital Health 2031' Queensland Health set out their vision and foundation for digitally enabled healthcare (Queensland Health, 2021). In this report they state that the current information and knowledge sharing will go from being incomplete to an automated information exchange between healthcare providers within their roadmap of embedding digital over the next decade (Queensland Health, 2021). However, as noted on Queensland Health eHealth initiative webpage (Queensland Health, 2024) only one of the facilities involved in this study is currently listed for inclusion in the proposed roll-out. So, whilst improved connectivity, telehealth and patient health record are being highlighted and addressed for rural and remote locations (National Rural Health Alliance, 2024a; Queensland Health, 2021), there does not appear to be any concrete plans to address interprofessional patient information sharing at this point in time.

7.3.2 Interdisciplinary teamwork

Communication, either face to face or via information technology, was identified by Williams (2012) as a key component of interdisciplinary working and paramount in reducing rural professional isolation. When the setting causes detachment from peers—illustrated by Ash's experience with technology failures and Frankie's account of how the environment often affected the availability and attendance of visiting health professionals—the consequences negatively impact both women and rural health professionals. Professional isolation in relation to rural and remote nursing was first discussed in the seminal work of Long and Weinert (1989). They, like other researchers to follow (Adams et al., 2019; Doolan-Noble et al., 2021; Kagi et al., 2023; Kulig et al., 2018; MacKay et al., 2021; McElroy et al., 2024; Terry et al., 2021; Williams, 2012) identified how a lack of collegial support remains one of the most concerning characteristics of rural nursing.

Williams (2012) identifies professional isolation as a barrier to rural nurse recruitment and retention, describing it as the absence of peer support crucial for fulfilling professional roles, aligning with Maslow's (1982) esteem needs. McNeil et al. (2015), note that the scarcity of rural practitioners increases the necessity for professional collaboration, yet interactions remain inconsistent and ad hoc, echoing findings by MacKay et al. (2021).

At times of positive teamwork interactions, the participants in this study acknowledged the elevated levels of interdisciplinary skills of colleagues with midwifery and obstetric knowledge. Participants spoke about the significance of interprofessional collaboration with midwives, doctors, retrieval services such as the Royal Flying Doctor Services (RFDS) and Retrieval Services Queensland (RSQ) as well as specialist services like Telehealth Emergency Management Support Unit (TEMSU). The importance of such collaborations has previously shown that health professionals in remote areas feel the clinical support and guidance is consistent in emergency situations (Green et al., 2023), improves management of complex conditions (Bradford et al., 2016) and reduces professional isolation (Wakerman et al., 2019; Williams, 2012). Having agency nurses who were dual qualified also as midwives was unusual and was seen as a bonus by permanent staff. However, Frankie acknowledged that a lot of pressure was placed on these dual qualified agency nurses because of their midwifery qualification.

A study by Gonzales-Chica et al. (2021) reported that RFDS performed a total of 1521 pregnancy related transfers in Queensland over a four year period, second only to Western Australia. Their data showed a steady increase over that time from 299 in 2015/16 to 416 in 2018/19 and showed most transfers were from rural hospitals and related to early pregnancy or pre-term complications. The significance of these numbers and subsequent support for rural nurses is emphasised by the research of McCullough et al. (2022, p. 574) who discuss the worth of having someone come in and say “ok we will manage this patient from here on in, ” Similarly, Frankie described such collaborative support as having a ’safety net’ which will be discussed further in this chapter, reinforcing the reality of the fear surrounding complications felt by the nurses in this study.

7.4 Scope of practice - unprepared or underprepared

This theme encompassed the sub-themes of skills and knowledge and educational needs. The term 'underprepared,' frequently used interchangeably with 'unprepared,' conveys a sense of lacking readiness, but the nuances between them are significant. 'Unprepared' denotes a complete absence of preparation, whereas 'underprepared' refers to being inadequately prepared (Merriam-Webster, n.d.-b), indicating some level of readiness that falls short of expectations. It implies that individuals possess some skills and knowledge but lack the necessary experience or expertise.

The term 'unprepared' has been used by various authors discussing rural and remote nurses. For example, Whiteing et al. (2022) described remote nurses as being unprepared for the additional responsibilities of their roles, while Penz et al. (2007) attributed the lack of preparation to the unique challenges of rural practice. However, the participants in this study cannot be accurately classified as unprepared in the context of providing care to maternity patients. While they are often described as generalist, they are not qualified midwives. Although many of the participants expressed feelings of being unprepared, there was an overwhelming desire to become prepared. In this context, the perceived lack of preparation may be better understood as a reflection of the emotional and ethical tension participants experienced when faced with the actual or potential care of pregnant women. This tension, and the question of where that level of moral culpability lies, will be discussed further in this chapter.

7.4.1 Skills and knowledge

The nurses in this study hold a wealth of knowledge and skills and a wide breadth of experience in a variety of specialist areas allowing an alignment with the description of the generalist nature of rural nursing practice (Jukkala et al., 2008; Long & Weinert, 1989; Scharff, 2013). McCullough et al. (2022), in their research, describe the remote area nurse as possessing a wider skill set through independently attending a greater variety of assessments but also being able to interpret how they are using clinical protocols. Participant discussion in this study is congruent with this: Kai described how, as an endorsed Rural and Isolated Practice Registered Nurse (RIPRN) she can prescribe and treat patients without a doctor's order. MacKay et al. (2021) suggested in their study that, due to a lack of resources and facilities, rural nurses were prepared, and willing, to undertake many different tasks. This motivation to psychological growth and

self-development was theorised by Maslow (1943) as the apex of his hierarchy pyramid and later described by Hoffman (2008) as the highest level need, where the individual is capable of self-actualisation in terms of skills and abilities. However, like the participants in this study, other researchers identified such tasks as potentially stressful (Lenthall et al., 2018; LeSergent & Haney, 2005; Moszczynski & Haney, 2002; Opie et al., 2010) and barriers to job satisfaction (McCullough et al., 2022; McElroy et al., 2022; Smith, 2016; Smith et al., 2019) pertaining to a necessity rather than willingness.

Working in generalist remote nursing roles, all participants in this study relayed how drawing on experience and tacit knowledge from previous roles had assisted them in their current positions. However, there were few that had experienced or witnessed maternity care enough, to gain such implicit knowledge and skills in this area, aside from understanding that things can turn complicated very quickly. Both Kai and Lesley discussed moments they had worked outside their comfort zone in the remote context but mostly felt confident in their ability to critically analyse the situation. This sentiment conflicts with participants in McCullough et al.'s (2022) study who suggested knowledge and skills from previous roles as irrelevant in remote nursing. Furthermore, McCullough et al. whilst speaking about the remote setting in general, as opposed to maternity care, described a discrepancy between the knowledge and skills needed and the competence and confidence in providing care thus impacting the quality of care provided. These thoughts were also echoed by Cramer (1994) and Josif et al. (2017). Participants in this study also associated gaps in their knowledge as affecting care for pregnant women. Lesley voiced her concern that she would be able to 'fumble' her way through a nursing situation but not the birth of a baby or having to care for a pregnant woman.

All participants in this study agreed that a lack of even the most basic knowledge and skills in maternity care led to feelings of being unprepared. In alignment with these findings and in contrast to RNs in Canada (Medves & Davies, 2005). McCullough et al. (2022) argued a gap in nursing education, specifically the focus on the preparation of acute, rather than generalist nurses, contributed to nurses being unprepared. Only one of the participants in this study, Stevie, had any theoretical maternity experience because she worked overseas and needed this experience for registration purposes. However, despite this previous knowledge, Stevie admitted that she did not remember any of the skills or knowledge as it was so long ago. This sentiment is echoed by Nayda and Cheri (2008) who reiterate that without repeated exposure to situations there is a decrease in skills, knowledge and confidence. Yates et al. (2011) describes the

expectation placed on rural dual trained midwife/nurses to maintain competency in midwifery, despite spending only a small percentage of their clinical time practicing in that area. Newhouse (2005, p. 354) quite simply implies that "maintaining nurse competency is a major challenge". Maintaining skills is not only a concern for nurses working remotely. Farmer (2010) describes the difficulty of recruiting medical specialists that can maintain their skills. The 'capability for practice' domain of the National Rural and Remote Nursing Generalist Framework 2023 – 2027, asserts that rural health providers "actively maintain currency and capability in professional standards of practice" (National Rural Health Commissioner, 2022, p. 35).

Ash, Alexis and Lesley were all conscious of their need to know the basics and suggested a rotation in a maternity unit would be beneficial. This was evidenced by Ash's statement: '*I've been around longer than most people, to learn something you have to experience it*.' (L8). Experiential learning has been shown by Knowles (1980) and later Mezirow (2000) to be a critical component to transformative learning. Prescott and Garside (2009), Clapper (2010) and Waldner and Olson (2007) have all shown how simulated learning environments create experiential learning opportunities for learners, which help prepare them for real-world situations. Irrespective of the mode of acquisition of the skills and knowledge needed to care for maternity patients, the participants in this study were clear that they felt they did not have what was required and they needed more education.

7.4.2 Education needs

Nurses are both legally and professionally obligated to ensure their practice capabilities are current (NMBA, 2016a; NRHC, 2022). AHPRA (n.d.) defines Continuing Professional Development (CPD) as the process by which health practitioners maintain, enhance, and broaden their knowledge, skills, and competencies while also developing the necessary personal and professional attributes throughout their careers. According to the NMBA (2016b), nurses and midwives are encouraged to lay a foundation for lifelong learning through planning and reflection. This learning is promoted through a variety of methods, including multimedia, face-to-face instruction, simulation, e-learning, and self-directed learning (NMBA, 2016b). While this approach seems to embrace andragogy, as defined by Knowles as "the art and science of helping adults learn" (Knowles, 1980, p. 43), it falls short when applied to the context of rural and remote nursing. Knowles et al. (2012), later describe andragogy within a humanistic and pragmatic framework: the humanistic

approach, influenced by Maslow (Maslow et al., 1982) focuses on self-actualisation, while the pragmatic philosophy, shaped by Dewey (2011) values knowledge gained from personal experience over formal authority.

Applying Knowles' (2012) andragogy to practice may be seen as an idealistic framework. The challenges highlighted by study participants regarding access, distance, and appropriateness, reflect issues identified by other researchers (Belton et al., 2010; Molanari et al., 2011; Mullei et al., 2010; Penz et al., 2007; Terry et al., 2021). However, not all challenges can or should be addressed solely through Knowles' framework, as some may be better suited to the principles of critical theory and social change proposed by Mirriam and Brockett (1997). Indeed, Knowles states that the ends and purpose of adult learning events, whilst vital, must be separated from debates about models of adult learning. Knowles' framework acknowledges that the goals and context of adult learning are crucial, however, his framework does not provide solutions for overcoming the challenges identified.

The phrase "continuing professional development" (NMBA, 2016b) can also be problematic when referring to the acquisition and maintenance of skills. The term 'continuing' implies that the process has already begun, which is not applicable if a skill has not yet been acquired. As discussed in the previous sub-theme, the acquisition of maternity theory and practice skills were a concern for participants in this study and as reported by others (Cramer, 1994; Josif et al., 2017; McCullough et al., 2022). These concerns were also highlighted in the National Rural and Remote Nursing Generalist Framework. Analysis of responses from public consultation in this document showed respondents wanted to ensure that attaining 'basic maternity skills were reflected' in the framework (Australian Government, 2023, p. 14). Accomplishing acquisition of skills in a completely different profession like maternity, was seen by the participants in this study as challenging for a number of reasons including: lack of commitment from their health service as stated by Charlie "*having in-services or training courses is not being prioritised"* (100), lack of resources as demonstrated by Alexis *"we don't have staff to cover so we won't do anything"* and inappropriate delivery of education as discussed by Frankie "*I think the scenarios need to be activity based, it can't be all theoretical"* (L.43).

Given the participants' perception of their employer's lack of commitment to ongoing education, their concerns appear justified when examined alongside findings from existing research. Penz et al. (2007) acknowledge the difficulty in addressing time

constraints and staff shortages but attest the importance and necessity of upholding competency levels needed for advanced nursing roles. Kenny and Duckett (2003) acknowledge that there was an understanding by nursing supervisors that nurses needed to participate in professional development activities and attend educational sessions, however, the complexities of finding alternative replacement staff often prevented them from approving leave for this purpose. These findings are also congruent with Pearson and Care's (2002) work into rural nurses' education who suggest rural nurses in their study prefer practical, accessible during working hours, rurally orientated and organisationally funded education. This sentiment is mirrored by Penz et al. (2007) who discuss the unrealistic expectation placed on rural nurses to attend education away from their community. Similarly, Levett-Jones' (2005) asserts that hospital administrators must establish a framework to foster a culture of ongoing education within an organisation. Participants in this study acknowledged that, in theory, such a culture existed. However, they highlighted that in practice, if education was not personally initiated and actively pursued by themselves, they would be left without support and resources. This situation was very much evident from Lesley's interview where she acknowledged that the Maternity Education Course (MEC) was mandatory for RNs in her hospital and health service (HHS). However, she also stated she had been in her role for three years and had "*pushed and pushed and pushed … for it. So I just paid the other day. I'll just get reimbursed because it's something I have to do for me"* (L74).

The mode of education delivery fell short of meeting the needs of most of the participants in this study. The impact upon their capacity for self-actualisation through personal growth and developing their potential (Maslow et al., 1982) was evident throughout many of the interviews. The participants differences and similarities of experiences were consistent with the adult learning principles described by Knowles et al. (2012). When the nurses' experiences with the 'imminent birth education' program were discussed, it became clear that everyone enjoyed the face-to-face delivery, which included both theoretical and practical components. In the words of Charlie it was "*really good."* The course was deemed inadequate when it was offered online or contained only the theoretical training. The program was originally designed with mixed-mode delivery to address challenges such as staffing and cost (Connell, 2018). When delivered with this intention, participants in this study, mirrored positive evaluations received by the course coordinators (Connell et al., 2019). However, participants

criticised deviations from this method, especially during Covid-19, believing that these adjustments were motivated by budgetary considerations or used as a justification because of the pandemic.

It appears that the participants' individual characteristics influenced the variations in their experiences with maternity education. For instance, those with different professional backgrounds or levels of experience might have responded differently to changes in the delivery mode or ease of access. Participants' own needs, preferences, and expectations may have influenced how they perceived and evaluated the efficacy and effectiveness of the education, whether it was delivered in-person or virtually. These variables probably played a role in varying degrees of satisfaction with education, especially when it strayed from expectations and correlated with others' research (Karaman, 2011; Murphy et al., 2006), whilst also aligning with both Maslow's individuality of needs (Maslow et al., 1982) and Knowles' learning principles (Knowles et al., 2012). Experienced nurses like Lesley and Riley, and less experienced nurses like Frankie and Charlie who worked only in rural settings, showed developed critical thinking skills for addressing education concerns. Lesley highlighted the development of innovative technologies, such as virtual reality, as a more realistic and cost-effective solution for enhancing maternity education. This concept is consistent with recommendations made by other academics who contend that investing in cutting-edge technologies is essential to fulfilling the educational requirements of rural healthcare nurses in the future (Hegge et al., 2002; Jukkala et al., 2008; Lemée et al., 2024; Liu et al., 2004; North West Hospital and Health Service [NWHHS], 2023; Podubinski et al., 2024).

7.5 Moral distress

Moral distress has been described as being when an individual "knows what is the right thing to do but recognises herself/himself as unable to pursue such an action either due to errors of judgment, personal failure, weakness of character, or even due to circumstances beyond personal control" (Barlem et al., 2012, p. 679). More specifically in nursing, the seminal work of Jameton (1984) suggested a psychological imbalance brought about by an inability to perform morally appropriate activities corresponding to their integrity or knowledge. Barlem et al. further suggest that the consequences of such effects can lead to feelings of anger and sorrow. Whilst displays of anger were not evident from participants in this study, precursors to this emotion; concern and

frustration were certainly portrayed, as was sorrow. Protective factors suggested to support nurses to positively adapt to moral distress include maintenance of psychological well-being (Foster et al., 2020) and personal resilience (Cooper et al., 2020; Cusack et al., 2016). Resilience is said to comprise numerous dimensions: endurance, adaptability, determination, recuperability, life calling, and comfort zone (Handoyo et al., 2020). Participants in Handoyo et al.'s, study certainly voiced feeling outside their comfort zone and, asserted a fear of making a mistake as a key component of their distress. This fear potentially hindered their movement from self-actualisation to transcendence as understood through their self-awareness (Maslow et al., 1982).

7.5.1 Fear

Fear brings about a complex fusion of behaviours, mental processes, and physiological reactions that have developed over millions of years to help protect us (Guthrie Yarwood, 2022). Consulting the literature for this discussion, the word fear, whilst sometimes used by participants in studies (Hughes, 2012) is uncommonly referred to as a study focus. Considering the terminology of fear, psychologists consider it as a strong emotional response, caused by conditioned stimuli associated with punishment or threat (Miller, 1960). A more common term used in the literature around stress, resilience and distress for rural and remote nurses is anxiety (Badu et al., 2020; Clark et al., 2021; Moszczynski & Haney, 2002; Nayda & Cheri, 2008). Defined by Segal (2010), anxiety epitomises more dispersed feelings of apprehension and reflection that are associated with a perceived rather than actual threat. However, Gross and Canteras (2012) argue that instead of making a clear distinction between fear and anxiety, many individuals are likely to experience a combination of both acute fear in response to immediate threats and more diffuse reactions of anxiety. Similarly, Gray (1991) observes that anxiety may also stem from conditioned stimuli associated with frustrative nonreward.

Fear and anxiety have evolved beyond mere survival responses to threats. They now influence our daily decisions and long-term goals, stemming from concerns about change, failure, embarrassment, and the unknown (Gross & Canteras, 2012). Research has shown that time and circumstance significantly shape perceptions of fear and anxiety, influencing responses to events such as war, illness, phobias, and, more recently, the Covid-19 pandemic (Amin, 2020; Armstrong-Jones, 1917; Coelho et al., 2020; Milosevic & McCabe, 2015; Nahm et al., 2021). Whilst nuances of the terminology

between fear and anxiety obviously exist, Gray solicits the question “what’s in a name?” (Gray, 1991, p. 77). Participants in this study portrayed, as per the definitions, levels of both fear and anxiety. However, their statements should not be interpreted as reflecting a simple or convenient distinction between the two emotions, aligning with Gross and Cantera’s argument that these emotional experiences are not entirely independent of one another.

All participants in this study used emotionally charged language such as nervous, terrifying, scary, scared, devastating, fear, anxiety, and anxious to describe their feelings about caring for a pregnant woman. These emotional descriptors closely mirror those reported in previous studies examining the emotional responses of nurses working outside of their scope of practice (Hughes, 2012; McCullough et al., 2022; Nayda & Cheri, 2008). However, Alexis and Ash both exhibited a deeper, almost guttural form of expression, capturing how their internal fears amplified their emotional response to reverberate through their thoughts, manifesting physically. The weight of their apprehension was palpable, their words, voice tone, and body language portraying not just anxiety but a profound sense of fear. It was the strength of these reactions that influenced the use of fear rather than anxiety as a sub-theme in this study. To honour the depth of their emotions, my interpretation of the participants’ words needed to conduct an equally powerful resonance.

Despite having never physically cared for a pregnant woman in labour, Alexis and Ash both displayed responses that were activated by perception, an intrinsic threatening stimulus, an exposure context association termed by Muller et al. (1997) as ‘fear conditioning’. Most of the participants in this study discussed the threat of having to care for a pregnant woman rather than their memory of providing that care. Whilst sometimes fear was elicited by attending education, as was the case for Ash, it was also prompted by participants' personal experiences and through disaster stories shared between nurses. Lesley shared a dramatic story about a woman giving birth at her facility before she arrived. Kai recalled similar stories from midwifery educators, highlighting the dangers of fostering fear in the workplace (Hughes, 2012).

The concept of storytelling, or narrative pedagogy (Best, 2021), in nursing, has deep roots with its value recognised for centuries (Bowles, 1995). It has been acknowledged as a powerful tool for relaying knowledge and experiences (Bowles, 1995; East et al., 2010). East et al. further attest that personal narratives can serve as a foundation for

developing resilience. However, while these affirmations offer profound insights into lived experiences, it is crucial to consider ethical principles, context, environment, and safety to protect both the storyteller and listener (East et al., 2010). Sabini and Silver (1982) and Dunbar (2022) propose blurred lines between storytelling and gossip are inevitable. According to Sabini and Silver, newcomers explore common morality by understanding the limits of acceptable behaviour. Without proper safeguards and positive framing, storytelling can negatively affect self-confidence and cause fear.

7.5.2 Inadequate and unsupported

As adults, equipped with education and emotional awareness, we can usually rationalise feelings of inadequacy. However, when continually confronted with feelings of being devalued, insignificant, or working in an ineffective or unfamiliar environment, research suggests that nurses may experience a sense of inadequacy, which undermines their motivation (Leliopoulou et al., 2024). Nursing under adverse circumstances, defined as "conditions that have a negative or harmful effect" (Cambridge dictionary, n.d.-c) has been reported as contributing to distressing feelings, particularly during events like the Covid-19 pandemic (Carnesten, 2023; Coelho et al., 2020; Scott, 2022; Tribby & Isaacson, 2024). Such experiences can be likened to nursing in a war zone (Finnegan et al., 2016; Rahimaghaee et al., 2016). Both situations involve placing nurses in a temporary and unique context, emphasising the roles' transient yet challenging nature. When examining rural and remote nursing in the context of challenging circumstances, it is important to note that while the intensity and dangers of a war zone or pandemic are typically absent, the psychological long-term effects of the continuous and demanding nature of rural and remote nursing can be unsustainable. These factors can significantly contribute to issues like moral distress, which often leads nurses to leave the profession (Allen et al., 2020; Beks et al., 2018; MacKay et al., 2021; Molinari & Monserud, 2008; Whiteing et al., 2022; Woods, 2014).

All participants in this study acknowledged the unique nature of their jobs and embraced the diverse scope and generalist aspects of their roles. Many expressed pride in their abilities, experience, and the breadth of their responsibilities. For example, Kai shared her experiences with her RIPRN practice, while Ash proudly stated, "*I am very, very good at what I do"* (L9). None of the participants indicated a desire to leave either the rural and remote environment or the profession. However, they did convey feelings of discomfort and inadequacy when it came to providing care for pregnant women. This

discomfort, due to the rare occurrence of such cases, reflects a 'temporary and extraordinary' context that aligns with previously discussed adverse circumstances, putting these nurses at risk of developing post-traumatic stress disorder (PTSD) (Schuster & Dwyer, 2020). It has also been suggested that nurses who meet a diagnostic criteria for PTSD almost always are symptomatic of burnout (Mealer et al., 2009). Both PTSD and burnout have been linked and attributed to the contribution of rural workforce attrition (Leung & Shen, 2022; Smith et al., 2023).

Both Schuster and Dwyer (2020) and Mealer et al. (2009) emphasise that nurses who directly or indirectly witness patient suffering during traumatic events are at significant risk for developing PTSD. Furthermore, emotional involvement or identification with the patient was also shown to increase stress for nurses (Adriaenssens et al., 2012; Schuster & Dwyer, 2020), and this was certainly the case for Frankie in this study. She described how her perspective on the care provided to pregnant women shifted after having her own children, resulting in a strong desire to offer the best possible chance for pregnant women to be healthy. Like Frankie, many participants faced the dilemma of knowing they lacked the knowledge and skills to provide essential care. Although none of the nurses in this study expressed concerns about PTSD when caring for pregnant women, some showed classic PTSD symptoms like avoidance, physical reactions, and negative thoughts about their abilities (Black Dog Institute, n.d.).

Community belonging can enhance job satisfaction but may also cause feelings of being overburdened (MacKay et al., 2021; Mohale & Mulaudzi, 2008). Rural and remote nurses often seek social and peer support as coping strategies, which have been shown to reduce psychological distress (Adriaenssens et al., 2012). Mealer et al. (2009) suggest that nurses with components of resilience were less likely to experience PTSD than those with lower levels of perseverance. However, seeking support for rural and remote nurses can be more complex for several reasons. Isolated working environments reduce the availability of appropriate support that truly understands the demands of the rural and remote nursing role (Jahner et al., 2019; McCullough et al., 2020; Tribby & Isaacson, 2024). When nurses find an ally, as Frankie stated when discussing a particular case looking after a pregnant woman, they hold on to them "*The grad nurse I was on with, she has become a good friend and …*despite moving away*… we often talk about it"* (L34) a sentiment mirrored in others' research (MacKay et al., 2021). Navigating work relationships when seeking support has been shown to leave nurses feeling

marginalised, embarrassed and unsupported (Leliopoulou et al., 2024). Nurses in this study, similar to those in MacKay et al., discussed receiving negative, derogatory, and dismissive comments from medical and midwifery colleagues. If teamwork was identified as positive in the first theme of 'being in the world of the rural and remote nurse' its absence in this context amplifies the significance of that discussion and the role it takes in the provision of support.

While Jahner et al. (2020) noted mixed perceptions of debriefing sessions, Kai and Frankie identified the absence of formal debriefing as a significant gap in rural and remote contexts. Schuster and Dwyer (2020) highlighted ambiguity in debriefing best practices, yet both Kai and Frankie concur with Floridis (2023) that debriefing, formal or informal, remains critical post-incident, despite unique challenges in these settings.

7.5.3 Resignation

Despite experiencing moral distress and negative emotions, participants in this study displayed commendable professionalism. The term professionalism, significant in nursing, involves care delivery, social values, cultural issues, and organisational expectations. As defined by Monash University (n.d.), professionalism includes respect, compassion, self-awareness, honesty, integrity, accountability, and a commitment to continual improvement. The Nursing and Midwifery Council (UK) (n.d.) and NMBA (2019) highlight attributes necessary for nurses to practice professionally such as continuous learning, being a role model, supporting appropriate environments, enabling person-centred care, practicing evidence-based care and being able to lead. The nurses in this study understood that their moral distress was secondary to their professional duties working in the rural and remote settings. According to Zibrik et al. (2010) participants in their research, similarly, conveyed by Lesley, Ash and Frankie, voiced having no one else to rely on for care delivery, adopted a resigned "it's up to us" mentality.

As previously discussed in this chapter, the remote nursing generalist scope of practice spans the continuum of care and lifespan, encompassing various disciplines, including maternity (Australian Government, 2023). Although the traditional nursing scope of practice in Australia does not typically include maternity care, the National Rural and Remote Framework allows for its inclusion in rural settings. According to Konkin et al. (2020) this enables rural nurses to extend their capabilities beyond their usual limits. However, for the participants in this study, this expansion led to feelings of resignation

regarding their ability to provide care that they felt morally and ethically unprepared to handle.

7.6 Conclusion

This chapter has discussed the findings from this study, comparing and contrasting them to the literature and identifying new knowledge in relation to rural and remote nurses caring for pregnant women. The study has highlighted the inequity of accessible healthcare in a rural setting and the impact this has on the nurses who provide care. Ideas for addressing the identified concerns of the rural and remote nurses in this study will be discussed in the final chapter.

Viewed through the lens of Maslow's hierarchy of needs, the emotional and professional stress experienced by these participants suggests that their foundational needs for safety, support, and psychological security are often unmet and do not allow them to reach self-actualisation. Furthermore, the participants' strong desire to become adequately prepared, despite systemic limitations, reflects key principles of Knowles' adult learning theory, particularly the emphasis on self-directed learning and the relevance of experience-based education. Potential strategies to address the concerns identified by participants, including educational and systemic interventions, will be discussed in depth in the final chapter.

Chapter 8: Recommendations and conclusions

Some discussion regarding methods undertaken will necessitate the use of first-person language relating to myself as the Principal Investigator (PI).

8.1 Introduction

This study aimed to investigate the experiences and perceptions of registered nurses caring for pregnant women in a rural and remote setting, in the absence of a midwife. Phenomenological analysis of interview transcripts identified three themes that have been described and discussed in the preceding chapters. In this final chapter, I will review my understanding of rural nursing and consider the strengths and limitations of this study. I will also provide recommendations and proposals for future research and rural and remote nursing practice.

8.2 Reviewing my understanding

Prior to undertaking this study, I had contemplated the notion of a doctoral thesis for many years. Despite my profound passion for midwifery, I encountered difficulties in identifying a sufficiently compelling area of research to motivate me to advance. This scenario shifted markedly when I commenced work in the rural and remote regions of Australia. Being so far removed from my midwifery starting point, the inequity of outback midwifery, but also the potential, was overwhelming to me. On a daily basis, I was drawn in: the lifestyle, the culture, the people and the imbalance in health equity.

Initially, I considered midwifery in isolation. I found myself asking the questions, I have since come to realise are questions asked by many healthcare professionals who have never worked in rural or remote areas: Why is maternity care so inequitable? Why are there not enough midwives? Why are maternity units closing? The answers to these questions are very important and should continue to be asked. However, during the process of this study, I have realised they are discussing solutions to an overarching problem and not addressing the here-and-now for nurses providing care to pregnant women.

As I listened to the stories of nurses, both prior to commencing this study, and more intently during the interview process, I gained a deeper understanding and respect for these healthcare professionals. Instead of being fiercely protective of my midwifery profession to the point of being dismissive of their input, I was able to comprehend,

without compartmentalising, the important role nurses play in rural and remote midwifery care. I came to realise the difficulties and moral distress they faced on a daily basis but could also admire and appreciate their tenacity, humour and professionalism. As much as I learned about their roles, I also gained deeper insight into myself and what I contribute to the midwifery profession. This experience has reshaped my perspective and influenced how I teach future generations of student nurses and midwives.

8.3 Strengths of the study

One of the key strengths of this study is its research topic. As highlighted in the literature review (Chapter 2) and the discussion (Chapter 7), there are no existing studies that focus on the experiences and perceptions of nurses caring for pregnant women in the absence of a midwife. This makes it the first phenomenological study to explore this important topic.

The methodology of the study is another strength. Interpretive phenomenology allowed for the lived experiences of the participants to be portrayed in their own words, thus offering a rich understanding of the phenomena. The researcher's interpretation evolved alongside a deeper understanding of the participants' interpretations. This method highlights that understanding is not straightforward or objective; rather, it is influenced by the viewpoints and interpretations of both the participant and the researcher, resulting in a complex and nuanced analysis (Crowther et al., 2017; Flood, 2010). The researcher's background as a midwife and clinical educator is also therefore seen as a strength in this study. The researcher was very familiar with the locations and aware of the obstacles placed on the participants because of the setting. The familiarity of the researcher in these areas may have provided a greater opportunity for engagement.

The last strength of this study was in the data collection method, which echoed the difficulties experienced by the participants around attending education and financial implications. Conducting online interviews was cost-effective and time-efficient, particularly during the Covid-19 pandemic. Several planned interviews needed to be changed at short notice by participants, which may have proved difficult and had further consequences had the interviews been face-to-face.

8.4 Limitations to the study

Just as this study had strengths, it also had limitations that must be acknowledged to interpret the findings. This study used interpretive phenomenology to explore the perceptions and experiences of a small number of rural and remote nurses. Whilst a small sample size is appropriate for a phenomenological study, the data set taken from eight participants within a single Health and Hospital Service (HHS) in Queensland may be considered limited. The diverse experiences reported by participants from various geographical settings are likely to have influenced the findings, potentially yielding varied outcomes. This variability is a recognised and acceptable dimension within the framework of phenomenological research (Zahavi, 2020).

It is important to recall that, as previously discussed regarding the strengths of Zoom interviews, the availability of visual cues—such as facial expressions, gestures, and eye contact—contributes valuable context to qualitative data. In contrast, telephone interviews lack these non-verbal elements. To compensate for this absence, strategies such as enhanced verbal probing, reflective listening and journaling, and careful attention to vocal tone and pauses were employed to ensure the richness and depth of participant responses and maintain meaningful engagement.

Being new to qualitative research interviewing, preconceived assumptions could have limited or skewed the data collection process. As discussed in Chapter 4, van Manen's methodological themes (1990) were applied to guide the research and address these biases, particularly through the use of Gadamer's reconceptualised hermeneutic circle (2006). Furthermore, the interpretation of the data set could have been analysed in alternative ways. Van Manen (2002) notes that interpretation is not definitive, and individual insights deserve scrutiny. Keeping this in mind, this study incorporated collaborative analysis to enhance the validity of the findings.

8.5 Recommendations

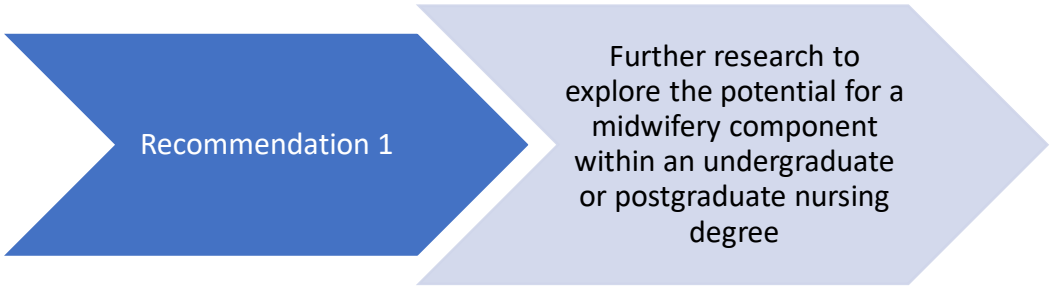
The sociopolitical relationship between nursing and midwifery in Australia is shaped by enduring historical tensions, entrenched professional boundaries, and regulatory frameworks that reinforce siloed identities (Reiger, 2000). Midwifery, grounded in woman-centred care and cultural continuity, has long advocated for autonomy and distinct professional recognition (International Confederation of Midwives, 2025), whereas nursing has traditionally operated within broader institutional hierarchies that

often subsume midwifery under generalist scopes. This dynamic has contributed to fragmented educational pathways and limited cross-disciplinary integration, particularly in rural and remote contexts where workforce shortages necessitate flexible, culturally safe maternity care (Onnis and Hunter, 2025). Addressing these divides requires research into educational reform and policy change that embeds reflexive, culturally responsive curricula, equipping nurses with the capacity to engage meaningfully with maternity principles while respecting professional distinctions.

Recognising the complexities involved in providing maternity care in rural and remote areas, this study highlights the need for targeted recommendations that address the gaps in research, education, practice, and policy. Five recommendations have been made under these key areas, which are visually represented in Figure 8.1. In focusing on actionable solutions within these four pillars, the aim is to improve the support provided to nurses, enhance the quality of care for pregnant women, and advocate for equitable access to midwifery services. These recommendations are not intended to create practitioners who function as pseudo midwives.

Figure 8.1 Recommendations from the research study

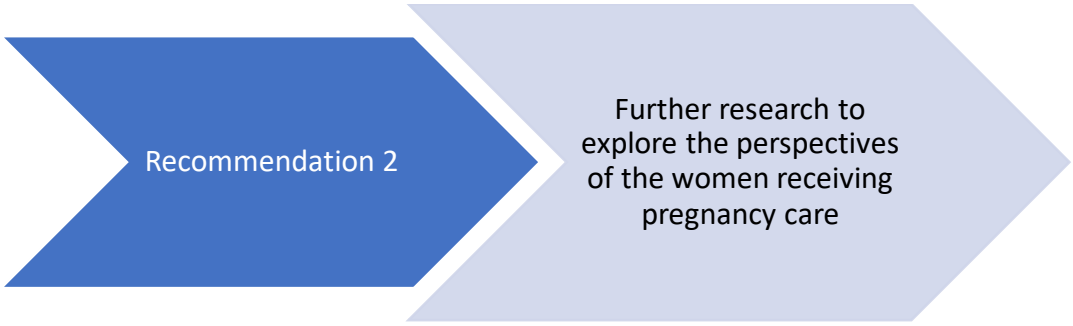
8.5.1 Recommendations for research



This research must consider the service providers' input whilst acknowledging that this would not be a pathway to midwifery registration but rather equipping rural and remote nurses with the skills they need within the generalist practice in which they work. All the participants in this study displayed feelings of inadequacy and unpreparedness. Despite attending education sessions in maternity skills, many suggested they would have felt more confident and prepared had they had the opportunity to learn the basics in the clinical area, as opposed to a simulated education setting. Postgraduate opportunities in 'speciality nursing' currently exist through tertiary education providers. Fields of acute care, emergency, paediatric, critical care, chronic disease and ageing, cardiac, perioperative and perianaesthesia (Deakin University, n.d.; Griffith University, n.d.; University of Technology Sydney [UTS], n.d.) as well as non-clinical advancement in nursing education, leadership and management (James Cook University, n.d.-a; Victoria University, n.d.) all prepare nurses for advanced roles.

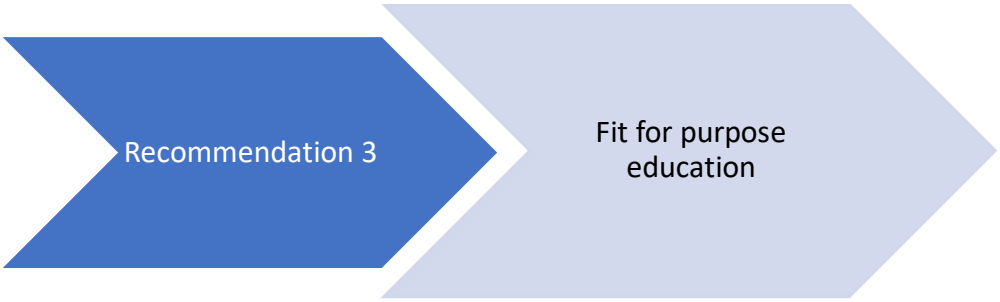
There are a number of courses and support networks specifically aimed at rural and remote nursing (CRANAplus, n.d.; Flinders University, n.d.-b; Northern Territory Health, n.d.). However, aside from the existing maternity-specific education available to rural and remote nurses (CRANAplus, 2024a; Queensland Health, 2018), if a nurse does not want to undertake a postgraduate midwifery course (James Cook University, n.d.-c; Notre Dame Australia University, n.d.), their exposure to maternity skills in a clinical area are limited.

It is recommended that tertiary education facilities undertake further research into the efficacy of a postgraduate course for generalist rural and remote nurses that encompasses a maternity skills component.



This study explored the experiences and perceptions of rural and remote nurses caring for pregnant women in the absence of a midwife. While maintaining an ethical approach, gaining the experiences and perceptions of pregnant women who have been cared for by a nurse rather than a midwife would contribute to the wider contextual understanding. Historically, the terminological distinction between nurses and midwives has often been conflated by professional organisations (Brundell et al., 2023; McKellar et al., 2019) and media representation (Garcia & Qureshi, 2024; González et al., 2023). This conflation raises significant questions regarding whether women, particularly those in rural and remote areas, fully comprehend the differences in the scope of practice between these two professions. For instance, as highlighted in the study, Ash's statement in Chapter 6 revealed that the parents under her care did not perceive a lack of confidence or knowledge on her part. Moreover, investigating whether this understanding, or lack thereof, impacts women's perceptions of the care they receive during pregnancy from nurses rather than midwives would provide valuable insights into improving maternity care in underserved region. Such an investigation is critical to advocating for equitable and culturally safe midwifery services in rural and remote areas

8.5.2 Recommendations for Education



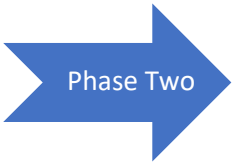
The nurses in this study spoke thoughtfully about their situations. They acknowledged their vulnerability and moral distress when caring for pregnant women whilst also

displaying professionalism and pride in their work. Their proposed solutions to the challenges they faced demonstrated a commitment to their profession, which, as Wang and Yu (2021) suggest is a key factor in reducing nursing attrition. One might argue that without firsthand experience in a particular area, a person cannot fully grasp the requirements of that role. This argument does seem true at first glance regarding the current planning and delivery of education in maternity skills for rural and remote nurses. However, hospital managers and nursing and midwifery educators must also navigate the complexities of rural and remote work, a fact acknowledged by the study participants. They did not assign blame but instead sought solutions. It is these potential solutions that are being presented as a recommendation on behalf of the nurses in this study.

According to Masso et al. (2019), fitness for purpose refers to the skills, knowledge, and attributes required by a nurse to meet the needs of the community they serve. The generalist nature of rural and remote nursing is due to the unique characteristics of the settings and communities that require healthcare, setting it apart from metropolitan and even regional health requirements. This comparison can also be applied to the nursing scope of practice. Whilst El Haddad (2016) and Masso et al. (2019) discuss the nebulous nature of practice readiness to newly graduated nurses, the comments from the participants in this study, despite their professional experience, concur that there is a lack of clarity in the level of expectation and responsibility when caring for pregnant women. Recommendation 1 for future research proposes educational initiatives to close this gap and better prepare nurses. However, prior to this occurring, there remains an educational gap.

This study has revealed that educational activities need to combine theory with a strong practical component. Participants reiterated their desire for hands-on, visual learning, a concept supported by Knowles et al. (2012) adult learning principles. It is recommended that, whatever their grade and role within an organisation, nurses, prior to going out to the rural and remote environment, attend a two phase introduction to the provision of maternity care. Once entrenched in the rural and remote environment, nurses will have access to phase three of this recommendation.

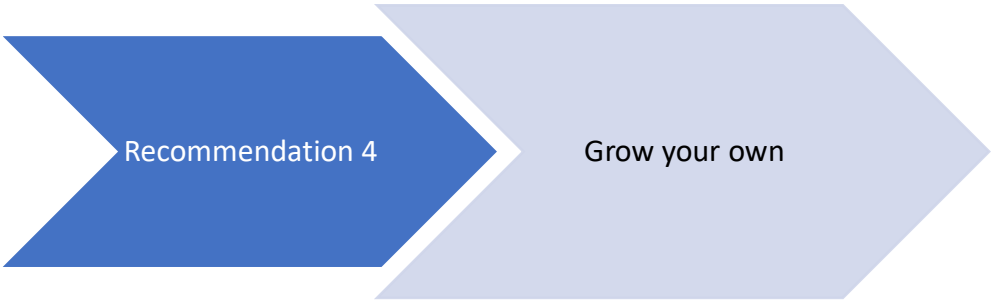
This phase would take the form of attending face-to-face theory and clinical simulation in the form of the imminent birth program (Queensland Health, 2018). This program is well-researched and, when delivered as its developers intended, meets the theoretical needs of its participants. Completing this before phase 2 will allow nurses to put theory into practice.



This phase would involve the nurse completing a minimum of 1 week working under the direct supervision of a midwife in a maternity ward. Being exposed to the midwifery setting would assist the nurses in exploring the basics of maternity care in a controlled environment, whilst building interprofessional relationships. Having exposure to a birthing environment would be advantageous. However, timing, availability and ethical factors need to be considered.

This phase will take the form of CPD. As identified in this, and others' research (Clinical Excellence Queensland, 2020; Glazebrook et al., 2004; Kenny & Duckett, 2003; Lazenby et al., 2020; Penz et al., 2007; Terry et al., 2021) rural and remote nurses need CPD activities that are rurally oriented, funded organisationally and accessible. The accessibility aspect of education delivery has already begun to be explored with virtual reality (VR) (Jans et al., 2023; Kouijzer et al., 2023; Lau et al., 2023; Prajapati & Kumar, 2025). Within Queensland, James Cook University is initiating Virtual Reality (VR) into teaching spaces (Kokkonen, 2019) and more specifically a project within Queensland Health has been designed for birthing simulation (Andre, 2023). Phase 3 CPD will involve either midwifery educators attending the remote facility to conduct simulated maternity scenarios or alternatively make use of virtual reality when available.

8.5.3 Recommendations for Practice



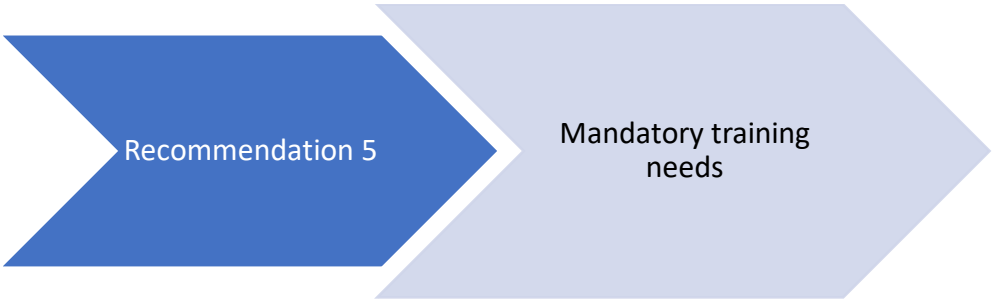
This recommendation suggests that universities expand their programs to conduct face-to-face residentials in more rural and remote clinical locations. As discussed throughout this thesis, the issues for nurses working in rural and remote areas are multifaceted. Participants frequently discussed how living in rural and remote areas affected their professional and personal lives. Nurses with rural or remote backgrounds, or those exposed to such environments during education or as graduates, fared better. A critical shortage of nurses in rural and remote locations is an ongoing concern in Australia (Australian Nursing and Midwifery Federation, 2023; Grobler et al., 2009; NRHA, 2024b) with reported figures of between only 25 and 28% (Department of Health and Aged Care, 2023b; Montgomery et al., 2025) of employed nurses choosing to practice in rural and remote areas. Several initiatives have been proposed, and the National Rural Health Alliance (2024b) developed a rural health, education and training fact sheet giving an overview of available pathways into rural health. This fact sheet brought together approaches aimed at addressing change through recruitment, opportunities, support and encouragement.

As identified by Montgomery et al. (2025), there is limited research into students from rural and remote areas studying nursing. However, it is evident that the complex challenges discussed throughout this thesis can also be applied to this group. Currently, there are two options for rural and remote students wishing to study nursing: attend university as an internal student, meaning moving away from home, or as an external student, studying online. Some universities offer mixed-mode learning, like James Cook University (2025) and Charles Darwin University (2025). Whilst this study option allows the student to complete most subjects online, there remains attendance at residential schools that are only offered at certain campuses. While small rural clinics cannot

realistically offer residential schools, students could benefit from accessing nearby facilities rather than travelling long distances.

Growing a unique workforce that is fit for practice encompasses much more than clinical skills. A desire for rural and remote living and attributes for rural and remote practice must be congruent. Research into the retention of rural and remote graduates (Wooley et al., 2020; Woolley et al., 2021), alongside the voices of participants in this study, suggests that immersive experiences influence long-term work location choices.

8.5.4 Recommendations for Policy



Addressing the critical gaps in healthcare provision for pregnant women in rural and remote areas necessitates the implementation of policy-driven mandates for targeted education of nurses. The findings of this research indicate that nurses frequently experience feelings of being inadequately prepared and face significant moral distress in delivering appropriate care, underscoring the pressing need for intervention. Policies mandating specialised education would ensure nurses acquire the requisite theoretical knowledge and practical skills to effectively manage maternity care in underserved, culturally diverse regions. Structured educational initiatives, including CPD programs and immersive training experiences, ought to be integrated into professional development frameworks. These programs should be specifically tailored to address the distinct challenges of rural and remote healthcare settings, providing accessible and contextually informed learning opportunities to enhance competency and confidence in practice.

A policy framework that mandates education for nurses in rural and remote areas would serve as a cornerstone in strengthening healthcare equity. Without such regulation, the disparity in maternity care between urban and rural populations is likely to persist, exacerbating inequalities. Evidence from studies on workforce retention and immersive training (Lemée et al., 2024; Russell et al., 2021) suggests that nurses who receive

adequate preparation are more likely to remain in rural and remote practice, contributing to sustainable healthcare solutions in underserved areas. Moreover, mandating maternity-related education through policy ensures organisational commitment to funding, accessibility, and resource allocation, all of which were barriers identified by participants in this study. In formalising these requirements, policymakers can foster a resilient nursing workforce capable of managing maternity care effectively in the absence of a midwife and enhancing maternal outcomes across Australia's rural landscapes.

8.6 Dissemination of research

The findings from this research have been disseminated through various platforms, ensuring wide-reaching impact and engagement with the academic, clinical, and broader healthcare communities. These insights were shared in peer-reviewed journals, including the integrative review (as shown in chapter 2) titled 'What challenges and enablers elicit job satisfaction in rural and remote nursing in Australia', published in Nurse Education in Practice (McElroy et al., 2022). A presentation of the research findings 'The experiences and perceptions of rural and remote nurses who provide care to pregnant women in the absence of midwives' was published in the international Rural and Remote Health Journal (McElroy et al., 2024). Additionally, a lighter yet compelling article titled 'Would you prefer a midwife, nurse or a cleaner?', appeared in the Rural Health Alliance journal 'Partyline' (McElroy et al., 2025) which brought the study's implications to a broader audience, emphasising the critical disparities in maternity care.

8.6.1 Publication

McElroy, M., Wicking, K., Harvey, N., & Yates, K. (2025). Would you prefer a midwife, nurse or a cleaner? *Rural Health Alliance Partyline*, 90. https://www.ruralhealth.org.au/partyline/article/would-you-prefer-midwife-nurse-or-cleaner

Would you prefer a midwife, a nurse or a cleaner?

Navigating the storms

By McElroy, M., Wicking, K., Harvey, N., & Yates, K
College of Healthcare Services, James Cook University
Issue: 90

You are a pregnant woman living in rural and remote Australia and go into labour. Who would you want to look after you when you go into labour? Most would say a midwife, a highly trained health professional, specialising in the care of women during pregnancy, labour, and after birth. Unfortunately, the reality of rural and remote living is that midwives are not often accessible to pregnant women. An important contributor to this is the closure of 40% of midwifery units in Australia over the last two and half decades. As a result, women often have to travel long distances to receive midwifery care, leaving their homes and families behind.

What does this mean? Simply put, if a midwife is not available to care for pregnant women in these regions, other healthcare professionals must step in to fill the gap. In many cases, this responsibility falls to registered nurses. To understand the experiences and perceptions of rural and remote nurses providing care to pregnant women, a phenomenological study was conducted.

Midwifery Group Practice: A necessary step forward for rural Victorian maternity care

Search is on for Australia's best nurses and midwives

Mentor program supporting Aboriginal & Torres Strait Islander nurses, midwives & allied health professionals

The nurses interviewed in this study were immensely proud of their profession and their level of knowledge and skills. The stories they willingly shared were honest and raw. They talked about the generalist nature of nursing in a rural and remote location and their ability to extend their scope of practice to meet the needs of the community; a community of which they were proud to be part of. However, they also said their scope was often stretched.

Most nurses had attended education in maternity care; however, the education was infrequent and often prioritised as unimportant by their health service. One nurse talked about having to travel for 3 days for an 8-hour education session. Consequently, the nurses in this study felt overwhelmingly underprepared when providing care to pregnant women. They described their extended clinical skills and knowledge, however often felt these were not relevant when delivering maternity care.

A predominant question asked by participants in this study was 'is being a nurse enough'? These nurses were fearful of pregnancy-focused clinical situations, as they knew enough to know they didn't know enough! They felt inadequate and unsupported. They did, however, feel resigned to practicing this way as they were committed to providing the best care they could to their community. This commitment drove them to set aside their fears, with one nurse stating – *'I would cope, though I wouldn't enjoy it'*.

The nurses in this study felt passionate that nursing students need to be better prepared for the realities of working and living in rural and remote locations, a concept that is being addressed by some universities. Transparency regarding the challenges of working in these environments should be openly discussed, as well as exposure through clinical placement opportunities. The concept of 'growing our own', in the context of the rural and remote workforce, is an attractive recruitment strategy to produce fit-for-purpose graduate nurses. Ongoing specific and suitably delivered education, that meets the needs of nurses, must be part of the solution for rural midwifery care.

We should no longer accept statements like the one shared by a very experienced nurse in this study, who remarked, "*I think you are talking to the worst person in the world with regards obstetrics, women would be better off coming in to see the cleaner than me*". Investment in continuous education and support for nurses can bridge the gap in rural maternity care, empowering them with confidence and skills. Together, we can ensure every woman receives the care she deserves.

*McElroy, M., Wicking, K., Harvey, N., & Yates, K. (2024). The experiences and perceptions of rural and remote nurses who provide care to pregnant women in the absence of midwives. Rural And Remote Health, 24. https://doi.org/10.22605/RRH8721

8.6.2 Conferences and events

The research findings were also actively presented at various professional and academic events and conferences, underscoring their relevance to ongoing discussions on rural healthcare. Beginning with a research proposal presentation during the Australian College of Midwives International Day of the Midwife event in May 2021, the integrative review findings achieved success as poster presentation first prize at Townsville University Hospital's Research Week in October 2021 and was also presented at the Council of Deans for Nurses and Midwives Conference (CDNM, 2022).

The research outcomes titled ‘Experiences and perceptions of rural and remote nurses caring for pregnant women’ were presented at the CRANAplus Remote Nursing & Midwifery Conference under the theme ‘Clinicians, changemakers – celebrating inspiring people & practice’ (2024b). Additionally, the findings have been formally accepted for presentation at the Are You Remotely Interested (AYRI) conference, themed ‘Keeping on Track for Health Equity in the Bush,’ scheduled to occur in July 2025 (Centre for Rural and Remote Health [CRRH] and James Cook University [JCU], 2025).

This thorough dissemination strategy reflects a strong commitment to addressing health disparities through academic engagement. It emphasises the diverse efforts to impact policy formation, clinical practice, and future scholarly research within rural and remote healthcare.

8.7 Conclusions

The closure of maternity units in rural and remote areas of Australia has had far-reaching impacts, extending beyond the midwifery profession and the affected communities that experience inequality. Using interpretive phenomenology, this study has given insight into how rural and remote nurses perceive and experience the care provided to pregnant women in the absence of a midwife. Three major themes were revealed: ‘Being in the world of the rural and remote nurse’; ‘Scope of practice – unprepared or underprepared’; and ‘Moral distress’.

This final chapter has discussed how I, as a researcher, clinician and lecturer, have changed over the period of completing this research and writing this thesis. The strengths and limitations of this study have been described and acknowledged. Most importantly, the dialogue undertaken with the participants in this study has been interpreted to provide a number of recommendations for future research and clinical practice. These recommendations are aimed at the current rural and remote nurses, but also at strengthening the future rural and remote workforce and improving midwifery outcomes for rural women.

References

Aarsand, L., & Aarsand, P. (2018). Framing and switches at the outset of qualitative research interviews. *Qualitative Research*, *19*(6), 635-652. https://doi.org/10.1177/1468794118816623

Abdel-Latif, M. E., Bajuk, B., Oei, J., Vincent, T., Sutton, L., & Lui, K. (2006). Does rural or urban residence make a difference to neonatal outcome in premature birth? A regional study in Australia. *Archives of Disease in Childhood - Fetal and Neonatal Edition*, *91*(4), F251-F256. https://doi.org/10.1136/adc.2005.090670

Abdul Majid, M. A., Othman, M., Mohamad, S. F., Lim, S., & Yusof, A. (2017). Piloting for interviews in qualitative research: Operationalization and lessons learnt. *International Journal of Academic Research in Business and Social Sciences, 7*(4), 1073-1080. https://doi.org/10.6007/IJARBSS/v7-i4/2916

Adams, M., Lazarsfeld-Jensen, A., & Francis, K. (2019). The implications of isolation for remote industrial health workers. *Rural and Remote Health*, *19*(2), 5001. https://doi.org/10.22605/RRH5001

Adriaenssens, J., de Gucht, V., & Maes, S. (2012). The impact of traumatic events on emergency room nurses: Findings from a questionnaire survey. *International Journal of Nursing Studies*, *49*(11), 1411-1422. https://doi.org/https://doi.org/10.1016/j.ijnurstu.2012.07.003

Alele, F., & Malau-Aduli, B. (2023). *An introduction to research methods for undergraduate health profession students*. James Cook University.

Aliakbari, F., Parvin, N., Heidari, M., & Haghani, F. (2015). Learning theories application in nursing education. *Journal of Education and Health Promotion*, 4. https://doi.org/10.4103/2277-9531.151867

Allen, P., May, J., Pegram, R., & Shires, L. (2020). "It's mostly about the job' - putting the lens on specialist rural retention. *Rural and Remote Health*, *20*(1), 5299. https://search.informit.org/doi/10.3316/informit.152454989461044

Almathami, H., Win, K., & Vlahu-Gjorgievska, E. (2020). Barriers and facilitators that influence telemedicine-based, real-time, online consultation at patients' homes: Systematic literature review. *Journal of Medical Internet Research*, *22*(2), e16407. https://doi.org/10.2196/16407

Alsaigh, R., & Coyne, I. (2021). Doing a hermeneutic phenomenology research underpinned by Gadamer's philosophy: A framework to facilitate data analysis. *International Journal of Qualitative Methods*, *20*. https://doi.org/10.1177/16094069211047820

Amin, S. (2020). The psychology of coronavirus fear: Are healthcare professionals suffering from corona-phobia? *International Journal of Healthcare Management*, *13*(3), 249-256. https://doi.org/10.1080/20479700.2020.1765119

Andre, J. (2023, August 27). Virtual reality in outback Queensland hopes to deliver safer births and fill skills gaps. *ABC North West Queensland*. https://amp.abc.net.au/article/102776052

Archibald, M., Ambagtsheer, R., Casey, M., & Lawless, M. (2019). Using Zoom videoconferencing for qualitative data collection: Perceptions and experiences of researchers and participants. *International Journal of Qualitative Methods*, *18*. https://doi.org/10.1177/1609406919874596

Armstrong-Jones, R. (1917). The psychology of fear and the effects of panic fear in wartime. *Journal of Mental Science*, *63*(262), 346-389. https://pmc.ncbi.nlm.nih.gov/articles/PMC5250721/

Australian Bureau of Agricultural and Resource Economics and Sciences. (2023). *Snapshot of Australia's agricultural workforce*. Australian Government. https://www.agriculture.gov.au/abares/products/insights/snapshot-of-australias-agricultural-workforce

Australian Bureau of Agricultural and Resource Economics and Sciences. (2024). *Snapshot of Australian agriculture 2024*. Australian Government. Retrieved 11.09.2024 from https://www.agriculture.gov.au/abares/products/insights/snapshot-of-australian-agriculture

Australian Bureau of Statistics. (2018). *Australian Statistical Geography Standard (ASGS)*. https://www.abs.gov.au/ausstats/abs@.nsf/mf/1270.0.55.005

Australian Bureau of Statistics. (2022). *Regional population*. Retrieved 01.09.2023 from https://www.abs.gov.au/statistics/people/population/regional-population/latest-release

Australian College of Midwives & Rural Doctors Association of Australia. (2023). *National forum to drive solutions to rural maternity crisis*. https://www.rdaa.com.au/common/Uploaded%20files/_Aus/Media%20releases%20-%202023/MR%20-%20National%20forum%20delivers%20key%20solutions%20for%20rural%20birthing%20challenges%20-%20final%20-%2030-8-23.pdf

Australian Government. (2009). *Closing the Gap in Indigenous disadvantage: The challenge for Australia*. http://www.dss.gov.au/sites/default/files/documents/05_2012/closing_the_gap.pdf

Australian Government. (2023). *The national rural and remote nursing generalist framework, 2023 - 2027*. https://www.health.gov.au/resources/publications/the-national-rural-and-remote-nursing-generalist-framework-2023-2027

Australian Government. (2024). *Closing the gap: Commonwealth 2023 annual report, Commonwealth 2024 Implementation plan.* ISSN 2653-5777/ISSN 2653-5750. https://www.niaa.gov.au/sites/default/files/documents/2024-02/ctg-annual-report-and-implementation-plan.pdf

Australian Health Ministers' Conference. (2011). National maternity services plan 2010-2015. Australian Government Department of Health and Ageing. https://www.health.gov.au/resources/publications/national-maternity-services-plan-2010

Australian Health Practitioner Regulation Agency. (2023). *Annual report 2022/23*. https://www.ahpra.gov.au/Publications/Annual-reports/Annual-report-2023.aspx

Australian Health Practitioner Regulatory Agency. (n.d.). *Continuing professional development*. https://www.ahpra.gov.au/Registration/Registration-Standards/CPD.aspx

Australian Institute of Health and Welfare. (2009). *Nursing and midwifery labour force 2009*. Australian Government. https://www.aihw.gov.au/reports/workforce/nursing-midwifery-labour-force-2009/contents/highlights

Australian Institute of Health and Welfare. (2018). *Survey of health care: Selected findings for rural and remote Australians*. Australian Government. https://www.aihw.gov.au/reports/rural-remote-australians/survey-health-care-selected-findings-rural-remote

Australian Institute of Health and Welfare. (2019). *Hospital resources 2017–18: Australian hospital statistics*. Australian Government. https://www.aihw.gov.au/reports/hospitals/hospital-resources-2017-18-ahs

Australian Institute of Health and Welfare. (2020). *Australia's health 2020* (Report No. 17, Aus 231). Australian Government. https://www.aihw.gov.au/reports/australias-health/australias-health-2020-data-insights/summary

Australian Institute of Health and Welfare. (2021). *Profile of Indigenous Australians*. Australian Government. Retrieved 10.08.2023 from https://www.aihw.gov.au/reports/australias-welfare/profile-of-indigenous-australians

Australian Institute of Health and Welfare. (2022a). *Rural and remote health*. Australian Government. Retrieved August 24, 2023, from https://www.aihw.gov.au/reports/rural-remote-australians/rural-and-remote-health

Australian Institute of Health and Welfare. (2022b). *Health workforce*. Australian Government. Retrieved 12.09.2023 from https://www.aihw.gov.au/reports/workforce/health-workforce

Australian Institute of Health and Welfare. (2023a). *Australia's mothers and babies*. Australian Government. Retrieved 12.03.2024 from https://www.aihw.gov.au/reports/mothers-babies/australias-mothers-babies

Australian Institute of Health and Welfare. (2023b). *Maternal deaths*. Australian Government. Retrieved 12.03.2024 from https://www.aihw.gov.au/reports/mothers-babies/maternal-deaths-australia

Australian Institute of Health and Welfare. (2023c). *Aboriginal and Torres Strait Islander mothers and babies*. Australian Government. https://www.aihw.gov.au/reports/mothers-babies/indigenous-mothers-babies

Australian Institute of Health and Welfare. (2024a). *Health workforce*. Australian Government. https://www.aihw.gov.au/reports/workforce/health-workforce

Australian Institute of Health and Welfare. (2024b). *Social determinants of health*. Australian Government. https://www.aihw.gov.au/reports/australias-health/social-determinants-of-health

Australian Institute of Health and Welfare. (2024c). *Rural and remote health*. Australian Government. https://www.aihw.gov.au/reports/rural-remote-australians/rural-and-remote-health

Australian Nursing and Midwifery Federation. (2023). *National rural and remote nursing generalist framework consultation 2023-2027*. https://www.health.gov.au/sites/default/files/2023-03/the-national-rural-and-remote-nursing-generalist-framework-2023-2027.pdf

Aveyard, H. (2019). *Doing a literature review in health and social care: A practical guide* (4th ed.). Open University Press.

Badu, E., O'Brien, A. P., Mitchell, R., Rubin, M., James, C., McNeil, K., Nguyen, K., & Giles, M. (2020). Workplace stress and resilience in the Australian nursing workforce: A comprehensive integrative review. *International Journal of Mental Health Nursing*, *29*(1), 5-34. https://pubmed.ncbi.nlm.nih.gov/31917519/

Ball, L., Curtis, P., & Kirkham, M. (2003). Why do midwives leave? *Midwifery Matters, 96,* 8–10. https://web.p.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=0&sid=454992cc-22aa-4fac-9c41-ce6c93e2661d%40redis

Barbieri, S., & Jorm, L. (2019). Travel times to hospitals in Australia. *Scientific Data*, *6*(1), 248. https://doi.org/10.1038/s41597-019-0266-4

Barclay, L., & Kornelsen, J. (2016). The closure of rural and remote maternity services: Where are the midwives? *Midwifery*, *38*, 9-11. https://doi.org/10.1016/j.midw.2016.03.007

Barclay, L., Kornelsen, J., Longman, J., Robin, S., Kruske, S., Kildea, S., Pilcher, J., Martin, T., Grzybowski, S., Donoghue, D., Rolfe, M., & Morgan, G. (2016). Reconceptualising risk: Perceptions of risk in rural and remote maternity service planning [Article]. *Midwifery*, *38*, 63-70. https://doi.org/10.1016/j.midw.2016.04.007

Barlem, E. L. D., Lunardi, V. L., Lunardi, G. L., Dalmolin, G. d. L., & Tomaschewski, J. G. (2012). The experience of moral distress in nursing: the nurses' perception. *Revista da Escola de Enfermagem da USP*, *46*, 681-688. https://doi.org/10.1590/S0080-62342012000300021

Beck, C. (1994). Phenomenology: Its use in nursing research. *International Journal of Nursing Studies*, *31*(6), 499-510. https://doi.org/https://doi.org/10.1016/0020-7489(94)90060-4

Beks, H., Healey, C., & Schlicht, K. (2018). 'When you're it': A qualitative study exploring the rural nurse experience of managing acute mental health presentations. *Rural and Remote Health*, *18*(3), 1-11. https://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=131329908&site=ehost-live

Bell, D. (2020). James Bernauer, S.J., Jesuit Kaddish: Jesuits, Jews, and holocaust remembrance. *Journal of Jesuit Studies*, *8*(1), 151-153. https://doi.org/10.1163/22141332-0801P006-17

Belton, S., Campbell, M., Foxley, S., Hamerton, B., Gladman, J., McGrath, S., Piller, N., Saunders, N., & Vaughan, F. (2010). Evaluating the long-term effectiveness of the Maternity Emergency Care course in remote Australia. *Women and Birth*, *23*(2), 60-66. https://doi.org/https://doi.org/10.1016/j.wombi.2009.08.004

Benner, P., & Wrubel, J. (1988). Caring comes first. *The American Journal of Nursing*, *88*(8), 1072-1075. https://doi.org/10.2307/3470953

Berndtsson, I., Friberg, F., Claesson, S., & Öhlén, J. (2007). Issues about thinking phenomenologically while doing phenomenology. *Journal of Phenomenological Psychology*, *38*(2), 256-277. https://doi.org/10.1163/156916207X234293

Best, C. (2021). Nursing through the lens of storytelling. *Medical Humanities*. https://blogs.bmj.com/medical-humanities/2021/12/30/nursing-through-the-lens-of-storytelling/

Black Dog Institute. (n.d.). *Signs & symptoms post-traumatic stress disorder*. Retrieved December 12, 2024, from https://www.blackdoginstitute.org.au/resources-support/post-traumatic-stress-disorder/signs/

Bond, C. J., & Singh, D. (2020). More than a refresh required for closing the gap of Indigenous health inequality. *Medical Journal of Australia*, *212*(5), 198-199. e191. https://onlinelibrary.wiley.com/doi/abs/10.5694/mja2.50498

Booth, T., Emerson, C., Hackney, M., & Souter, S. (2016). Preparation of academic nurse educators. *Nurse Education in Practice*, *19*, 54-57. https://doi.org/10.1016/j.nepr.2016.04.006

Bowie, B. H., & Wojnar, D. (2014). Using phenomenology as a research method in community-based research. In M. De Chesney (Ed.), *Nursing research using phenomenology: Qualitative designs and methods* (pp. 145-156). Springer.

Bowles, N. (1995). Storytelling: A search for meaning within nursing practice. *Nurse Education Today*, *15*(5), 365-369. https://doi.org/10.1016/S0260-6917(95)80010-7

Bradford, N. K., Caffery, L. J., & Smith, A. C. (2016). Telehealth services in rural and remote Australia: A systematic review of models of care and factors influencing success and sustainability. *Rural and Remote Health*, *16*(4), 1-23. https://pubmed.ncbi.nlm.nih.gov/27744708/

Bradow, J., De-Vitry Smith, S., Davis, D., & Atchan, M. (2021). A systematic integrative review examining the impact of Australian rural and remote maternity unit closures. *Midwifery*, *103*, 103094. https://doi.org/https://doi.org/10.1016/j.midw.2021.103094

Bragg, S., & Bonner, A. (2015). Losing the rural nursing workforce: Lessons learnt from resigning nurses. *Australian Journal of Rural Health*, *23*(6), 366-370. https://doi.org/10.1111/ajr.12251

Braun, V., & Clarke, V. (2022). *Thematic analysis: A practical guide*. SAGE Publications Ltd.

Brew, B., Inder, J., Allen, J., Thomas, B., & Kelly, B. (2016). The health and wellbeing of Australian farmers: A longitudinal cohort study. *BMC Public Health*, *16*, 988. https://doi.org/10.1186/s12889-016-3664-y

Brinkmann, S., & Kvale, S. (2015). *Interviews: Learning the craft of qualitative research interviewing* (3rd ed.). SAGE.

Brody, R. (2014, March 27). Why does It matter if Heidegger was anti-semitic? *The New Yorker*. https://www.newyorker.com/culture/richard-brody/why-does-it-matter-if-heidegger-was-anti-semitic

Brown, A., De Costa, C., & Guo, F. (2020). *Our food future: Trends and opportunities*. ABARES, Research Report 20.1, Canberra, DOI: 10.25814/5d9165cf4241d

Brown, M. E. L., & Dueñas, A. N. (2020). A medical science educator's guide to selecting a research paradigm: Building a basis for better research. *Medical Science Educator*, *30*(1), 545-553. https://doi.org/10.1007/s40670-019-00898-9

Brumby, S., Martin, J., & Willder, S. (2006). The sustainable farm families project: Changing farmer attitudes to health. *Rural and Remote Health*, 9(1), 1012. https://doi.org/10.22605/RRH1012

Brundell, K., Vasilevski, V., Farrell, T., & Sweet, L. (2023). Language used to describe the Australian midwifery workforce: A change opportunity to improve professional identity. *Women and Birth*, *36*(4), 393-395. https://doi.org/https://doi.org/10.1016/j.wombi.2022.11.013

Bull, A., Bayes, S., & Geraghty, S. (2023). Single registered midwives contributing care for general patients: A scoping study. *Australian Journal of Advanced Nursing*, *40*(2), 15 - 22. https://doi.org/https://doi.org/10.37464/2023.402.725

Burns, M., & Peacock, S. (2018). Interpretive phenomenological methodologists in nursing: A critical analysis and comparison. *Nursing Inquiry*, *26*(2), e12280. https://doi.org/10.1111/nin.12280

Buykx, P., Humphreys, J., Wakerman, J., & Pashen, D. (2010). Systematic review of effective retention incentives for health workers in rural and remote areas: Towards evidence-based policy. *Australian Journal of Rural Health*, *18*, 102-109. https://pubmed.ncbi.nlm.nih.gov/20579020/

Byrne, A.L., Harvey, C., Chamberlain, D., Baldwin, A., Heritage, B., & Wood, E. (2020). Evaluation of a nursing and midwifery exchange between rural and metropolitan hospitals: A mixed methods study. *PLoS ONE*, *15*(7), e0234184. https://pubmed.ncbi.nlm.nih.gov/32609775/

Callander, E., Sidebotham, M., Lindsay, D., & Gamble, J. (2021). The future of the Australian midwifery workforce – Impacts of ageing and workforce exit on the number of registered midwives. *Women and Birth*, *34*(1), 56-60. https://doi.org/10.1016/j.wombi.2020.02.023

Cambridge dictionary. (n.d.-a). Facticity. In *Cambridge advanced learner's dictionary & thesaurus* Retrieved March 5, 2024, from https://dictionary.cambridge.org/dictionary/english/facticity

Cambridge dictionary. (n.d.-b). Unprepared. In *Cambridge advanced learner's dictionary & thesaurus*. Retrieved November 17, 2023, from https://dictionary.cambridge.org/dictionary/english/unprepared

Cambridge dictionary. (n.d.-c). Adverse conditions. In *Cambridge advanced learner's dictionary & thesaurus* Retrieved December 1, 2024, from https://dictionary.cambridge.org/dictionary/english/adverse-conditions

Cameron, B., & Cameron, S. (2001). Outcomes in rural obstetrics, Atherton Hospital 1991-2000. *Australian Journal of Rural Health*, *9 Suppl 1*, S39-42. https://doi.org/10.1046/j.1440-1584.9.s1.4.x

Carnesten, H., Wiklund Gustin, L., Skoglund, K., & von Heideken Wågert, P. (2023). Caring through barriers-Newly graduated registered nurses' lived experiences in emergency departments during the COVID-19 pandemic. Journal of advanced nursing, 79(6), 2269–2279. https://doi.org/10.1111/jan.15585

Centre for Rural and Remote Health & James Cook University. (2025). *Keeping on track for health equity in the bush*. Mount Isa. https://www.crrh.jcu.edu.au/conferences/are-you-remotely-interested-conference/

Centre for Rural and Remote Health & James Cook University. (n.d.). *Student placements: Nursing and midwifery*. Retrieved April 8, 2024, from https://www.crrh.jcu.edu.au/students/student-placements/

Charles Darwin University. (2025). *Remote placement (NT) application*. Retrieved February 2, 2025, from https://www.cdu.edu.au/health/student-experience/remote-placement-nt-application

Chinnis, A., Summers, D., Doerr, C., Paulson, D., & Davis, S. (2001). Q methodology: A new way of assessing employee satisfaction. *The Journal of Nursing Administration*, *31*(5), 252-259. https://pubmed.ncbi.nlm.nih.gov/11388161/

Christensen, L., & Simmons, L. (2019). *The scope of practice for academic nurse educators and academic clinical nurse educators*. Lippincott Williams & Wilkins.

Clapper, T. C. (2010). Beyond Knowles: What those conducting simulation need to know about adult learning theory. *Clinical Simulation in Nursing*, *6*(1), e7-e14. https://www.sciencedirect.com/science/article/abs/pii/S1876139909005015

Clark, P., Crawford, T. N., Hulse, B., & Polivka, B. J. (2021). Resilience, moral distress, and workplace engagement in emergency department nurses. *Western Journal of Nursing Research*, *43*(5), 442-451. https://pubmed.ncbi.nlm.nih.gov/32909515/

Clarke, V., & Braun, V. (2018). Using thematic analysis in counselling and psychotherapy research: A critical reflection. *Counselling and Psychotherapy Research*, *18*(2), 107 - 110. https://doi.org/10.1002/capr.12165

Clinical Excellence Queensland. (2019). *Rural maternity taskforce report*. https://clinicalexcellence.qld.gov.au/sites/default/files/docs/maternity/rural-maternity-taskforce-report.pdf

Clinical Excellence Queensland. (2020). *Imminent birth education program*. Queensland Government. https://clinicalexcellence.qld.gov.au/improvement-exchange/imminent-birth-education-program

Coelho, C. M., Suttiwan, P., Arato, N., & Zsido, A. N. (2020). On the nature of fear and anxiety triggered by COVID-19. *Frontiers in Psychology*, *11*, 581314. https://doi.org/10.3389/fpsyg.2020.581314

Cohen, M., & Omery, A. (1994). Schools of phenomenology: Implications for research. In J. Morse (Ed.), *Critical issues in qualitative research* (pp. 136-156). SAGE Publications, Inc.

Cohen, M., Kahn, D., & Steeves, R. (2000). *Hermeneutic phenomenological research: A practical guide for nurse researchers*. SAGE Publications, Inc. https://doi.org/10.4135/9781452232768

Connell, J. (2018). Imminent birth education program. *Australian Nursing & Midwifery Journal*, *26*(1), 46. https://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=130296259&site=ehost-live

Connell, J., Kelly, J., & Nagle, C. (2019). Imminent birth education for rural and remote settings: An evaluation study. *Australian Journal of Rural Health*, *00*(0), 1-7. https://doi.org/10.1111/ajr.12547

Cooper, A. L., Brown, J. A., Rees, C. S., & Leslie, G. D. (2020). Nurse resilience: A concept analysis. *International Journal of Mental Health Nursing*, *29*(4), 553-575. https://doi.org/10.1111/inm.12721

Cooper, E. (2009). Creating a culture of professional development: A milestone pathway tool for registered nurses. *The Journal of Continuing Education in Nursing*, *40*(11), 501-508. https://pubmed.ncbi.nlm.nih.gov/19904863/

Council of Australian Governments [COAG]. (2017). *National framework for maternity services (NFMS).* https://www.coaghealthcouncil.gov.au/Projects/National-Framework-for-Maternity-Services

Council of Deans of Nursing and Midwifery. (2022, March 29–30). Future-proofing the profession: A think tank for nursing and midwifery [Conference]. Sunshine Coast, QLD, Australia. https://www.cdnm.edu.au/march-2022-cdnm-symposium

Cramer, J. (1994). Finding solutions to support remote area nurses. *Australian Nursing Journal*, *2*(6), 21-25. https://pubmed.ncbi.nlm.nih.gov/7866558/

CRANAplus. (2018). *Framework for remote and isolated practice*. https://crana.org.au/uploads/pdfs/CRANA-Framework-for-Remote-and-Isolated-Practice-2018.pdf

CRANAplus. (2024a). *Maternity Emergency Care [MEC]*. https://crana.org.au/learning-opportunities/courses/maternity-emergency-care

CRANAplus. (2024b, October 9–11). Clinicians, changemakers – Celebrating inspiring people & practice [Conference]. Adelaide, SA, Australia. https://crana.org.au/conference

CRANAplus. (n.d.). *New remote area nurses*. https://crana.org.au/work-rural-remote/how-we-help/new-rans

Creswell, J., & Creswell, J. (2018). *Research design: Qualitative, quantitative & mixed methods approaches* (5th International student ed.). SAGE Publications, Inc.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th International ed.). Pearson.

Crotty, M. (1997). Tradition and culture in Heidegger's being and time. *Nursing Inquiry*, *4*(2), 88-98. https://doi.org/10.1111/j.1440-1800.1997.tb00082.x

Crowther, S., Ironside, P., Spence, D., & Smythe, L. (2017). Crafting stories in hermeneutic phenomenology research: A methodological device. *Qualitative Health Research*, *27*(6), 826-835. https://doi.org/10.1177/1049732316656161

Curran, M. (2014). Examination of the teaching styles of nursing professional development specialists, part I: Best practices in adult learning theory, curriculum development, and knowledge transfer. *The Journal of Continuing Education in Nursing*, *45*(5), 233. https://pubmed.ncbi.nlm.nih.gov/24779716/

Cusack, L., Smith, M., Hegney, D., Rees, C. S., Breen, L. J., Witt, R. R., Rogers, C., Williams, A., Cross, W., & Cheung, K. (2016). Exploring environmental factors in nursing workplaces that promote psychological resilience: Constructing a unified theoretical model. *Frontiers in Psychology*, *7*, 600. https://pubmed.ncbi.nlm.nih.gov/27242567/

Cushing, M. (2020). Gadamer's philosophical concept of "prejudice" and its use in comparative theology. *The Journal of Interreligious Studies, 29*. https://irstudies.org/index.php/jirs/article/view/423/467

Davidson, J., & di Gregorio, S. (2011). Qualitative research and technology: In the midst of a revolution. In N. Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research* (4th ed., pp. 627-643). Sage.

Davis, A. (1973). *The phenomenological approach in nursing research in doctoral preparation for nurses with emphasis on the psychiatric field.* University of California.

Deakin, H., & Wakefield, K. (2014). Skype interviewing: Reflections of two PhD researchers. *Qualitative research*, *14*(5), 603-616. https://doi.org/10.1177/1468794113488126

Deakin University. (n.d.). *Nursing postgraduate*. https://www.deakin.edu.au/__data/assets/pdf_file/0014/2630030/2303.02-NUR-PG-Nursing-Course-Guide-RGB-ACCESSBILE.pdf

Decelle, G. (2016). Andragogy: A fundamental principle of online education for nursing. *Journal of Best Practices in Health Professions Diversity*, *9*(2), 1263-1273. https://www.jstor.org/stable/26554258

Department of Health. (2019). *Modified monash model*. Australian Government. https://www.health.gov.au/resources/publications/modified-monash-model-fact-sheet?language=en

Department of Health and Aged Care. (2019). *Midwives*. https://hwd.health.gov.au/resources/publications/factsheet-midw-2019.pdf

Department of Health and Aged Care. (2023a). *Nurses and midwives dashboard*. https://hwd.health.gov.au/nrmw-dashboards/index.html

Department of Health and Aged Care. (2023b). *Summary statistics, nursing and midwifery professions*. https://hwd.health.gov.au/resources/data/summary-nrmw.html

Department of Health and Aged Care. (2024). *Unleashing the Potential of our Health Workforce – Scope of practice review final report*. https://www.health.gov.au/sites/default/files/2024-11/unleashing-the-potential-of-our-health-workforce-scope-of-practice-review-final-report_0.pdf

Department of Health and Ageing. (2009). Improving maternity services in Australia: The report of the Maternity Services Review. Australian Government. https://catalogue.nla.gov.au/catalog/4561610

Dewey, J. (2011). *How We Think*. Project Gutenberg.

Dewi, S. P., Kasim, R., Sutarsa, I. N., & Dykgraaf, S. H. (2024). A scoping review of the impact of extreme weather events on health outcomes and healthcare utilization in rural and remote areas. *BMC Health Services Research*, *24*(1), 1333. https://doi.org/10.1186/s12913-024-11695-5

Dilthey, W. (1985). *Poetry and experience*, Princeton University Press, Ed. Vol. V.

Dixon, J., & Welch, N. (2000). Researching the rural–metropolitan health differential using the 'social determinants of health'. *Australian Journal of Rural Health*, *8*(5), 254-260. https://doi.org/10.1046/j.1440-1584.2000.00327.x

Donnellan-Fernandez, R. E., Creedy, D. K., Callander, E. J., Gamble, J., & Toohill, J. (2020). Differential access to continuity of midwifery care in Queensland, Australia. *Australian Health Review*, *45*(1), 28-35. https://pubmed.ncbi.nlm.nih.gov/32854818/

Doolan-Noble, F., Tumilty, E., McAuley, K., & Stokes, T. (2021). How rural nurses in southern New Zealand navigate their ethical landscape—A qualitative study. *Australian Journal of Rural Health*, *29*(3), 332-340. https://pubmed.ncbi.nlm.nih.gov/34146365/

Dreyfus, H. L. (1993). Heidegger's critique of the Husserl/Searle account of intentionality. *Social Research*, *60*(1), 17-38. https://www.jstor.org/stable/40970727

Dunbabin, J., & Levitt, L. (2003). Rural origin and rural medical exposure: Their impact on the rural and remote medical workforce in Australia. *Rural and Remote Health*, *3*(2), 1-17. https://doi.org/10.22605/RRH212

Dunbar, R. (2022). *How religion evolved: And why it endures*. Penguin Books.

Dyar, K. L. (2022). Qualitative inquiry in nursing: Creating rigor. *Nursing Forum*, *57*(1), 187-200. https://doi.org/10.1111/nuf.12661

East, L., Jackson, D., O'Brien, L., & Peters, K. (2010). Storytelling: An approach that can help to develop resilience. *Nurse Researcher*, *17*(3). https://pubmed.ncbi.nlm.nih.gov/20450085/

Edith Cowan University. (n.d.). *Clinical placements*. Retrieved February 2, 2025, from https://www.ecu.edu.au/schools/nursing-and-midwifery/nursing-and-midwifery-clinical-placements

Eke, O. F., Morone, C. C., Liteplo, A. S., & Shokoohi, H. (2021). Non–Covid-19 clinical research in the era of pandemic. *The American Journal of Emergency Medicine*, *39*, 231-232. https://doi.org/10.1016/j.ajem.2020.05.013

El Haddad, M. (2016). *Grounded theory examination of the perspective of practice and education sectors regarding graduate registered nurse practice readiness in the Australian context.* University of the Sunshine Coast. https://www.researchgate.net/publication/309208778

Elliot-Schmidt, R., & Strong, J. (1997). The concept of well-being in a rural setting: Understanding health and illness. *The Australian Journal of Rural Health*, *5*(2), 59-63. https://doi.org/10.1111/j.1440-1584.1997.tb00239.x

Encyclopedia Britannica. (2015). axiology. In *Encyclopedia Britannica*. https://www.britannica.com/topic/axiology

Ennis, L., & Wykes, T. (2016). Sense and readability: Participant information sheets for research studies. *British Journal of Psychiatry*, *208*(2), 189-194. https://doi.org/10.1192/bjp.bp.114.156687

Evans, R., Veitch, C., Hays, R., Clark, M., & Larkins, S. (2011). Rural maternity care and health policy: Parents' experiences. *Australian Journal of Rural Health*, *19*(6), 306-311. https://doi.org/10.1111/j.1440-1584.2011.01230.x

Faculty of Health Sciences and Wellness. (2020). *Certificate of obstetric nursing*. Humber College. https://healthsciences.humber.ca/programs/obstetric-nursing-rn.html

Farmer, J., Philip, L., King, G., Farrington, J., & Macleod, M. (2010). Territorial tensions: Misaligned management and community perspectives on health services for older people in remote rural areas. *Health & Place*, *16*(2), 275-283. https://doi.org/10.1016/j.healthplace.2009.10.010

Faye, E. (2006). Nazi foundations in Heidegger's work. *South Central Review*, *23*(1), 55-66. https://doi.org/10.1353/scr.2006.0006

Felton-Busch, C., & Larkins, S. (2019). Remote dwelling Aboriginal Australian women and birthing: A critical review of literature. *Women and Birth*, *32*(1), 6-15. https://doi.10.1016/j.wombi.2018.05.003

Finlay, L. (2009). Debating phenomenological research methods. *Phenomenology & Practice*, *3*(1). https://doi.org/10.29173/pandpr19818

Finnegan, A., Lauder, W., & McKenna, H. (2016). The challenges and psychological impact of delivering nursing care within a war zone. *Nursing Outlook*, *64*(5), 450-458. https://doi.org/10.1016/j.outlook.2016.05.005

Flesch, R. (1948). A new readability yardstick. *Journal of Applied Psychology*, *32*(3), 221-233. https://doi.org/10.1037/h0057532

Flinders University. (n.d.-a). *Flinders University rural and remote health SA*. Retrieved February 16, 2025, from https://www.flinders.edu.au/flinders-rural-and-remote-health-sa

Flinders University. (n.d.-b). *Remote health practice*. Retrieved April 12, 2025, from https://www.flinders.edu.au/study/courses/postgraduate-remote-health-practice

Flood, A. (2010). Understanding phenomenology. *Nurse Researcher*, *17*(2), 7-15. https://pubmed.ncbi.nlm.nih.gov/20222274/

Floridis, J. (2023). Debriefing after critical incidents in rural and remote healthcare settings - A remote clinical perspective. *Rural and Remote Health*, *23*(1), 1-4. https://pubmed.ncbi.nlm.nih.gov/36945148/

Flusser, V., & Mathews, A. (1999). *Shape of things: A philosophy of design*. Reaktion Books, Limited. http://ebookcentral.proquest.com/lib/jcu/detail.action?docID=1323079

Foster, K., Roche, M., Giandinoto, J. A., & Furness, T. (2020). Workplace stressors, psychological well-being, resilience, and caring behaviours of mental health nurses: A descriptive correlational study. *International Journal of Mental Health Nursing*, *29*(1), 56-68. https://pubmed.ncbi.nlm.nih.gov/31127973/

Fowler, A. C., Twigg, D., Jacob, E., & Nattabi, B. (2018). An integrative review of rural and remote nursing graduate programmes and experiences of nursing graduates. *Journal of Clinical Nursing*, *27*(5-6), e753-e766. https://doi.org/10.1111/jocn.14211

Gadamer, H. (1989). *Truth and method* (2nd rev. ed. / translation revised by Joel Weinsheimer and Donald G. Marshall, ed.). Crossroad.

Gadamer, H. (2006). Language and understanding (1970). *Theory, Culture & Society*, *23*(1), 13-27. https://doi.org/10.1177/0263276406063226

Garcia, R., & Qureshi, I. (2024). Nurse identity: The misrepresentation of nursing in the media. *Evidence-Based Nursing*, *27*(1), 4-5. https://doi.org/10.1136/ebnurs-2023-103875

Gerstl-Pepin, C., & Patrizio, K. (2009). Learning from Dumbledore's pensieve: Metaphor as an aid in teaching reflexivity in qualitative research. *Qualitative research*, *9*(3), 299-308. https://doi.org/10.1177/1468794109105029

Glazebrook, R., Manahan, D., Chater, B., Barker, P., Row, D., Steele, B., Morris, G., Cornelius, S., & McLellan, T. (2004). Educational needs of rural and remote Australian non-specialist medical practitioners for obstetric ultrasound. *Australian Journal of Rural Health*, *12*(2), 73-80. https://doi.org/10.1111/j.1038-5282.2004.00559.x

Goble, E., Austin, W., Larsen, D., Kreitzer, L., & Brintnell, S. (2012). Habits of mind and the split-mind effect: When computer-assisted qualitative data analysis software is used in phenomenological research. *Forum Qualitative Social Research*, *13*(2). https://www.qualitative-research.net/index.php/fqs/article/view/1709/3341

Goldie, P. (2002). Emotions, feelings and intentionality. *Phenomenology and the Cognitive Sciences*, *1*, 235-254. https://doi.org/10.1023/A:1021306500055

Gonzalez-Chica, D., Gillam, M., Williams, S., Sharma, P., Leach, M., Jones, M., Walters, L., & Gardiner, F. (2021). Pregnancy-related aeromedical retrievals in rural and remote Australia: National evidence from the Royal Flying Doctor Service. *BMC Health Services Research*, *21*(1), 1-10. https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-021-06404-5

González, H., Errasti-Ibarrondo, B., Iraizoz-Iraizoz, A., & Choperena, A. (2023). The image of nursing in the media: A scoping review. *International Nursing Review*, *70*(3), 425-443. https://doi.org/10.1111/inr.12833

Google Maps. (n.d.-a). *Queensland*. https://www.google.com/maps

Google Maps. (n.d.-b). *Victoria*. https://www.google.com/maps

Grange, J. (1991). Heidegger as Nazi: A postmodern scandal. *Philosophy East and West*, *41*(4), 515-522. https://doi.org/10.2307/1399647

Gray, J., & Smith, R. (2017). Any action? Reflections on the Australian midwifery action project. *Women and Birth*, *30*(3), 177-183. https://doi.org/10.1016/j.wombi.2017.02.008

Gray, J. A. (1991). Fear, panic, and anxiety: What's in a name? *Psychological Inquiry*, *2*(1), 77-78. https://doi.org/10.1207/s15327965pli0201_18

Green, D., Russell, D. J., Zhao, Y., Mathew, S., Fitts, M. S., Johnson, R., Reeve, D. M., Honan, B., Niclasen, P., Liddle, Z., Maguire, G., Remond, M., & Wakerman, J. (2023). Evaluation of a new medical retrieval and primary health care advice model in Central Australia: Results of pre- and post-implementation surveys. *Australian Journal of Rural Health*, *31*(2), 322-335. https://doi.org/https://doi.org/10.1111/ajr.12954

Griffith University. (n.d.). *Speciality nursing*. https://www.griffith.edu.au/careers-employment/students-graduates/career-options/specialty-nursing

Grobler, L., Marais, B. J., Mabunda, S. A., Marindi, P. N., Reuter, H., & Volmink, J. (2009). Interventions for increasing the proportion of health professionals practising in rural and other underserved areas. *Cochrane Database Syst Rev*(1), Cd005314. https://doi.org/10.1002/14651858.CD005314.pub2

Gross, C. T., & Canteras, N. S. (2012). The many paths to fear. *Nature Reviews Neuroscience*, *13*(9), 651-658. https://doi.org/10.1038/nrn3301

Guba, E., & Lincoln, Y. (1994). Competing paradigms in qualitative research. In N. Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). Sage.

Guignon, C. (2012). Becoming a person: Hermeneutic phenomenology's contribution. *New Ideas in Psychology*, *30*(1), 97-106. https://doi.org/10.1016/j.newideapsych.2009.11.005

Guthrie Yarwood, M. (2022). *Psychology of human emotion: An open-access textbook*. Pressbooks. https://psu.pb.unizin.org/psych425/

Handoyo, N. E., Rahay, G. R., Claramita, M., Ash, J., & Schuwirth, L. W. (2020). Personal resilience and rural doctors' retention: A study in Indonesia. *Rural and Remote Health*, *20*(4), 1-13. https://doi.org/10.22605/RRH6097

Harman, G. (2007). *Heidegger explained: From phenomenon to thing*. Open Court Publishing.

Hart, S. L. (1971). Axiology--Theory of values. *Philosophy and Phenomenological Research*, *32*(1), 29-41. https://doi.org/10.2307/2105883

Harvie, K., Sidebotham, M., & Fenwick, J. (2019). Australian midwives' intentions to leave the profession and the reasons why. *Women and Birth*, *32*(6), e584-e593. https://doi.org/10.1016/j.wombi.2019.01.001

Hegge, M., Powers, P., Hendrickx, L., & Vinson, J. (2002). Competence, continuing education, and computers. *The Journal of Continuing Education in Nursing*, *33*(1), 24-32. https://doi.org/10.3928/0022-0124-20020101-06

Hegney, D., McCarthy, A., Rogers-Clark, C., & Gorman, D. (2002). Retaining rural and remote area nurses. *The Journal of Nursing Administration*, *32*(3), 128-135. http://www.jonajournal.com/pt/re/jona/toc.00005110-200203000-00000.htm;jsessionid=Gy5Yl5G9JLJQGxqRMq5xdBQQvVtvz2PqGsZTK9ZDryy1zhLGFxx2!-1851260294!181195628!8091!-1

Heidegger, M. (1973). *Being and time*. Blackwell.

Heidegger, M., & Krell, D. F. (1993). *Basic writings: From being and time (1927) to the task of thinking (1964)* (Rev. and expanded ed.). Harper SanFrancisco.

Heidegger, M., & van Buren, J. (1999). *Ontology--The hermeneutics of facticity*. Indiana University Press. http://www.jstor.org/stable/j.ctt16gzmw1

Heidegger, M. (2013). *The essence of truth - On Plato's cave allegory and theaetetus* (1 ed.). Bloomsbury.

Hemphill, E., & Keulil, C. (2013). Recruitment ad analysis offers new opportunities to attract GPs to short-staffed practices. *Health Mark Quarterly*, *30*, 144-161. https://pubmed.ncbi.nlm.nih.gov/23697854/

Henwood, T., Eley, R., Parker, D., Tuckett, A., & Hegney, D. (2009). Regional differences among employed nurses: A Queensland study. *Australian Journal of Rural Health*, *17*(4), 201-207. https://doi.org/10.1111/j.1440-1584.2009.01072.x

Hirst, C. (2004). *Re-birthing: Report of the review of maternity services in Queensland & Queensland health & review of maternity services in Queensland*. https://nla.gov.au/nla.cat-vn4395860

Hirst, C. (2005). *Re-birthing. Report of the review of maternity services in Queensland.* https://www.health.qld.gov.au/__data/assets/pdf_file/0024/435660/maternityreview.pdf

Hoang, H., Le, Q., & Kilpatrick, S. (2012). Small rural maternity units without caesarean delivery capabilities: Is it safe and sustainable in the eyes of health professionals in Tasmania? *Rural and Remote Health*, *12*(3), 1-11. https://pubmed.ncbi.nlm.nih.gov/22808931/

Hoang, H., Le, Q., & Terry, D. (2014). Women's access needs in maternity care in rural Tasmania, Australia: A mixed methods study. *Women and Birth*, *27*(1), 9-14. https://doi.org/10.1016/j.wombi.2013.02.001

Hoffman, E. (2008). The Maslow effect: A humanist legacy for nursing. *American Nurse Today*, *3*(8), 36 - 37. https://www.myamericannurse.com/the-maslow-effect-a-humanist-legacy-for-nursing/

Holstein, J., & Gubrium, J. (1995). *The active interview* (Vol. 37). SAGE Publications.

Homer, C. (2022). Is any continuity better than no continuity to address preterm birth and perinatal loss? *Women and Birth*, *35*(4), 325-326. https://doi.org/10.1016/j.wombi.2022.05.005

Horrell, B., Stephens, C., & Breheny, M. (2015). Online Research with informal caregivers: Opportunities and challenges. *Qualitative Research in Psychology*, *12*(3), 258-271. https://doi.org/10.1080/14780887.2015.1040318

Hughes, D. (2012). Project Title: Nurses' experience of activating a rapid response system in general rural hospital wards. https://www.heti.nsw.gov.au/__data/assets/pdf_file/0007/438901/dot-hughes-final-report.pdf

Hull, M. J., Gunn, K. M., Smith, A. E., Jones, M., & Dollman, J. (2022). "We're lucky to have doctors at all": A qualitative exploration of Australian farmers' barriers and facilitators to health-related help-seeking. *International Journal of Environmental Research and Public Health*, *19*(17), 11075. https://pubmed.ncbi.nlm.nih.gov/36078793/

Hundley, V., Tucker, J., van Teijlingen, E., Kiger, A., Ireland, J., Harris, F., Farmer, J., Caldow, J., & Bryers, H. (2007). Midwives' competence: Is it affected by working in a rural location? *Rural and Remote Health*, *7*(3), 764-764. https://doi.org/10.22605/RRH764

Husserl, E. (2001). *Logical investigations* (J. N. Findlay, Trans.; Vol. 1). Routledge.

Husserl, E. (2004). *Ideas: General introduction to pure phenomenology*. Taylor & Francis Group. http://ebookcentral.proquest.com/lib/jcu/detail.action?docID=1702131

International Confederation of Midwives. (2025). *Philosophy and Model of Midwifery Care.*

Jackson, M., Dahlen, H., & Schmied, V. (2012). Birthing outside the system: Perceptions of risk amongst Australian women who have freebirths and high-risk homebirths. *Midwifery*, *28*(5), 561-567. https://doi.org/10.1016/j.midw.2011.11.002

Jacob, S., & Furgerson, S. (2015). Writing interview protocols and conducting interviews: Tips for students new to the field of qualitative research. *Qualitative Report*. https://doi.org/10.46743/2160-3715/2012.1718

Jahner, S., Penz, K., & Stewart, N. J. (2019). Psychological impact of traumatic events in rural nursing practice: An Integrative review. *Online Journal of Rural Nursing and Health Care*, 105-135. https://doi.org/10.14574/ojrnhc.v18i2.523

Jahner, S., Penz, K., Stewart, N. J., & MacLeod, M. L. (2020). Exploring the distressing events and perceptions of support experienced by rural and remote nurses: A thematic analysis of national survey data. *Workplace Health & Safety*, *68*(10), 480-490. https://pubmed.ncbi.nlm.nih.gov/32812847/

James Cook University. (2025). *Bachelor of Nursing Science [Pre-Registration] [mixed-mode]*. Retrieved March 11, 2025, from https://www.jcu.edu.au/courses/bachelor-of-nursing-science-ext

James Cook University. (n.d.-a). *Master of Nursing*. https://online.jcu.edu.au/jcu-online-nursing-courses

James Cook University. (n.d.-b). *Discover nursing and midwifery*. Retrieved February 16, 2025, from https://www.jcu.edu.au/courses/study/nursing-and-midwifery

James Cook University. (n.d.-c). *Graduate Diploma of Midwifery*. Retrieved February 19, 2025, from https://www.jcu.edu.au/courses/graduate-diploma-of-midwifery

James Cook University Information Technology Department. (2021). https://www.jcu.edu.au/courses/study/information-technology

Jameton, A. (1984). *Nursing practice: The ethical issues*. Prentice-Hall.

Jans, C., Bogossian, F., Andersen, P., & Levett-Jones, T. (2023). Examining the impact of virtual reality on clinical decision making – An integrative review. *Nurse Education Today*, *125*, 105767-105767. https://doi.org/10.1016/j.nedt.2023.105767

Jaspers, K. (1971). *Philosophy of existence*. University of Pennsylvania Press.

Johnston, C. M., Wallis, M., Oprescu, F. I., & Gray, M. (2017). Methodological considerations related to nurse researchers using their own experience of a phenomenon within phenomenology. *Journal of Advanced Nursing*, *73*(3), 574-584. https://doi.org/10.1111/jan.13198

Josif, C., Kruske, S., Kildea, S., & Barclay, L. (2017). The quality of health services provided to remote dwelling aboriginal infants in the top end of northern Australia following health system changes: A qualitative analysis. *BMC Pediatrics*, *17*(1), 93. https://doi.org/10.1186/s12887-017-0849-1

Jukkala, A. M., Henly, S. J., & Lindeke, L. L. (2008). Rural perceptions of continuing professional education. *The Journal of Continuing Education in Nursing*, *39*(12), 555-563. https://doi.org/10.3928/00220124-20081201-08

Kagi, E., Rasiah, R., & Moran, M. (2023). Experiences of primary health care nurses advancing their careers in a remote Western Australian location. *Australian Journal of Rural Health*, *31*(1), 41-51. https://pubmed.ncbi.nlm.nih.gov/35852926/

Kahn, D. (2000). How to conduct research. In M. Cohen, D. Kahn, & R. Steeves (Eds.), *Hermeneutic phenomenological research a practical guide for nurse researchers*. SAGE.

Karaman, S. (2011). Nurses' perceptions of online continuing education. *BMC Medical Education*, *11*(1), 86. https://doi.org/10.1186/1472-6920-11-86

Kenny, A., & Duckett, S. (2003). Educating for rural nursing practice. *Journal of Advanced Nursing 44*(6), 613-622. https://doi.org/10.1046/j.0309-2402.2003.02851.x

Kensington, M., & Rankin, J. (2021). Sustaining rural midwives and rural communities. In L. Davies, M. Kensington, & R. Daellenbach (Eds.), *Sustainability, Midwifery and Birth* (pp. 146-161). Routledge.

Kidd, T., Kenny, A., & Meehan-Andrews, T. (2012). The experience of general nurses in rural Australian emergency departments. *Nurse Education in Practice*, *12*(1), 11-15. https://doi.org/10.1016/j.nepr.2011.05.001

Kiger, M. E., & Varpio, L. (2020). Thematic analysis of qualitative data: AMEE Guide No. 131. *Medical Teacher*, *42*(8), 846-854. https://doi.org/10.1080/0142159X.2020.1755030

Kildea, S. (2006). Risky business: Contested knowledge over safe birthing services for Aboriginal women. *Health Sociology Review*, *15*(4), 387-396. http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,athens&db=ccm&AN=106241574&site=eds-live

Kildea, S., Kruske, S., & Bowell, L. (2006). Maternity emergency care: Short course in maternity emergencies for remote area health staff with no midwifery qualifications. *Australian Journal of Rural Health*, *14*(3), 111-115. https://doi.org/10.1111/j.1440-1584.2006.00785.x

Kildea, S., McGhie, A., Gao, Y., Rumbold, A., & Rolfe, M. (2015). Babies born before arrival to hospital and maternity unit closures in Queensland and Australia. *Women and Birth*, *28*(3), 236-245. https://doi.org/10.1016/j.wombi.2015.03.003

Kildea, S., Gao, Y., Rolfe, M., Josif, C., Bar-Zeev, S., Steenkamp, M., Kruske, S., Williams, D., Dunbar, T., & Barclay, L. (2016). Remote links: Redesigning maternity care for Aboriginal women from remote communities in Northern Australia – A comparative cohort study [Article]. *Midwifery*, *34*, 47-57. https://doi.org/10.1016/j.midw.2016.01.009

Killam, L. (2013). *Research terminology simplified: Paradigms, axiology, ontology, epistemology and methodology*. Kindle Scribe.

Knaack, P. (1984). Phenomenological research. *Western Journal of Nursing Research*, *6*(1), 107-114. https://doi.org/10.1177/019394598400600108

Knowles, M. (1980). *The modern practice of adult education: From pedagogy to andragogy* (Rev. and updated ed.). Cambridge Adult Education.

Knowles, M. (1984). *The adult learner: A neglected species* (3rd ed.). Gulf.

Knowles, M., Holton Iii, E., & Swanson, R. (2012). *The adult learner* (7th ed.). Routledge. https://doi.org/10.4324/9780080964249

Koch, T. (1995). Interpretive approaches in nursing research: The influence of Husserl and Heidegger. *Journal of Advanced Nursing*, *21*(5), 827-836. https://doi.org/10.1046/j.1365-2648.1995.21050827.x

Koch, T. (1999). An interpretive research process: Revisiting phenomenological and hermeneutical approaches. *Nurse Researcher*, *6*(3), 20-34. https://doi.org/10.7748/nr1999.04.6.3.20.c6085

Kokkonen, K. (2019). *Health care of the future*. James Cook University. https://www.jcu.edu.au/this-is-uni/science-and-technology/articles/visiting-the-doc-via-virtual-reality

Konkin, J., Grave, L., Cockburn, E., Couper, I., Stewart, R. A., Campbell, D., & Walters, L. (2020). Exploration of rural physicians' lived experience of practising outside their usual scope of practice to provide access to essential medical care (clinical courage): An international phenomenological study. *BMJ Open*, *10*(8), e037705. https://doi.org/10.1136/bmjopen-2020-037705

Kosiak, M. (2021). Midwifery practices and Aboriginal and Torres Strait Islander women: Urban and regional perspectives. In O. Best & B. Fredericks (Eds.), *Yatdjuligin: Aboriginal and Torres Strait Islander nursing and midwifery care* (3rd ed., pp. 139 - 165). Cambridge University Press.

Kouijzer, M., Kip, H., Bouman, Y. H. A., & Kelders, S. M. (2023). Implementation of virtual reality in healthcare: A scoping review on the implementation process of virtual reality in various healthcare settings. *Implement Science Community*, *4*(1), 67. https://doi.org/10.1186/s43058-023-00442-2

Kruske, S., Kildea, S., Jenkinson, B., Pilcher, J., Robin, S., Rolfe, M., Kornelsen, J., & Barclay, L. (2016). Primary maternity units in rural and remote Australia: Results of a national survey. *Midwifery*, *40*, 1-9. https://doi.org/10.1016/j.midw.2016.05.004

Kulig, J. C., Townshend, I., Kosteniuk, J., Karunanayake, C., Labrecque, M. E., & MacLeod, M. L. (2018). Perceptions of sense of community and community engagement among rural nurses: Results of a national survey. *International Journal of Nursing Studies*, *88*, 60-70. https://www.sciencedirect.com/science/article/abs/pii/S0020748918301834

Kumar, R., & Owen, A. (2019). *Research methodology: A step-by-step guide for beginners* (5th ed.). SAGE.

Lau, S. T., Siah, C. J. R., Loh, W. L., Rusli, K. D. B., Schmidt, L. T., Lim, F. P., & Liaw, S. Y. (2023). Enhancing professional competency in clinical procedures using head-mounted display virtual reality – A mixed-method study. *Medical Education Online*, *28*(1), 2232134. https://doi.org/10.1080/10872981.2023.2232134

Lazenby, M., Chambers, S., Chyun, D., Davidson, P., Dithole, K., Norman, I., & Tlou, S. (2020). Clinical nursing and midwifery education in the pandemic age. *International Nursing Review*, *67*(3), 323-325. https://doi.org/10.1111/inr.12601

Lea, J., & Cruickshank, M. (2015). The support needs of new graduate nurses making the transition to rural nursing practice in Australia. *Journal of Clinical Nursing*, *24*(7-8), 948-960. https://doi.org/10.1111/jocn.12720

Leap, N. (1999). The introduction of 'direct entry' midwifery courses in Australian universities: Issues, myths and a need for collaboration. *Australian College of Midwives Incorporated Journal*, *12*(2), 11-16. https://doi.org/10.1016/S1031-170X(99)80014-2

Leliopoulou, C., Collins, L., & Stroumpouki, T. (2024). Does it matter how I feel? An interpretive phenomenological study on nurses' perceived affective well-being at work. *Global Health Economics and Sustainability*. https://doi.org/10.36922/ghes.3012

Lemée, M.-H., Lavoie, S., Provost, J., & Ledoux, I. (2024). Exploring the acceptability and feasibility of an immersive virtual reality intervention for newly graduated nurses working in a rural area. *Clinical Simulation in Nursing*, *91*, 101542. https://doi.org/10.1016/j.ecns.2024.101542

Lenthall, S., Wakerman, J., Dollard, M., Dunn, S., Knight, S., Opie, T., Rickard, G., & MacLeod, M. (2018). Reducing occupational stress among registered nurses in very remote Australia: A participatory action research approach. *Collegian*, *25*(2), 181-191. https://doi.org/10.1016/j.colegn.2017.04.007

Leonard, V. (1989). A Heideggerian phenomenological perspective on the concept of the person. *Advanced Journal of Nursing Science*, *11*(4), 40 - 55. https://doi.org/10.1097/00012272-198907000-00008

LeSergent, C., & Haney, C. (2005). Rural hospital nurse's stressors and coping strategies: A survey. *International Journal of Nursing Studies*, *42*(3), 315-324. https://doi.org/10.1016/j.ijnurstu.2004.06.017

Leung, T. Y., & Shen, Q. (2022). Implementing a post-traumatic stress disorder screening for first responders in rural areas. *Public Health Nursing*, *39*(4), 788-796. https://pubmed.ncbi.nlm.nih.gov/35152470/

Levett-Jones, T. (2005). Self-directed learning: Implications and limitations for undergraduate nursing education. *Nurse Education Today*, *25*(5), 363-368. https://doi.org/10.1016/j.nedt.2005.03.003

Liu, L., Cook, A., Varnhagen, S., & Miyazaki, M. (2004). Rehabilitation professionals' satisfaction with continuing education delivered at a distance using different technologies. *Assistive Technology*, *16*(2), 104-115. https://pubmed.ncbi.nlm.nih.gov/15566043/

Lockhart, J., & Resick, L. (2014). The value of dialogue when planning and conduction phenomenological research: reflections of a dissertation chair and doctoral student. In M. De Chesnay (Ed.), *Nursing Research Using Phenomenology: Qualitative Designs and Methods* (pp. 131-144). Springer Publishing Company.

Long, K. A., & Weinert, C. (1989). Rural nursing: Developing the theory base. *Scholarly Inquiry for Nursing Practice*, *3*(2), 113-127. https://pubmed.ncbi.nlm.nih.gov/2772454/

Longman, J., Kornelsen, J., Pilcher, J., Kildea, S., Kruske, S., Grzybowski, S., Robin, S., Rolfe, M., Donoghue, D., Morgan, G., & Barclay, L. (2017). Maternity services for rural and remote Australia: Barriers to operationalising national policy. *Health policy*, *121*(11), 1161-1168. https://doi.org/10.1016/j.healthpol.2017.09.012

Lumivero. (2020). *NVivo*. In https://lumivero.com/products/nvivo/

Lynch, C. P., Cha, E. D. K., Jenkins, N. W., Parrish, J. M., Mohan, S., Geoghegan, C. E., Jadczak, C. N., & Singh, K. (2021). Readability analysis of patient-accessible information regarding ambulatory surgical center procedures. *International Journal of Spine Surgery*, *15*(5), 1046-1053. https://doi.org/10.14444/8133

Mac, O. A., Thayre, A., Tan, S., & Dodd, R. H. (2020). Web-based health information following the renewal of the cervical screening program in Australia: Evaluation of readability, understandability, and credibility. *Journal of Medical Internet Research*, *22*(6). https://doi.org/10.2196/16701

MacKay, S. C., Smith, A., Kyle, R. G., & Beattie, M. (2021). What influences nurses' decisions to work in rural and remote settings? A systematic review and meta-synthesis of qualitative research. *Rural and Remote Health*, *21*(1), 6335-6335. https://doi.org/10.22605/RRH6335

MacKellar, D., & Brunsdon, J. (1990). *I love a sunburnt country: The diaries of Dorothea Mackellar*. Angus & Robertson.

Mackey, S. (2005). Phenomenological nursing research: Methodological insights derived from Heidegger's interpretive phenomenology. *International Journal of Nursing Studies*, *42*(2), 179-186. https://doi.org/10.1016/j.ijnurstu.2004.06.011

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, *50*(4), 370-396. https://doi.org/10.1037/h0054346

Maslow, A. H., Lowry, R., Maslow, B. G., Freedman, J. L., & International Study Project. (1982). *The journals of Abraham Maslow*. Lewis Publishing Co.

Masso, M., Sim, J., Loggie, C., Moroney, T., Halcombe, E., & Thompson, C. (2019). *Topic 1: Fit for purpose / work ready / transition to practice.* https://www.health.gov.au/resources/publications/topic-1-fit-for-purpose-work-ready-transition-to-practice?language=en

May, J., Kent, S., & Giuppy, M. (2007). *Obstetric care in rural Australia: The evidence is right under our noses— But what direction are we heading?* 9th National Rural Health Conference, Albury, NSW. https://www.ruralhealth.org.au/9thNRHC/9thnrhc.ruralhealth.org.au/program/docs/papers/may_D1.pdf

McCalman, J., Bailie, R., Bainbridge, R., McPhail-Bell, K., Percival, N., Askew, D., Fagan, R., & Tsey, K. (2018). Continuous quality improvement and comprehensive primary health care: A systems framework to improve service quality and health outcomes. *Frontiers in Public Health*, *6*, 76-76. https://doi.org/10.3389/fpubh.2018.00076

McConnell-Henry, T., Chapman, Y., & Francis, K. (2009). Husserl and Heidegger: Exploring the disparity. *International Journal of Nursing Practice*, *15*(1), 7-15. https://doi.org/10.1111/j.1440-172X.2008.01724.x

McCullough, K., Whitehead, L., Bayes, S., Williams, A., & Cope, V. (2020). The delivery of primary health care in remote communities: A Grounded Theory study of the perspective of nurses. *International Journal of Nursing Studies*, *102*, 103474. https://pubmed.ncbi.nlm.nih.gov/31835121/

McCullough, K., Bayes, S., Whitehead, L., Williams, A., & Cope, V. (2022). Nursing in a different world: Remote area nursing as a specialist–generalist practice area. *Australian Journal of Rural Health*, *30*, 570-581. https://pubmed.ncbi.nlm.nih.gov/35770878/

McElroy, M., Wicking, K., Harvey, N., & Yates, K. (2022). What challenges and enablers elicit job satisfaction in rural and remote nursing in Australia: An Integrative review. *Nurse Education in Practice*, *64*, 103454. https://doi.org/10.1016/j.nepr.2022.103454

McElroy, M., Wicking, K., Harvey, N., & Yates, K. (2024). The experiences and perceptions of rural and remote nurses who provide care to pregnant women in the absence of midwives. *Rural and Remote Health*, *24*. https://doi.org/10.22605/RRH8721

McElroy, M., Harvey, N., Wicking, K., & Yates, K. (2025). Would you prefer a midwife, a nurse or a cleaner? *Partyline*(90). https://www.ruralhealth.org.au/partyline/article/would-you-prefer-midwife-nurse-or-cleaner.html

McKellar, L., Brown, A., & Adelson, P. (2019). A public e-survey to explore community understanding of the role of the midwife in Australia. *European Journal of Midwifery*, *3*, 20. https://doi.org/10.18332/ejm/114226

McLelland, G., McKenna, L., & Archer, F. (2013). No fixed place of birth: Unplanned BBAs in Victoria, Australia. *Midwifery*, *29*(2), e19-e25. https://doi.org/10.1016/j.midw.2011.12.002

McNeil, K., Mitchell, R., & Parker, V. (2015). The paradoxical effects of workforce shortages on rural interprofessional practice. *Scandinavian Journal of Caring Sciences*, *29*(1), 73-82. https://doi.org/10.1111/scs.12129

Mealer, M., Burnham, E., Goode, C., Rothbaum, B., & Moss, M. (2009). The prevalence and impact of post traumatic stress disorder and burnout syndrome in nurses. *Depression and Anxiety*, *26*(12), 1118-1126. https://pubmed.ncbi.nlm.nih.gov/19918928/

Medves, J. M., & Davies, B. L. (2005). Sustaining rural maternity care- Don't forget the RNs. *Canadian Journal of Rural Medicine*, *10*(1), 29. https://pubmed.ncbi.nlm.nih.gov/15656921/

Merriam-Webster. (n.d.-a). Sorge. In Merriam-Webster Dictionary. Retrieved October 16, 2023, from https://www.merriam-webster.com/dictionary/sorge

Merriam-Webster. (n.d.-b). Underprepared. In Merriam-Webster Dictionary. Retrieved November 18, 2023, from https://www.merriam-webster.com/dictionary/underprepared

Merriam, S., & Brockett, R. (1997). *The Profession and practice of adult education: An introduction*. Wiley & Sons.

Mezirow, J. (2000). Learning to think like an adult: Core concepts of transformation theory. In J. Mezirow (Ed.), *Learning as transformation: Critical perspectives on a theory in progress* (pp. 3 - 33). Jossey-Bass.

Miles, M., Chapman, Y., Francis, K., & Taylor, B. (2013a). Exploring Heideggerian hermeneutic phenomenology: A perfect fit for midwifery research. *Women and Birth*, *26*(4), 273-276. https://doi.org/https://doi.org/10.1016/j.wombi.2013.06.003

Miles, M., Francis, K., Chapman, Y., & Taylor, B. (2013b). Hermeneutic phenomenology: A methodology of choice for midwives. *International Journal of Nursing Practice*, *19*(4), 409-414. https://doi.org/10.1111/ijn.12082

Miller, N. (1960). Learnabledrives and rewards. In S. S. Stevens (Ed.), *Handbook of experimental psychology* (pp. 435 - 472). Wiley.

Mills, J. E., Francis, K., Birks, M., Coyle, M., Henderson, S., & Jones, J. (2010). Registered nurses as members of interprofessional primary health care teams in remote or isolated areas of Queensland: Collaboration, communication and partnerships in practice. *Journal of Interprofessional Care*, *24*(5), 587-596. https://doi.org/10.3109/13561821003624630

Milosevic, I., & McCabe, R. E. (2015). *Phobias: The psychology of irrational fear*. Bloomsbury Publishing USA.

Mitchell, A., & Trawny, P. (2017). *Heidegger's black notebooks: Responses to anti-semitism*. Columbia University Press.

Mohale, M., & Mulaudzi, F. (2008). Experiences of nurses working in a rural primary health-care setting in Mopani district, Limpopo Province. *Curationis*, *31*(2), 60 - 66. https://doi.org/PMid:19006959

Mokoka, K., Ehlers, V., & Oosthuizen, M. (2011). Factors influencing the retention of registered nurses in the Gauteng Province of South Africa. *Curationis*, *34*(1), 1-9. https://pubmed.ncbi.nlm.nih.gov/23327714/

Molanari, D. L., Jaiswal, A., & Hollinger-Forrest, T. (2011). Rural nurses: Lifestyle preferences and education perceptions. *Online Journal of Rural Nursing and Health Care*, *11*(2), 16-26. https://doi.org/10.14574/ojrnhc.v11i2.27

Molinari, D., & Monserud, M. (2008). Rural nurse job satisfaction. *Rural and Remote Health*, *8*(4). https://doi.org/10.22605/RRH1055

Monash University. (n.d.). *Definition of professionalism*. Retrieved January 10, 2025, from https://www.monash.edu/medicine/study/student-services/definition-of-professionalism

Monk, A. R., Tracy, S., Foureur, M., & Barclay, L. (2013). Australian primary maternity units: Past, present and future. *Women and Birth*, *26*(3), 213-218. https://doi.org/10.1016/j.wombi.2013.06.001

Montgomery, K., Ardzejewska, K., Casey, A., & Hogan, R. (2025). The lived experience of women studying nursing online in regional, rural and remote areas: An integrative literature review. *BMC Nursing*, *24*. https://doi.org/10.1186/s12912-024-02638-w

Morison, M., & Moir, J. (1998). The role of computer software in the analysis of qualitative data: Efficient clerk, research assistant or Trojan horse? *Journal of Advanced Nursing*, *28*(1), 106-116. https://doi.org/10.1046/j.1365-2648.1998.00768.x

Moszczynski, A. B., & Haney, C. J. (2002). Stress and coping of Canadian rural nurses caring for trauma patients who are transferred out. *Journal of Emergency Nursing*, *28*(6), 496-504. https://doi.org/10.1067/men.2002.129727

Moustakas, C. (1994). *Phenomenological research methods*. Sage Publications.

Muirhead, S., & Birks, M. (2020). Roles of rural and remote registered nurses in Australia: An integrative review. *Australian Journal of Advanced Nursing (Online)*, *37*(1), 21-33. https://www.ajan.com.au/~ajancoma/index.php/AJAN/article/view/56

Mullei, K., Mudhune, S., Wafula, J., Masamo, E., English, M., Goodman, C., Lagarde, M., & Blaauw, D. (2010). Attracting and retaining health workers in rural areas: Investigating nurses' views on rural posts and policy interventions. *BMC Health Services Research*, *10*(1), 1-10. https://pubmed.ncbi.nlm.nih.gov/20594367/

Muller, J., Corodimas, K. P., Fridel, Z., & LeDoux, J. E. (1997). Functional inactivation of the lateral and basal nuclei of the amygdala by muscimol infusion prevents fear conditioning to an explicit conditioned stimulus and to contextual stimuli. *Behavioral Neuroscience*, *111*(4), 683. https://pubmed.ncbi.nlm.nih.gov/9267646/

Murphy, C., Cross, C., & McGuire, D. (2006). The motivation of nurses to participate in continuing professional education in Ireland. *European Journal of Training and Development*, *30*(5), 365-384. https://doi.org/10.1108/03090590610677926

Naden, K., Hampton, D., Walke, E., Pavlovic, S. P., Graham, S., & Jones, D. (2023). Growing our own rural, remote and Aboriginal health workforce: Contributions made, approaches taken and lessons learnt by three rural Australian academic health departments. *Australian Journal of Rural Health*, *31*(3), 589-595. https://doi.org/10.1111/ajr.12972

Nahm, S. H., Blinman, P., Butler, S., Tan, S. C., & Vardy, J. (2021). Factors associated with fear of cancer recurrence in breast and colorectal cancer survivors: A cross-sectional study of cancer survivors. *Asia-Pacific Journal of Clinical Oncology*, *17*(3), 222-229. https://pubmed.ncbi.nlm.nih.gov/33079491/

National Health and Medical Research Council., the Australian Research Council., & Universities Australia. (2019). *Management of data and information in research: A guide supporting the Australian code for the responsible conduct of research*. National Health and Medical Research Council. https://www.nhmrc.gov.au/sites/default/files/documents/attachments/Management-of-Data-and-Information-in-Research.pdf

National Indigenous Australians Agency. (2020). *National agreement on closing the gap*. https://www.closingthegap.gov.au/national-agreement/national-agreement-closing-the-gap

National Rural Health Alliance. (2024a). *Digital health and connectivity in rural Australia*. https://www.ruralhealth.org.au/wp-content/uploads/2024/05/nrha-digital-health-connectivity-factsheet-apr-24.pdf

National Rural Health Alliance. (2024b). *Rural health education and training*. https://www.ruralhealth.org.au/publication/fact-sheet/rural-health-education-and-training/

National Rural Health Alliance. (2019). *Midwives in rural, regional and remote Australia*. https://www.ruralhealth.org.au/content/fact-sheet-midwives-rural-regional-and-remote-australia

National Rural Health Commissioner. (2022). *National rural and remote nursing generalist framework*. Australian Government. https://www.health.gov.au/sites/default/files/2023-03/the-national-rural-and-remote-nursing-generalist-framework-2023-2027.pdf

Nayda, R., & Cheri, J. (2008). From enrolled nurse to registered nurse in the rural setting: The graduate nurse experience. *Rural and Remote Health*, *8*(2), 1-9. https://doi.org/10.22605/RRH900

Nelms, T. (2014). Phenomenological philosophy and research. In M. De Chesnay (Ed.), *Nursing Research Using Phenomenology: Qualitative Designs and Methods* (pp. 1-23). Springer Publishing Company.

Newhouse, R. P. (2005). Exploring nursing issues in rural hospitals. *The Journal of Nursing Administration*, *35*(7/8), 350-358. https://doi.org/10.1097/00005110-200507000-00007

North West Hospital and Health Service. (2023). *North West Hospital and Health Service implements hybrid virtual reality training model for nursing and medical staff*. Retrieved February 9, 2025, from https://www.northwest.health.qld.gov.au/hybrid-virtual-reality-training-model/

Northern Territory Health. (n.d.). *Graduate certificate in remote health or primary health care*. https://health.nt.gov.au/careers/nursing-and-midwifery/career-structure-and-pathways/employed-model-programs/graduate-certificate-in-remote-health-or-primary-health-care

Notre Dame Australia University. (n.d.). *Graduate Diploma of Midwifery*. https://www.notredame.edu.au/programs/school-of-nursing/postgraduate/graduate-diploma-of-midwifery

Nowell, L., Norris, J., White, D., & Moules, N. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, *16*(1), 1 - 13. https://doi.org/10.1177/1609406917733847

Nursing and Midwifery Board of Australia. (2013). *Fact sheet: Scope of practice for registered nurses and midwives.* Retrieved April 20, 2025, from https://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/FAQ/Fact-sheet-scope-of-practice-and-capabilities-of-nurses.aspx

Nursing and Midwifery Board of Australia. (2016a). *Registered Nurse standards for practice* Retrieved April 20, 2025, from http://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Professional-standards/registered-nurse-standards-for-practice.aspx

Nursing and Midwifery Board of Australia. (2016b). *Guidelines: Continuing professional development*. Retrieved May 18, 2025, from https://www.nursingmidwiferyboard.gov.au/codes-guidelines-statements/codes-guidelines/guidelines-cpd.aspx

Nursing and Midwifery Board of Australia. (2022). *Fact sheet: Scope of practice capabilities of nurses*. Retrieved April 20, 2025, from https://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/FAQ/Fact-sheet-scope-of-practice-and-capabilities-of-nurses.aspx

Nursing and Midwifery Council. (n.d.). *Enabling professionalism*. Retrieved January 10, 2025, from https://www.nmc.org.uk/standards/guidance/professionalism/

O'Connor, T. (2018). *Grow our own: Creating a sustainable midwifery workforce in rural and remote areas*. NSW Government. Retrieved April 8, 2024, from https://aci.health.nsw.gov.au/ie/projects/grow-our-own

Olafson, F. A. (1998). Truth, responsibility, and trust. In *Heidegger and the ground of ethics: A Study of Mitsein* (pp. 40-68). Cambridge University Press. https://doi.org/DOI: 10.1017/CBO9781139173209.003

Onnis, L., & Hunter, T. (2025). Improving rural and remote health workforce retention amid global workforce shortages: a scoping review of evaluated workforce interventions. *Journal of Health Organization and Management*, *39*(2), 260–279. https://doi.org/10.1108/JHOM-03-2024-0077

Opie, T., Dollard, M., Lenthall, S., Wakerman, J., Dunn, S., Knight, S., & MacLeod, M. (2010). Levels of occupational stress in the remote area nursing workforce. *Australian Journal of Rural Health*, *18*(6), 235-241. https://doi.org/10.1111/j.1440-1584.2010.01161.x

Paley, J. (1998). Misinterpretive phenomenology: Heidegger, ontology and nursing research. *Journal of Advanced Nursing*, *27*(4), 817-824. https://doi.org/10.1046/j.1365-2648.1998.00607.x

Paley, J. (2014). Heidegger, lived experience and method. *Journal of Advanced Nursing*, *70*(7), 1520-1531. https://doi.org/10.1111/jan.12324

Parker, V., McNeil, K., Higgins, I., Mitchell, R., Paliadelis, P., Giles, M., & Parmenter, G. (2013). How health professionals conceive and construct interprofessional practice in rural settings: A qualitative study. *BMC Health Services Research*, *13*(1), 500. https://doi.org/10.1186/1472-6963-13-500

Patterson, M., & Williams, D. (1998). Paradigms and problems: The practice of social science in natural resource management. *Society & Natural Resources*, *11*(3), 279-295. https://doi.org/10.1080/08941929809381080

Pearson, C. L., & Care, W. D. (2002). Meeting the continuing education needs of rural nurses in role transition. *The Journal of Continuing Education in Nursing*, *33*(4), 174-179. https://doi.org/10.3928/0022-0124-20020701-09

Peck, B., & Mummery, J. (2023). Hermeneutic constructivism: One ontology for authentic understanding. *Nursing Inquiry*, *30*(2), e12526. https://doi.org/10.1111/nin.12526

Penz, K., D'Arcy, C., Stewart, N., Kosteniuk, J., Morgan, D., & Smith, B. (2007). Barriers to participation in continuing education activities among rural and remote nurses. *The Journal of Continuing Education in Nursing*, *38*(2), 58-66. https://pubmed.ncbi.nlm.nih.gov/17402377/

Podubinski, T., Glenister, K., & Ferdous, H. (2024). *If we immerse them, they will come: Can rural health experiences through virtual reality have impact on workforce recruitment?* Proceedings of Australian Conference on Human-Computer Interaction (OzCHI'24), New York.

Poland, B. D. (1995). Transcription quality as an aspect of rigor in qualitative research. *Qualitative Inquiry*, *1*(3), 290-310. https://doi.org/10.1177/107780049500100302

Polit, D., & Beck, C. (2017). *Nursing research: Generating and assessing evidence for nursing practice* (10th ed.). Wolters Kluwer.

Porter, E. J. (1998). On "Being Inspired" by Husserl's phenomenology: Reflections on Omery's exposition of phenomenology as a method of nursing research. *Advances in Nursing Science*, *21*(1), 16-28. https://journals.lww.com/advancesinnursingscience/Fulltext/1998/09000/On__Being_Inspired__by_Husserl_s_Phenomenology_.3.aspx

Prajapati, M., & Kumar, S. (2025). Virtual reality revolution in healthcare: A systematic review. *Health and Technology*. 15, 231–242. https://doi.org/10.1007/s12553-025-00941-3

Prengaman, M., Terry, D., Schmitz, D., & Baker, E. (2017). The nursing community Apgar questionnaire in rural Australia: An evidence based approach to recruiting and retaining nurses. *Online Journal of Rural Nursing and Health Care*, *17*, 148-171. https://doi.org/10.14574/ojrnhc.v17i2.459

Prescott, S., & Garside, J. (2009). An evaluation of simulated clinical practice for adult branch students. *Nursing Standard*, *23*(22), 35-40. https://doi.org/10.7748/ns2009.02.23.22.35.c6776

Primary Health Network (PHN) for country South Australia. (2020). *The national health priority areas (NHPA),*. Retrieved May 25, 2025, from https://www.countrysaphn.com.au/community/national-health-priority-areas/#a

Queensland Government. (2018). *Clinical Services Capability Framework (CSCF) maternity services*. https://www.health.qld.gov.au/__data/assets/pdf_file/0024/444273/cscf-maternity.pdf

Queensland Government. (2022). *Clinical Services Capability Framework (CSCF)*. Retrieved March 16, 2024, from https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/service-delivery/cscf

Queensland Government. (n.d.). *Nursing and midwifery regional, rural and remote student placement allowance*. Retrieved February 16, 2025, from https://www.careers.health.qld.gov.au/students-and-graduates/clinical-placements/students/nursing-and-midwifery-regional-rural-and-remote-student-placement-allowance

Queensland health. (2009 - 2016). *Perinatal annual reports*. https://www.health.qld.gov.au/hsu/peri

Queensland Health. (2014). *Queensland rural and remote health service framework*. https://www.publications.qld.gov.au/dataset/8f72deaa-aee0-4b5f-91eb-624cea6fa0e8/resource/0d627e3a-1a38-443a-80e5-6b60fd837b8f/download/rural-remote-service-framework.pdf

Queensland Health. (2018). *Imminent birth project*. https://ilearncatalogue.health.qld.gov.au/course/495/parrot-c-ac42-imminent-birth

Queensland Health. (2021). *Digital health 2031: A digital vision for Queensland's health system*. Queensland Government. https://www.health.qld.gov.au/__data/assets/pdf_file/0020/1153910/QH_Digital_Health_2031.pdf

Queensland Health. (2023). *The workforce attraction incentive scheme*. https://www.health.qld.gov.au/__data/assets/pdf_file/0026/1247615/hed-0223.pdf

Queensland Health. (2024). *Integrated electronic medical record (ieMR)*. Retrieved June 18, 2024, from https://www.health.qld.gov.au/clinical-practice/innovation/digital-health-initiatives/queensland/integrated-electronic-medical-record-iemr#rollout

Radford, N., & Thompson, A. (1994). A study of issues concerning the implementation of direct entry midwifery education. In S. Robinson & A. Thomson (Eds.), *Midwives, research and childbirth: Volume 3* (pp. 260-292). Springer US. https://doi.org/10.1007/978-1-4899-6958-3_10

Rahimaghaee, F., Hatamopour, K., Seylani, K., & Delfan, V. (2016). Nurses' perceptions of care during wartime: A qualitative study. *International Nursing Review*, *63*(2), 218-225. https://pubmed.ncbi.nlm.nih.gov/26849972/

Reiger, K. (2000). The politics of midwifery in Australia: Tensions, debates and opportunities. *Annual Review of Health Social Sciences*, *10*(1), 53-64. https://doi.org/10.5172/hesr.2000.10.1.53

Reiners, G. (2012). Understanding the differences between Husserl's (descriptive) and Heidegger's (interpretive) phenomenological research. *Journal of Nursing & Care*, *01*. https://doi.org/10.4172/2167-1168.1000119

Ricoeur, P., & Thompson, J. B. (1981). *Hermeneutics and the human sciences: Essays on language, action, and interpretation*. Cambridge University Press.

Robinson, N. (2023). Maternity services in the bush are at crisis levels but midwives say they have the solution. *The Australian*. https://www.theaustralian.com.au/nation/maternity-services-in-the-bush-are-at-crisis-levels-but-midwives-say-they-have-the-solution/news-story/4fdbee166f3b8da917eb4b8af25533ae

Rosen, J. (2017). *Why can't we always stop what we've started? Johns Hopkins neuroscientists have the answer*. John Hopkins University. https://hub.jhu.edu/2017/12/07/neuroscience-susan-courtney-stop-behaviors/

Rothman, J. (2014). *Is Heidegger contaminated by Nazism?* https://www.newyorker.com/books/page-turner/is-heidegger-contaminated-by-nazism

Rudd, K. (2008). *Apology to Australia's Indigenous Peoples*. Parliament of Australia. https://www.aph.gov.au/Visit_Parliament/Art/Icons/Apology_to_Australias_Indigenous_Peoples

Russell, D., Mathew, S., Fitts, M., Liddle, Z., Murakami-Gold, L., Campbell, N., Ramjan, M., Zhao, Y., Hines, S., & Humphreys, J. S. (2021). Interventions for health workforce retention in rural and remote areas: A systematic review. *Human Resources for Health*, *19*(1), 103. https://pmc.ncbi.nlm.nih.gov/articles/PMC8393462/

Sabini, J., & Silver, M. (1982). *Moralities of everyday life*. Oxford University Press.

Safe Work Australia. (2016). *Work health and safety in the agriculture industry*. https://www.safeworkaustralia.gov.au/safety-topic/industry-and-business/agriculture

Salminen, L., Minna, S., Sanna, K., Jouko, K., & Helena, L. (2013). The competence and the cooperation of nurse educators. *Nurse Education Today*, *33*(11), 1376-1381. https://pubmed.ncbi.nlm.nih.gov/23062869/

Sartre, J.-P. (1977). *Life/situations: Essays written and spoken / by Jean-Paul Sartre; translated by Paul Auster and Lydia Davis*. Pantheon Books.

Scharff, J. (2013). The distinctive nature and scope of rural nursing pratice: Philosophical Bases. In C. Winters (Ed.), *Rural nursing: Concepts, theory, and practice* (4th ed., pp. 241 - 258). Springer.

Schofield, D. J., & Beard, J. R. (2005). Baby boomer doctors and nurses: Demographic change and transitions to retirement. *Medical Journal of Australia*, *183*(2), 80-83. https://doi.org/10.5694/j.1326-5377.2005.tb06928.x

Schuster, M., & Dwyer, P. A. (2020). Post-traumatic stress disorder in nurses: An integrative review. *Journal of Clinical Nursing*, *29*(15-16), 2769-2787. https://pubmed.ncbi.nlm.nih.gov/32372541/

Scott, D. (2022). Reducing feelings of unpreparedness experienced by Registered Nurses assigned the care of Covid-19 positive individuals with intellectual and developmental disabilities. Georgia State University. https://doi.org/10.57709/28837834

Segal, D. L. (2010). Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR). In *The Corsini Encyclopedia of Psychology* (pp. 1-3). https://doi.org/10.1002/9780470479216.corpsy0271

Senate Community Affairs References Committee. (2023). *Universal access to reproductive health*. https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Community_Affairs/ReproductiveHealthcare

Siberry, A., Adams, T., & Leach, B. (2023). "Place matters": Midwives' interprofessional relations in rural and urban institutional contexts. *SSM-Qualitative Research in Health*, *4*, https://doi.org/10.1016/j.ssmqr.2023.100309

Sinnerton, J. (2018). Maternity ward closures putting bush babies at risk. *Courier Mail*. https://www.couriermail.com.au/news/queensland/queensland-government/maternity-ward-closures-putting-bush-babies-at-risk/news-story/d2e9f314ce2b4c18233af01913a18610

Sinnerton, J. (2024). All eyes on new Chief Midwife to help ease maternity crisis. *Courier Mail*. https://www.couriermail.com.au/news/queensland/all-eyes-on-new-chief-midwife-to-help-ease-maternity-crisis/news-story/d798582fd7be429c81b3d614e6c20964

Slaby, J., & Stephan, A. (2008). Affective intentionality and self-consciousness. *Consciousness and Cognition*, *17*(2), 506-513. https://doi.org/https://doi.org/10.1016/j.concog.2008.03.007

Smith, J., D. (2016). *Australia's rural, remote and Indigenous health* (3rd ed.). Elsevier.

Smith, S., Lapkin, S., Halcomb, E., & Sim, J. (2023). Job satisfaction among small rural hospital nurses: A cross-sectional study. *Journal of Nursing Scholarship*, *55*(1), 378-387. https://pubmed.ncbi.nlm.nih.gov/36065145/

Smith, T., McNeil, K., Mitchell, R., Boyle, B., & Ries, N. (2019). A study of macro-, meso- and micro-barriers and enablers affecting extended scopes of practice: The case of rural nurse practitioners in Australia. *BMC Nursing*, *18*(1), 14-12. https://doi.org/10.1186/s12912-019-0337-z

Smythe, E., & Spence, D. (2020). Reading Heidegger. *Nursing Philosophy*, *21*(2), 1-9. https://doi.org/10.1111/nup.12271

Smythe, E. A., Ironside, P. M., Sims, S. L., Swenson, M. M., & Spence, D. G. (2008). Doing Heideggerian hermeneutic research: A discussion paper. *International Journal of Nursing Studies*, *45*(9), 1389-1397. https://doi.org/10.1016/j.ijnurstu.2007.09.005

Sohn, B. K. (2017). Phenomenology and Qualitative Data Analysis Software (QDAS): A Careful Reconciliation. Forum Qualitative Sozialforschung Forum: Qualitative Social Research, 18(1). https://doi.org/10.17169/fqs-18.1.2688

Southworth, J. (2022). Bridging critical thinking and transformative learning: The role of perspective-taking. *Theory and Research in Education*, *20*(1), 44-63. https://doi.org/10.1177/14778785221090853

Speziale, H. S., & Carpenter, D. R. (2011). *Qualitative research in nursing: Advancing the humanistic imperative* (5th ed.). Wolters Kluwer Health/Lippincott Williams & Wilkins.

Spiegelberg, H., & Schuhmann, K. (1982). *The phenomenological movement: A historical introduction* (3rd rev. and enl. ed. / with the collaboration of Karl Schuhmann ed.). Nijhoff.

St Clair, M., & Murtagh, D. (2019). Barriers to telehealth uptake in rural, regional, remote Australia: what can be done to expand telehealth access in remote areas. Digital Health: Changing the Way Healthcare is Conceptualised and Delivered: Selected Papers from the 27th Australian National Health Informatics Conference (HIC 2019) https://pubmed.ncbi.nlm.nih.gov/31397320/

Staempfli, S., & Lamarche, K. (2020). Top ten: A model of dominating factors influencing job satisfaction of emergency nurses. *International Emergency Nursing*, *49*, 100814. https://doi.org/10.1016/j.ienj.2019.100814

Stroll, A., & Martinich, A. (2023). Epistemology. In *Encyclopedia Britannica*. Retrieved 16.04.2024 from https://www.britannica.com/topic/epistemology

Sweet, L. P., Boon, V. A., Brinkworth, V., Sutton, S., & Werner, A. F. (2015). Birthing in rural South Australia: The changing landscape over 20 years. *Australian Journal of Rural Health*, *23*(6), 332-338. https://doi.org/10.1111/ajr.12214

Taylor, B., & Francis, K. (2013). *Qualitative research in the health sciences: Methodologies, methods, and processes*. Routledge. https://doi.org/10.4324/9780203777176

Terhaar, M., & Paris, L. (2010). Using Maslow's pyramid and the National Database of Nursing Quality Indicators (TM) to attain a healthier work environment. *Online Journal of Issues in Nursing*, *16*(1):6. https://pubmed.ncbi.nlm.nih.gov/21800926/

Terry, D., Peck, B., Baker, E., & Schmitz, D. (2021). The rural nursing workforce hierarchy of needs: Decision-making concerning future rural healthcare employment. *Healthcare, 9*(9): 1232. https://pubmed.ncbi.nlm.nih.gov/34575006/

Tigard, D. (2019). The positive value of moral distress. *Bioethics*, *33*(5), 601 - 608. https://pubmed.ncbi.nlm.nih.gov/30734331/

Tracy, S. K., Sullivan, E., Dahlen, H., Black, D., Wang, Y. A., & Tracy, M. B. (2006). General obstetrics: Does size matter? A population-based study of birth in lower volume maternity hospitals for low-risk women. *BJOG: An International Journal of Obstetrics and Gynaecology*, *113*(1), 86-96. https://doi.org/10.1111/j.1471-0528.2005.00794.x

Trawny, P. (Ed.). (2014). *Heidegger, Martin: Considerations II-VI (Black Booklets 1931-1938)* (Vol. 1). Verlag Vittorio Klostermann.

Tribby, K. V., & Isaacson, M. J. (2024). "We're not valued, we're not heard": Voices of seasoned nurses in a rural state following the onset of COVID-19. *Advances in Nursing Science*, *47*(3), 233-247. https://pubmed.ncbi.nlm.nih.gov/36745160/

Tuffour, I. (2017). A critical overview of interpretative phenomenological analysis: A contemporary qualitative research approach. *Journal of Healthcare Communications*, *2*(4). https://doi.org/10.4172/2472-1654.100093

Umoren, R., Kim, L., Gray, M., Best, J., & Robins, L. (2022). Interprofessional model on speaking up behaviour in healthcare professionals: A qualitative study. *BMJ Leader*, *6*(1), 15. https://doi.org/10.1136/leader-2020-000407

University of Newcastle. (n.d.). *Nursing rural immersion program*. Retrieved February 16, 2025, from https://www.newcastle.edu.au/college/health-medicine-wellbeing/department-of-rural-health/placement-information/disciplines/nursing/nursing-rural-immersion-program

University of Queensland. (n.d.). *Rural health placements*. Retrieved February 16, 2025, from https://study.uq.edu.au/stories/rural-health-placements

University of Southern Queensland. (n.d.). *Rural and away placement opportunities for Health programs*. Retrieved February 16, 2025, from https://www.unisq.edu.au/current-students/academic/hes-placements/rural-and-away-placements

University of Technology Sydney [UTS]. (n.d.). *Postgraduate nursing*. https://studyonline.uts.edu.au/ppc/master-advanced-nursing?LeadChannel=PPC&LeadSource=Bing&VendorAccountCampaignType=Search&Keyword=postgraduate%20nursing&CampaignSourceCode=Search-MAdvN-Postgraduate&VendorId=7&MediaCampaignID=522001461&MediaGroupID=1311718558557551&MediaAdID=&MediaKeywordID=kwd-81982691052845:loc-9&msclkid=5fdc5b9a1f151580f4963c27072f9c6d&utm_source=bing&utm_medium=cpc&utm_campaign=Search-MAdvN&utm_term=postgraduate%20nursing&utm_content=Postgraduate

van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. State University of New York Press. http://ebookcentral.proquest.com/lib/jcu/detail.action?docID=3408268

van Manen, M. (2002). Writing phenomenology. In M. van Manen (Ed.), *Criticism of the Phenomenological Approach (Understanding the Limits of Subjectivity and Objectivity in Research)*. Althouse Press.

van Manen, M. (2014). *Phenomenology of practice: Meaning-giving methods in phenomenological research and writing*. Left Coast Press.

van Manen, M. (2015). *Researching lived experience: Human science for an action sensitive pedagogy,* (2nd ed.). Left Coast Press.

van Manen, M. (2017). Phenomenology in its original sense. *Qualitative Health Research*, *27*(6), 810-825. https://doi.org/10.1177/1049732317699381

van Manen, M. (2018). Rebuttal rejoinder: Present IPA for what it is—Interpretative psychological analysis. *Qualitative Health Research*, *28*, 1959 - 1968. https://journals.sagepub.com/doi/10.1177/1049732318795474

van Manen, M., & van Manen, M. (2021). Doing phenomenological research and writing. *Qualitative Health Research*, *31*(6), 1069-1082. https://doi.org/10.1177/10497323211003058

Victoria University. (n.d.). *Master of Nursing*. https://online.vu.edu.au/ppc/master-of-nursing?utm_campaign=Search-MON-BM-Postgraduate&utm_source=Bing&utm_medium=ppc&utm_term=postgraduate%20nursing&LeadChannel=PPC&LeadSource=Bing&VendorAccountCampaignType=Search&Keyword=postgraduate%20nursing&CampaignSourceCode=Search-MON-BM-Postgraduate&VendorId=7&msclkid=433977fa67e11d1efd7210477fdb889a&utm_content=Postgraduate

Wahyuni, D. (2012). The research design maze: Understanding paradigms, cases, methods and methodologies. *Journal of Applied Management Accounting Research*, *10*(1), 69. https://www.researchgate.net/publication/256024036

Wakely, L., Wolfgang, R., & Wakely, K. (2019). Powerless facing the wave of change: The lived experiences of providing services in rural areas under the National Disability Insurance Scheme. *Rural and Remote Health*, *19*, 5337. https://doi.org/10.22605/RRH5337

Wakerman, J., Humphreys, J., Russell, D., Guthridge, S., Bourke, L., Dunbar, T., Zhao, Y., Ramjan, M., Murakami-Gold, L., & Jones, M. P. (2019). Remote health workforce turnover and retention: What are the policy and practice priorities? *Human Resources for Health*, *17*(1), 99. https://doi.org/10.1186/s12960-019-0432-y

Waldner, M. H., & Olson, J. K. (2007). Taking the patient to the classroom: Applying theoretical frameworks to simulation in nursing education. *International Journal of Nursing Education Scholarship*, *4*(1), 18-Article18. https://doi.org/10.2202/1548-923X.1317

Walsh, S., Versace, V., Thompson, S., Browne, L., Knight, S., Lyle, D., Argus, G., & Jones, M. (2023a). Supporting nursing and allied health student placements in rural and remote Australia: A narrative review of publications by university departments of rural health. *Medical Journal of Australia*, *219 Suppl 3*, S14-s19. https://doi.org/10.5694/mja2.52032

Walsh, S. M., Versace, V. L., Thompson, S. C., Browne, L. J., Knight, S., Lyle, D. M., Argus, G., & Jones, M. (2023b). Supporting nursing and allied health student placements in rural and remote Australia: A narrative review of publications by university departments of rural health. *Medical Journal of Australia*, *219*(S3), S14-S19. https://doi.org/10.5694/mja2.52032

Wang, L., & Yu, P. (2021). Impact of exemplar education program on the professional commitment of nursing students: A quasi-experimental study. *Nurse Education Today*, *107*, 105118. https://pubmed.ncbi.nlm.nih.gov/34507259/

Ward, D., & Lasen, M. (2009). An overview of needs theories behind consumerism. *Journal of Applied Economic Sciences*, *4*. https://www.researchgate.net/publication/23961616

Welch, N. (2000). *Understanding of the determinants of rural health*. National Rural Health Alliance. https://www.scribd.com/document/169955112/03-welch-00

Whitehead, D., Ferguson, C., LoBiondo-Wood, G., & Haber, J. (2020). *Nursing and midwifery research methods and appraisal for evidence-based practice* (6th ed.). Elsevier.

Whiteing, N., Barr, J., & Rossi, D. (2022). The practice of rural and remote nurses in Australia: A case study. *Journal of Clinical Nursing*, *31*(11-12), 1502-1518. https://doi.org/10.1111/jocn.16002

Wilkes, L. (1991). Phenomenology: A window to the nursing world. In G. Gray & R. Pratt (Eds.), *Towards a Discipline of Nursing* (pp. 229 - 245). Churchill Livingstone.

Williams, M. A. (2012). Rural professional isolation: An integrative review. *Online Journal of Rural Nursing and Health Care*, *12*(2), 3-10. https://www.researchgate.net/publication/288260514

Woods, M. (2014). Beyond moral distress: Preserving the ethical integrity of nurses. *Nurse Ethics*, *21*(2), 127-128. https://journals.sagepub.com/doi/10.1177/0969733013512741

Wooley, T., Hogenbrick, J., & Strasser, R. (2020). Retaining graduates of non-metropolitan medical schools for practice in the local area: The importance of locally based postgraduate training pathways in Australia and Canada. *Rural and Remote Health*, *20*(5835). https://doi.org/10.22605/RRH5835

Woolley, T., Ross, S., Larkins, S., Sen Gupta, T., & Whaleboat, D. (2021). "We learnt it, then we lived it": Influencing medical students' intentions toward rural practice and generalist careers via a socially-accountable curriculum. *Medical Teacher*, *43*(1), 93-100. https://doi.org/10.1080/0142159X.2020.1817879

World Health Organization. (n.d.). *Midwifery education and care*. Retrieved April 7, 2024, from https://www.who.int/teams/maternal-newborn-child-adolescent-health-and-ageing/maternal-health/midwifery

World Health Organization. (2010). *Increasing access to health workers in remote and rural areas through improved retention: global policy recommendations*. World Health Organization. https://iris.who.int/bitstream/handle/10665/44369/9789241564014_eng.pdf?sequence=1

Xu, A., Baysari, M. T., Stocker, S. L., Leow, L. J., Day, R. O., & Carland, J. E. (2020). Researchers' views on, and experiences with, the requirement to obtain informed consent in research involving human participants: A qualitative study. *BMC Medical Ethics*, *21*(1), 93. https://doi.org/10.1186/s12910-020-00538-7

Yates, K., Usher, K., & Kelly, J. (2011). The dual roles of rural midwives: The potential for role conflict and impact on retention. *Collegian*, *18*(3), 107-113. https://doi.org/10.1016/j.colegn.2011.04.002

Yates, K., Kelly, J., Lindsay, D., & Usher, K. (2013). The experience of rural midwives in dual roles as nurse and midwife: "I'd prefer midwifery but I chose to live here". *Women and Birth*, *26*(1), 60-64. https://doi.org/10.1016/j.wombi.2012.03.003

Zahavi, D. (2003). Inner time-consciousness and pre-reflective self-awareness. In D. Welton (Ed.), *The new Husserl a critical reader* (Vol. 1, pp. 157-180). Indiana University Press.

Zahavi, D. (2020). The practice of phenomenology: The case of Max van Manen. *Nursing Philosophy: an International Journal for Healthcare Professionals*, *21*(2), e12276. https://doi.org/10.1111/nup.12276

Zamawe, F. C. (2015). The implication of using NVivo software in qualitative data analysis: Evidence-based reflections. *Malawi Medical Journal*, *27*(1), 13-15. https://doi.org/10.4314/mmj.v27i1.4

Zhao, Y., Russell, D. J., Guthridge, S., Ramjan, M., Jones, M. P., Humphreys, J. S., Carey, T. A., & Wakerman, J. (2017). Long-term trends in supply and sustainability of the health workforce in remote Aboriginal communities in the Northern Territory of Australia. *BMC Health Services Research*, *17*(1), 836. https://doi.org/10.1186/s12913-017-2803-1

Zhongwei, L. I. (2014). Husserl on intentionality as an essential property of consciousness. *Frontiers of Philosophy in China*, *9*(1), 87-108. http://www.jstor.org/stable/43281401

Zibrik, K. J., MacLeod, M. L., & Zimmer, L. V. (2010). Professionalism in rural acute-care nursing. *Canadian Journal of Nursing Research Archive*, 20-37. https://pubmed.ncbi.nlm.nih.gov/20420090/

Appendix 1: Systematic Review Paper

Title:

A systematic review of the literature examining the outcomes resulting from births that occur in a non-birthing facility in rural and remote Australia. Exploring the impact on mothers, babies, the workforce, and the healthcare system

Introduction

Australia is currently enjoying the privilege of being one of the safest countries in the world to birth a baby (Australian Institute of Health and Welfare [AIHW], 2022). However, for the 28% of Australian mothers living outside a major city (Australian Institute of Health and Welfare [AIHW], 2020) this is not necessarily the case. Therefore, women who live in rural and remote areas in Australia, normally at 36 weeks gestation, may be required to travel from their home and family, potentially hundreds and hundreds of kilometers away, to a location that offers birthing options. This is normally a regional or metropolitan location. However, the reality is that some women, for multifactorial reasons, may not travel to a location that offers birthing options. These women will give birth to their baby in their hometown and require support and help from staff working at the non-birthing facility. A non-birthing facility is a hospital or healthcare facility that does not offer birthing options to women. Some women may time their exit from their hometown too late and end up birthing on the side of the road or in the back of a car – the term used to describe this is, baby born before arrival (BBA).

A significant impact to the above scenario occurring more readily is the closing of small maternity units. Despite calls to improve provision of rural and remote maternity services (Australian Health Ministers Conference, 2011), the past three decades has seen 255 (41%) small maternity units, many of which are in the rural and remote setting, closed in Australia (National Rural Health Alliance inc, 2012). Coupled with midwifery workforce shortages, concern from many midwifery authors has prompted research in this area. An abundance of this have been works which have attempted to solve the many issues identified including: service planning, risk (Barclay et al., 2016; Kildea et al., 2016a), women's choices in birthing (Coxon et al., 2014; Thompson & Wojcieszek, 2012) and models of midwifery care (Brown & Dietsch, 2013; Dawson et al., 2016; Kildea et al., 2016a; Kruske et al., 2016; Tran et al., 2017). Yet few, it appears, have explored the relationship between the prevalence of birthing in a non-birthing facility in rural and remote Australia, and the subsequent outcomes.

Therefore, this review was born out of the need to improve understanding about what the potential impacts and outcomes are for women, their babies, staff working at non-birthing facilities, and the healthcare system itself, in rural and remote Australia.

Research question and Aims

What is the impact and outcome on mothers, babies, the workforce, and the healthcare system from births that occur in a 'non-birthing facility' in rural and remote Australia? The aims of this literature review:

1. Describe what impact/s, if any, there are for mothers, babies, staff, and the healthcare facility because of births occurring at a non-birthing facility.
2. Describe what the outcome/s are for mothers, babies, staff, and the healthcare facility because of births occurring at a non-birthing facility.

Methods

A PICO framework was used to determine the parameters of the review (Huang et al., 2006) and a PRISMA checklist guided the reporting (Moher et al., 2009). The clinical question looking at occurrence, yielded a broad methodological range of studies. Such a review, incorporating and examining qualitative, quantitative and mixed method studies, was used to develop a holistic understanding of the phenomenon under review from both empirical and theoretical research, to better inform future practice.

Search Strategy

Five electronic health databases were searched. Concepts and key words were identified through the PICO framework and are presented in Tables 1 and 2. Literature between 2003 and 2018 was searched; a start date selected from a previous literature search by the author and to capture historical data relating to maternity service closures. Reference lists of included studies were examined and a further search by recurrent authors' names identified additional literature. A third search was conducted, extending to 2021, due to the time interval between the initial search and write-up. Retrieved records were assessed in three stages against the inclusion and exclusion criteria, screening of titles and abstracts and finally full text. The full search strategy can be seen in Tables 3 and 4.

Inclusion and Exclusion Criteria

A full list of the inclusion / exclusion criteria can be found in Table 5. This study was limited to Australian literature published in English. The aforementioned literature search by the author, had highlighted a distinct lack of studies focusing on non-birthing facilities. It was therefore decided not to define this as either an inclusion or exclusion criteria. Antenatal (including truncation symbols) was included in the search strategy, however studies that focused primarily on the antenatal period with no discussion of birthing were excluded.

Data collection, abstraction, and appraisal

All studies identified through the search were screened by title and abstract to eliminate those obviously ineligible. In studies where the inclusion / exclusion criteria were not easily determined, the full text were screened. The principal author did the initial assessment of all papers on her own as the manuscript was an assessment piece in a university degree. However, when the manuscript was being prepared for publication, the principal author divided the 74 full text papers evenly between the co-authors to review and confirm the final selection of eligible papers for the review. Figure 1 illustrates the screening process using a PRISMA flowchart (Peters et al., 2015).

A table of all studies retrieved, including those excluded by the above processes, was drawn up to allow the author the ability to juxtapose author names, keywords, and database retrieval. The table identified the studies that were excluded based on inclusion/exclusion criteria, while allowing for a further author led search. The chosen articles were tabled into a personalised data summary chart. From this, Critical Appraisal Skills Program (CASP) Checklists and Mixed Methods Appraisal Tools (MMAT) were used to systematically analyse the trustworthiness, relevance and results of the articles (Critical Appraisal Skills Programme, 2018; Hong et al., 2018). Three quarters of the articles were deemed high quality and the remaining quarter medium quality. A thematic analysis approach was used to amalgamate the evidence. A final review table was drawn up and can be seen in Table 6. Themes derived from the full text were extracted and can be seen in Table 7.

Results

Of the total 130 records identified, 74 full text articles were obtained and reviewed and 21 were included in the review. Reasons for exclusion of the 53 articles at the full text review stage are shown in the PRISMA flow chart (Figure 1).

Included studies

A higher proportion of the included studies used qualitative research methods: 13 Qualitative, 6 Quantitative and 2 Mixed Methods. There were 2 studies (Abdel-Latif et al., 2006; Ibiebele et al., 2015) that detailed the prevalence and outcomes of rural births occurring outside a birthing facility. One study examined babies BBA (Kildea et al., 2015) and one looked at in-flight births during maternal transfer (Shipway et al., 2016). Additional to this small number of studies that addressed the question being asked, the remaining articles all met the inclusion criteria, without specifically discussing impacts or outcomes.

Three Emergent themes arose from the data: Maternal culture and historical influence; maternity services [sub themes of workforce and planning]; and neonatal outcomes and maternal risk. Each theme will be addressed in turn; however, it should be noted that there was often overlap between themes.

Maternal Culture and Historical influence

Three articles focussed on the maternal culture of Indigenous women and the historical influence on pregnancy and birthing practices. Ireland et al. (2011) explored reasons for declining transfer to urban hospitals by Aboriginal women. Data collection took place in a small community in the Northern Territory where 12 women told their stories. There results identified three themes: previous experiences, factors influencing planning for community birth and women's beliefs, and practices surrounding community birth. The findings concluded that there had been a breakdown of traditional birthing practices leading to a high level of non-compliance due to a desire to 'birth on country'.

In a second study by Ireland et al. (2015a), observation and semi-structured interviews were used to describe the western colonisation of Aboriginal birth and midwifery practices. In their six-yearlong study, the authors recruited 23 Indigenous women with the help of female health workers and 'message sticks'. The findings concluded no correlation between the closure of services and any adverse outcomes in infant mortality. There were, however, significant cultural cost to Aboriginal women, namely the right to reproductive choice and the importance of an inability to birth on country.

The cultural safety of maternity services provided to Aboriginal and Torres Strait Islander women in remote areas of Australia was the focus of Kruske et al.'s (Kruske et al., 2006) research. Although their focus was not on birthing outcomes, it has been included in this review as it addresses all environments and practitioners that may provide care with the potential for these women birthing

in a non-birthing facility. This study discussed many issues in the literature surrounding cultural safety and vulnerable populations; however, its efficacy to inform practice beyond raising awareness is debatable.

The focus of these studies has highlighted a lack of emphasis in maternity planning placed on the psychological aspects of traditional birthing practices and culture. What all the authors have concluded is how these issues are of greater importance to the indigenous women in their studies than any clinical risk. Indeed, Ireland et al. in both of their studies (Ireland et al., 2011; Ireland et al., 2015b) attribute a level of non-compliance with western recommended practices from some women in their studies in order to achieve 'birthing on country'. Recommendations from all of these studies place emphasis on addressing cultural safety in the planning and provision of maternity services.

Maternity Services - Workforce

Three articles addressed maternity workforce from the perspective of the remote nurses and midwives' experiences: Yates et al. (2013) looked at dual role nurse/midwives working in remote settings; the development of a maternity emergency course (MEC) was discussed by Kildea et al. (2006) and Mills et al. (2010) examined rural and remote nurses' (non-midwives') experiences of providing antenatal services.

The study by Mills et al. (Mills et al., 2010), whilst regarding antenatal services only, was deemed appropriate for inclusion as it scrutinized the role of the nurse in providing maternity services thereby providing that care in a non-birthing facility. This mixed methods study established a pilot for the provision of antenatal services in the general practice (GP) environment. The study justification developed from workforce shortage in midwifery which led to a Medicare Medical Benefits Scheme (MBS) item number for registered nurses (RNs) to provide antenatal services for low-risk pregnant women. This study enrolled 10 rural RNs to partake in a professional development program to provide antenatal services, and four general practitioners (GPs) in the evaluation process. During their reporting, the authors suggested an increase in confidence from the RNs when delivering antenatal care. However, drawing conclusions on such a small number, given that there was an attrition dropout rate of 70%, leads the reader to query its validity.

The need for upskilling and education for remote RNs was also identified by Kildea et al. (2006). Their study discussed RNs working outside of their scope of practice when looking after pregnant women in labour. Their work resulted in the development of a maternity emergency course (MEC) through the Council of Remote Area Nurses (CRANA) which was piloted in Alice Springs in 2003.

Kildea et al.(Kildea et al., 2006) reported increased confidence and decreased fear when providing care to childbearing women after the education.

Whilst the study by Yates et al. (2013) also represents a small sample (n = 8), their use of a phenomenological methodology justifies this and assists the reader to develop an understanding of this poorly researched dual nurse/midwife role. The ability to attract and maintain midwives in rural areas has been highlighted by a number of studies as a major issue for maintaining rural maternity care (Bar-Zeev et al., 2013; Department of Health and Aging, 2009; Kildea et al., 2006; Kildea et al., 2010; Longman et al., 2017). The authors posited multifactorial contributors to benefits and disadvantages to a rural nursing and midwifery workforce (Yates et al., 2013).

What these three studies have identified is a concern for rural and remote midwifery and the workforce that is providing the care, be that nursing or midwifery. Congruence in the need for upskilling and education is threaded throughout, yet the appropriateness of the care delivery is not brought to question by either Kildea et al. (2006) or Mills et al. (Mills et al., 2010). Whilst not offering solutions to workforce issues, Yates et al. (2013) has delivered an insight into the viewpoint of the workforce itself and recommended further research into the implications of the joint nurse/midwife role

Maternity Services - Planning

This is the largest theme with 9 studies. Quantitative studies by Sweet et al. (2015) and Rolfe et al. (2017) examined the distribution and remoteness of services. Sweet et al. (2015) mapped rural maternity services in South Australia through a retrospective review. Their study identified over a nine-year period, 60% of rural maternity units had closed, resulting in a rise from 18% to 24% of women having to travel, sometimes hundreds of kilometres, from their usual residence to have a baby. Rolfe et al.(Rolfe et al., 2017) discussed the inequitable planning of maternity services across Australia. Furthermore, geographical factors such as isolation, disadvantaged and vulnerable populations, did not increase the likelihood for a birthing service being established. The statements of this study were drawn through the construction of a geographical catchments around health facilities, illustrating population characteristics and population-based indicators of maternity service needs.

Maternity care accessibility in rural and remote Australia for Aboriginal women are discussed in four of the studies in this sub-theme. Two of these studies are qualitative in nature (Kildea et al., 2010; Kildea et al., 2016b), and two quantitative studies (Bar-Zeev et al., 2013; Kildea et al., 2015). The

Kildea et al. 2010 and 2016 studies are personal and narrative views, initiated from personal experience and passions; both exploring the existing government legislation and relevant literature. Kildea et al. (2010) raised the question how maternity services can contribute to reducing poor maternal and infant outcomes by 'closing the gap'. Looking at areas of the issue said to influence the delivery of maternity services. There is a clear and concise reference to a number of principal reports into Aboriginal healthcare, maternity and more specifically the inequality in services provided. They acknowledge the multi-faceted nature of the changes needed and that Australia should observe and "learn from comparable countries, particularly Canada and New Zealand" (Kildea et al., 2010, p. 12).

Actions targeting Indigenous women from the Australian National Maternity Services Plan [NMSP] (Commonwealth of Australia, 2011) and the progress that has been achieved in relation to these areas is the focus of Kildea et al. (Kildea et al., 2016b) study. As a narrative view, Kildea et al. (2016a) presented suggestions as to why questions in these areas have not been answered. The authors proposed that the timeframe for the NMSP has come and gone without notable results and proposed the use of the Australian rural birthing index [a toolkit devised to calculate the level of maternity services based on need] as reported by Longman et al. (Longman et al., 2015) for moving forward. Kildea et al. (2016a) acknowledged work being conducted around birthing on country but emphasized momentum needed to stay and funding needed to be dedicated to the components of risk highlighted.

Maternity accessibility in rural and remote Australia for Aboriginal women, and the relationship between service and population needs, as suggested by Rolfe et al. (2017) is again challenged by Bar-Zeev et al. (2013). Their quantitative retrospective cohort study of 412 was recruited from two large Aboriginal communities in the Northern Territory. Whilst a cohort design is most often associated with prospective studies, the authors have stated that the women were followed up at 12 months post-partum which suits such a longitudinal study. Results, following statistically sound analysis of the data, showed that 10% (n = 42) of the births occurred outside the hospital with 36% (n = 15) of these being premature. The authors identified the *Closing the Gap* report (Australian Government, 2014) in relation to Aboriginal women having access to a continuity birthing model and the need to address appropriate, quality staffing. This study is able to describe patterns of maternity services from two of the largest remote communities in Northern Australia, services that are available, accessed and needed for these women.

Accessibility and population needs are further discussed in Kildea et al. (Kildea et al., 2015). Exploring BBA, they identified a lack of data reporting intention to have an unassisted birth. They did however, link data reporting women in Aboriginal communities birthing their babies locally rather

than flying out to a birthing hospital (Gosden, 2008; Ireland et al., 2011), identifying an inverse association with BBA outcomes and reduction in rural and remote birthing services. The authors present a compelling argument for the establishment of, and re-opening of primary birthing units that have high BBA rates.

Planning specific maternity services was identified in three of the studies. Both Pilcher et al. (2014) and Longman et al. (2017) reviewed the use, appropriateness and sustainability of rural birthing index tools for Australia. Pilcher et al.(2014) used the component variables outlined in the NMSP (Commonwealth of Australia, 2011) to identify planning indexes specifically applicable to rural maternity services. Four indexes were identified, 2 Australian and 2 Canadian and presented in both narrative and tabular form. The authors have discussed that only two of the four are associated with maternity services but have identified that there are relevant and similar variables in each index. They have concluded that a modified index would suit the needs of maternity planners for remote services.

In the later study, Longman et al. (Longman et al., 2017) stated "a raft of national policy and planning documents promote continued provision of rural and remote maternity services, articulating a strategic intent for services to provide responsive, woman-centred care as close as possible to a woman's home" (2017, p. 1161) . The aim of their qualitative fieldwork was to investigate why this intent had not been achieved and whether an Australian Rural Birthing Index Toolkit (ARBI) would assist in this realization. Nine rural sites across four states and territories were identified using calculations from the Australian Rural Birthing Index Toolkit (ARBI). Interviews, focus groups and one group information session comprised 141 participants. Five themes were identified. The authors found there was malalignment between the ARBI score and the existing level of service thus concluding that the Toolkit could contribute to a more appropriate and sustainable level of planning and service. This substantive piece of work aimed to address previously reported issues surrounding the impact of service provision for rural and remote women and offered potential solutions (Longman et al., 2017).

Narrowing down the lack of service planning, Kornelsen et al. (2016) explored development through comprehensive costing for rural health. Their commentary reviewed national health initiatives around cost effectiveness for centralised services. Similar to the work of Kildea et al. (2016a) , the authors have made reference to the need for societal perspective on planning services into cost equations as well as a need for a costing framework that differs from the pragmatic one currently in use. The authors address and acknowledge the delineation of service levels, manifest costs, and latent costs. They also suggest however, that reconciling the latent costs with the concrete costs is

inaccurate and should be attained through qualitative data to attain a comprehensive cost-benefit ratio.

What all of these studies have emphasized is the inequity and disregard for women having a baby in a rural or remote location (Bar-Zeev et al., 2013; Kildea et al., 2010; Kildea et al., 2015; Kildea et al., 2016b; Kornelsen et al., 2016; Longman et al., 2017; Pilcher et al., 2014; Rolfe et al., 2017; Sweet et al., 2015). Whilst awareness of the challenges in this area is evident on the political agenda (Bar-Zeev et al., 2013; Kildea et al., 2010; Kildea et al., 2015; Kildea et al., 2016b; Longman et al., 2017; Pilcher et al., 2014) its lack of action is probed, and many solutions are suggested.

Neonatal outcomes and Maternal risk

The correlation between neonatal outcomes and the rural and remote setting were discussed in five studies. Abdel-Latif et al (Abdel-Latif et al., 2006). focused on the association between very premature infants born to mothers residing in rural areas and poorer neonatal outcomes. Their study identified characteristics of babies admitted to a neonatal intensive care unit (NICU) that were born to rural mothers. Findings related not only the place of birth, but the maternal characteristics and risk factors associated with rural and remote living. Indeed, when they stratified by category of hospital, they found a significantly higher rate of mortality in rural infants born in tertiary centers than urban infants, becoming statistically significant in the 30-31 week gestation group. No other birth related factors could be found, suggesting pre-existing pregnancy risk factors were responsible. The authors identified limitations in their accessibility to prenatal data that may have been valuable in identifying underlying factors to explain the higher risks.

Disparity in health between Aboriginal and non-Aboriginal Australians is the focus of the large retrospective cohort study by Ibiebele et al. (2015). They aimed to determine where those disparities lay in relation to stillbirth rates and geographical location and identify whether, over time the gap in stillbirth rates among Indigenous and non-Indigenous women reduced. Temporal trends of stillbirth rates showed that whilst overall the comparative rates between Indigenous and non-Indigenous showed a reduction of 57.3%, there remained an increased risk for women living in rural as opposed to urban regions. The authors also identified a four-fold increased risk of stillbirth for Indigenous women due to maternal conditions and a three-fold increase due to spontaneous preterm birth, a finding consistent with that of Abdel-Latif et al. (2006).

Focusing on risk factors for low birthweight, preterm and small for gestational age babies, Kildea et al.'s (2017) study, demonstrated two cohort groups, one retrospective and one prospective. There was no reporting of data collection or methods for the prospective group and no dialogue as to potential bias within the study. Despite this, their statistical data was consistent with that of Abdel-Latif et al. (2006) and concurred the relationship and risk association for teenage mothers and previous pre-term birth, also finding the burden of disease high. When examining infant risks, they found 10% of babies in the study were born outside of a birthing hospital yet there is no attempted correlation with morbidity and mortality for these infants. There are also no relationships drawn between cohorts 1 and 2; in fact, following the initial description of the two cohorts they are not further mentioned, reducing credibility.

Further to their recommendations in maternity services planning, Kildea et al.(Kildea et al., 2015) study examining babies born before arrival (BBA), found that women living in rural and remote areas had a higher incidence of neonatal admissions to neonatal nurseries and adverse outcomes for newborns. Data collected from Australia wide and Queensland specific, showed a significant positive linear relationship in the BBA rate over time; with Queensland showing higher overall BBA rates with more than a twofold increase. Despite the high risk of associated poor neonatal outcomes with the incidence of BBA, Kildea et al. (Kildea et al., 2015) conceded a lack of geocoded data collection relating to neonatal outcomes for babies BBA and recommended further research.

Focusing on the neonatal outcomes of birthing away from a maternity unit, Shipway et al. (2016) reported a retrospective review of four in-flight birth case studies. The births, occurring in the Northern Territory, identified neonatal outcomes associated with preterm (less than 37 weeks), very preterm (28 – 31.6 weeks) and extremely preterm (less than 27.6 weeks) babies. Respiratory issues and low birthweight contributed to both the preterm and very preterm babies extended tertiary hospital stays whilst the extremely preterm baby in the study died on arrival at the receiving hospital. As a descriptive review of retrospective case-studies this article provided the reader with an in-depth account of the cases involved. However, with no linking of the cases past the Indigenous status of all the women, there is little value for current or future practice other than to clarify the rarity of the occurrence. The authors do not attempt to draw comparison of any predisposing risk factors or indications for preterm labour.

Barclay and colleagues produced two studies examining maternal risk in remote maternity services (Barclay & Kornelsen, 2016; Barclay et al., 2016). Both qualitative in nature, the first (Barclay et al., 2016) explored perceptions of risk in service planning. From a purposeful sample of 117 clinicians from 9 sites in 4 jurisdictions, interviews and focus groups identified two risk themes: health service

risk and social risk; concluding that "Social risk exacerbates clinical risk" (Barclay et al., 2016, p. 68). The authors recommended the use of their own developed Australian Rural Birthing Index Toolkit previously reported in Longman et al. (2017) to influence future practice. These risks were further examined by Barclay and Kornelsen (2016) in the context of a discussion paper. They asked where the midwifery voice (in the form of the Australian Colleges of Midwives) was to advocate for evidenced based decision-making in the allocation of rural services. This proposition reiterates previous evidence presented and suggests taking a political standpoint.

Studies in this theme identify links between rural and remote disparities in healthcare, maternal risk factors and the actual or potential for, poorer neonatal outcomes (Abdel-Latif et al., 2006; Ibiebele et al., 2015; Kildea et al., 2015; Kildea et al., 2017), some being simply descriptive of events (Shipway et al., 2016) whilst others challenge the risk influence (Barclay & Kornelsen, 2016; Barclay et al., 2016). However, they are like-minded that rural and remote maternity and neonatal services do not cater for the higher-risk population.

Discussion

This review indicates the limited contemporary research into the impact on mothers, babies, the healthcare system and workforce when women birth their babies outside a birthing facility in rural and remote Australia. Notwithstanding, perinatal statistics show that these births are consistently occurring (Australian Institute of Health and Welfare [AIHW], 2018) and there is continuing concern from midwifery practice and academe calling for improvement in the provision of rural and remote maternity services (Barclay & Kornelsen, 2016; Coxon et al., 2014; Thompson & Wojcieszek, 2012; Tran et al., 2017). Regardless of the restricted literature specific to the aims of this review, diverse related discussion emerged.

This debate highlighted the multifactorial complexity of birthing in rural and remote Australia through culture and historical influences, maternity service planning, neonatal outcomes and maternal risk. The influence of the Aboriginal population in relation to birthing in remote areas was identified as particularly contributing to the complexity. Indigenous women account for two thirds of the population impacted by reduced birthing facilities in rural and remote Queensland (Clinical Excellence Queensland, 2019). For these women, the birthing experience is a rite of passage within the community, with links and connections made and celebrated with the land and country (Felton-Busch & Larkins, 2019). It is therefore natural that culture and historical influence are addressed here.

The sub- theme of planning was by far the largest to emerge from this literature review. This is likely due to growing concern and advocacy by midwives and midwifery researchers regarding choice and safety for remotely located women in Australia and in particular Queensland, in which most of these studies were conducted. The maternity needs of rural and remote women are not being met (Hoang et al., 2014; Rolfe et al., 2017). Despite policy and government reports, there appears a lack of insight into how maternity services in rural and remote areas are planned (Australian Health Ministers' Advisory Council, 2014-15; Commonwealth of Australia, 2010; Department of Health and Aging, 2009; National Rural Health Alliance inc, 2012). Many authors agree (Kildea et al., 2016a; Kornelsen et al., 2011; Kruske et al., 2016; Longman et al., 2017; Pilcher et al., 2014; Sweet et al., 2015), there needs to be a distinct shift in thinking about how rural and remote services are designed and managed; with many offering valuable and realistic solutions.

In this review associations between reduced service provision, maternal risk and poor neonatal outcomes were identified by a number of studies (Abdel-Latif et al., 2006; Barclay & Kornelsen, 2016; Barclay et al., 2016; Kildea et al., 2015; Kildea et al., 2017; Shipway et al., 2016). However, as has been previously suggested in historical data (Douglas, 2006; Van Wagner et al., 2007), Ireland et al. (Ireland et al., 2015a) found no correlation between the closure of traditional maternity services, pre colonisation and any improvements in outcomes in infant mortality once westernised services were introduced.

The relocation of rural and remote women to centralised birthing facilities denies them of choice (Hadjigeorgiou et al., 2012; Kildea et al., 2010) increases risk, anxiety and financial stress.(Dietsch et al., 2010; Sweet et al., 2015). The links between maternal stress and poor maternal and neonatal health outcomes are also well documented (Bermúdez-Millán et al., 2011; Coussons-Read, 2013; Harris et al., 2021) determining a cause-effect relationship.

Findings from this review have associated historical colonisation, Aboriginal birth practices and cultural safety with reduced rural and remote maternity services. A report by Clinical Excellence Queensland (2019) identified associated poorer perinatal outcomes and higher rates of all risk factors for women who reside at a distance of greater than four hours from a maternity service; 79% of these women recognised as Indigenous. The extrinsic complexity of the choice's women want in their maternity care is a widely researched topic worldwide (Borrelli et al., 2017; Fawsitt et al., 2017; Hadjigeorgiou et al., 2012; Hunter et al., 2011; O'Brien et al.). However, this knowledge has not necessarily translated into practice, meaning congruence between health professionals' interpretation of women's needs and women's wishes do not necessarily align. Presently, this is

further complicated with the shortage of indigenous voices in midwifery policy, limiting appropriate cultural considerations and education.

Strengths and limitations

This appears to be the first systematic review to explore the impact and outcomes of births that occur outside a birthing facility in rural and remote Australia. Although limited, this review has brought together high-quality research to explore this relationship and has identified associations between themes and areas for further research.

Inequality in maternity service provision for rural and remote women is not isolated to Australia. The Society of Obstetricians and Gynaecologists of Canada produced, alongside the Canadian Association of Midwives, a joint position paper on rural maternity care (Miller et al., 2012) highlighting comparable issues with recommendations. Indeed, studies in this review have made such comparisons (Kildea et al., 2010; Pilcher et al., 2014). Despite the similarities, disparity in nurse education between Australia and Canada meant studies were excluded from this review. The authors of this review feel the similarities between both the rural and remote landscapes and their Indigenous peoples warrants further research.

Conclusion

This review provides a source of information around the outcomes resulting from births that occur in a non-birthing facility in rural and remote Australia, alongside some outcome data when this does occur. The persistent concern for the physical and mental health and well-being of women living in rural and remote areas of Australia is paramount. Whilst the ethical relationship of this vulnerable population has been identified many times (Australian College of Midwives (ACM) et al., 2016; Australian Government, 2014; Australian Institute of Health and Welfare [AIHW], 2017) there appears to be a lack of action. This is an area of debate that the authors are sure should and will continue, hopefully with the assistance of the recommendations made by the literature on review here.

To explore, not just the outcomes, but the reasons why birthing is occurring outside of birthing units, including the impact these are having on the health professionals who deliver that care, it is recommended that further research is undertaken in this area.

Reference List

Abdel-Latif, M. E., Bajuk, B., Oei, J., Vincent, T., Sutton, L., & Lui, K. (2006). Does rural or urban residence make a difference to neonatal outcome in premature birth? A regional study in Australia. *Archives of Disease in Childhood - Fetal and Neonatal Edition*, *91*(4), F251-F256. https://doi.org/10.1136/adc.2005.090670

Australian College of Midwives (ACM), Congress of Aboriginal and Torres Strait Islander nurses and midwives (CATSINaM), & Council of Remote Area Nurses of Australia (CRANA). (2016). *Birthing on Country Project* https://www.midwives.org.au/news/ground-breaking-indigenous-maternity-services-program-birthing-country-launched

Australian Government. (2014). *Closing the Gap - Prime Ministers Report*.

Australian Health Ministers Conference. (2011). *National Maternity Services Plan: Provision of Maternity Care*. http://www.health.gov.au/internet/publications/publishing.nsf/Content/pacd-maternityservicesplan-toc~pacd-maternityservicesplan-chapter3

Australian Health Ministers' Advisory Council. (2014-15). *National maternity services plan: 2014-15 Annual report*.

Australian Institute of Health and Welfare [AIHW]. (2017). *Australia's mothers and babies 2015 - in brief* (Perinatal statistics series no.33, Issue. https://www.aihw.gov.au/getmedia/728e7dc2-ced6-47b7-addd-befc9d95af2d/aihw-per-91-inbrief.pdf.aspx?inline=true

Australian Institute of Health and Welfare [AIHW]. (2018). *National Perinatal Data Collection*. Retrieved 11.8.2018 from https://www.aihw.gov.au/about-our-data/our-data-collections/national-perinatal-data-collection

Australian Institute of Health and Welfare [AIHW]. (2020). *Australia's Health 2020* (978-1-76054-319-8).

Australian Institute of Health and Welfare [AIHW]. (2022). *Australia's mothers and babies: Maternal deaths*. https://www.aihw.gov.au/reports/mothers-babies/maternal-deaths-australia

Bar-Zeev, S., Barclay, L., Kruske, S., Bar-Zeev, S., Gao, Y., & Kildea, S. (2013). Use of Maternal Health Services by Remote Dwelling Aboriginal Women in Northern Australia and Their Disease Burden. *Birth*, *40*(3), 172-181. https://doi.org/doi:10.1111/birt.12053

Barclay, L., & Kornelsen, J. (2016). The closure of rural and remote maternity services: Where are the midwives? *Midwifery*, *38*, 9-11. https://doi.org/10.1016/j.midw.2016.03.007

Barclay, L., Kornelsen, J., Longman, J., Robin, S., Kruske, S., Kildea, S., Pilcher, J., Martin, T., Grzybowski, S., Donoghue, D., Rolfe, M., & Morgan, G. (2016). Reconceptualising risk: Perceptions of risk in rural and remote maternity service planning [Article]. *Midwifery*, *38*, 63-70. https://doi.org/10.1016/j.midw.2016.04.007

Bermúdez-Millán, A., Damio, G., Cruz, J., D'Angelo, K., Segura-Pérez, S., Hromi-Fiedler, A., & Pérez-Escamilla, R. (2011). Stress and the social determinants of maternal health among Puerto Rican women: a CBPR approach. *J Health Care Poor Underserved*, *22*(4), 1315-1330. https://doi.org/10.1353/hpu.2011.0108

Borrelli, S. E., Walsh, D., & Spiby, H. (2017). First-time mothers' choice of birthplace: influencing factors, expectations of the midwife's role and perceived safety. *Journal of Advanced Nursing*, *73*(8), 1937-1946. https://doi.org/10.1111/jan.13272

Brown, M., & Dietsch, E. (2013). The feasibility of caseload midwifery in rural Australia: A literature review. *Women and Birth*, *26*(1), e1-e4. https://doi.org/https://doi.org/10.1016/j.wombi.2012.08.003

Clinical Excellence Queensland. (2019). *Rural Maternity Taskforce Report*. https://clinicalexcellence.qld.gov.au/sites/default/files/docs/maternity/rural-maternity-taskforce-report.pdf

Commonwealth of Australia. (2010). *National Maternity Services Plan*.

Commonwealth of Australia. (2011). *National maternity services plan*.

Coussons-Read, M. E. (2013). Effects of prenatal stress on pregnancy and human development: mechanisms and pathways. *Obstet Med*, *6*(2), 52-57. https://doi.org/10.1177/1753495x12473751

Coxon, K., Sandall, J., & Fulop, N. (2014). To what extent are women free to choose where to give birth? How discourses of risk, blame and responsibility influence birth place decisions. *Health, Risk & Society*, *16*(1), 51-67. https://doi.org/10.1080/13698575.2013.859231

Critical Appraisal Skills Programme. (2018). *CASP Checklists* https://casp-uk.net

Dawson, K., McLachlan, H., Newton, M., & Forster, D. (2016). Implementing caseload midwifery: Exploring the views of maternity managers in Australia – A national cross-sectional survey. *Women and Birth*, *29*(3), 214-222. https://doi.org/https://doi.org/10.1016/j.wombi.2015.10.010

Department of Health and Aging. (2009). *Improving maternity services in Australia: a discussion paper from the Australian government*. Commonwealth of Australia. https://www.health.gov.au/internet/main/publishing.nsf/Content/624EF4BED503DB5BCA2

57BF0001DC83C/$File/Improving%20Maternity%20Services%20in%20Australia%20-%20The%20Report%20of%20the%20Maternity%20Services%20Review.pdf

Dietsch, E., Shackleton, P., Davies, C., Alston, M., & McLeod, M. (2010). 'Mind you, there's no anaesthetist on the road': women's experiences of labouring en route [Article]. *Rural And Remote Health*, *10*(2), 1371. https://www.scopus.com/inward/record.uri?eid=2-s2.0-77954644055&partnerID=40&md5=c6983cae7d08f4714a3f22a66e8bdf4d

Douglas, V. (2006). Childbirth among the Canadian Inuit: A review of the clinical and cultural literature. *International Journal of Circumpolar Health*, *65*(2), 117-132. https://doi.org/10.3402/ijch.v65i2.18087

Fawsitt, C. G., Bourke, J., Greene, R. A., McElroy, B., Krucien, N., Murphy, R., & Lutomski, J. E. (2017). What do women want? Valuing women's preferences and estimating demand for alternative models of maternity care using a discrete choice experiment. *Health policy (Amsterdam, Netherlands)*, *121*(11), 1154. https://doi.org/10.1016/j.healthpol.2017.09.013

Felton-Busch, C., & Larkins, S. (2019). Remote dwelling Aboriginal Australian women and birthing: A critical review of literature. *Women and Birth*, *32*(1), 6-15. https://doi.10.1016/j.wombi.2018.05.003

Gosden, A. (2008). *A report on the development of a midwifery model of care for the Joyce Palmer Health Service (Palm Island)*. Queensland Health.

Hadjigeorgiou, E., Kouta, C., Papastavrou, E., Papadopoulos, I., & Mårtensson, L. (2012). Women's perceptions of their right to choose the place of childbirth: an integrative review. *Midwifery*, *28*(3), 380-390. https://doi.org/10.1016/j.midw.2011.05.006

Harris, M. L., Hure, A. J., Holliday, E., Chojenta, C., Anderson, A. E., & Loxton, D. (2021). Association between preconception maternal stress and offspring birth weight: findings from an Australian longitudinal data linkage study. *BMJ Open*, *11*(3), e041502. https://doi.org/10.1136/bmjopen-2020-041502

Hoang, H., Le, Q., & Terry, D. (2014). Women's access needs in maternity care in rural Tasmania, Australia: A mixed methods study. *Women and Birth*, *27*(1), 9-14. https://doi.org/https://doi.org/10.1016/j.wombi.2013.02.001

Hong, Q., N,, Pluye, P., Fabregues, S., Bartlett, G., Boardman, F., Cargo, M., Dagenais, P., Gagnon, M., P,, Griffiths, F., Nicolau, B., O'Cathain, A., Rousseau, M., C,, & Vedel, I. (2018). *Mixed Methods Appraisal Tool [MMAT]*, .

Huang, X., Lin, J., & Demner-Fushman, D. (2006). Evaluation of PICO as a knowledge representation for clinical questions. *AMIA ... Annual Symposium proceedings*, *2006*, 359-363.

Hunter, M., Pairman, S., Benn, C., Baddock, S., Davis, D., Herbison, P., Dixon, L., Wilson, D., & Anderson, J. (2011). Do low risk women actually birth in their planned place of birth and does ethnicity influence women's choices of birthplace? *New Zealand College of Midwives Journal*(44), 5-11. http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,athens&db=ccm&AN=104707558&site=eds-live

Ibiebele, I., Coory, M., Boyle, F. M., Humphrey, M., Vlack, S., Flenady, V., & Boyle, F. M. (2015). Stillbirth rates among Indigenous and non-Indigenous women in Queensland, Australia: is the gap closing? *BJOG: An International Journal of Obstetrics & Gynaecology*, *122*(11), 1476. http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,athens&db=edb&AN=109932269&site=eds-live

Ireland, S., Wulili Narjic, C., Belton, S., & Kildea, S. (2011). Niyith Nniyith Watmam (the quiet story): Exploring the experiences of Aboriginal women who give birth in their remote community [Article]. *Midwifery*, *27*, 634-641. https://doi.org/10.1016/j.midw.2010.05.009

Ireland, S., Belton, S., McGrath, A., Saggers, S., & Narjic, C. (2015a). Paperbark and pinard: A historical account of maternity care in one remote Australian Aboriginal town. *Women and Birth*, *28*(4), 293-302. https://doi.org/https://doi.org/10.1016/j.wombi.2015.06.002

Ireland, S., Ray, R., Larkins, S., & Woodward, L. (2015b). Factors influencing the care provided for periviable babies in Australia: a narrative review. *Reproductive Health*, *12*, 1. http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,athens&db=edb&AN=111218970&site=eds-live

Kildea, S., Kruske, S., & Bowell, L. (2006). Maternity emergency care: Short course in maternity emergencies for remote area health staff with no midwifery qualifications. *Australian Journal of Rural Health*, *14*(3), 111-115. https://doi.org/10.1111/j.1440-1584.2006.00785.x

Kildea, S., Kruske, S., Barclay, L., & Tracy, S. (2010). 'Closing the Gap': How maternity services can contribute to reducing poor maternal infant health outcomes for Aboriginal and Torres Strait Islander women. *Rural & Remote Health*, *10*(3), 1-18. http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,athens&db=ccm&AN=104939074&site=eds-live

Kildea, S., McGhie, A., Gao, Y., Rumbold, A., & Rolfe, M. (2015). Babies born before arrival to hospital and maternity unit closures in Queensland and Australia. *Women and Birth*, *28*(3), 236-245. https://doi.org/10.1016/j.wombi.2015.03.003

Kildea, S., Gao, Y., Rolfe, M., Josif, C., Bar-Zeev, S., Steenkamp, M., Kruske, S., Williams, D., Dunbar, T., & Barclay, L. (2016a). Remote links: Redesigning maternity care for Aboriginal women from remote communities in Northern Australia – A comparative cohort study [Article]. *Midwifery*, *34*, 47-57. https://doi.org/10.1016/j.midw.2016.01.009

Kildea, S., Tracy, S., Sherwood, J., Magick-Dennis, F., & Barclay, L. (2016b). Improving maternity services for Indigenous women in Australia: moving from policy to practice. *Medical Journal of Australia*, *205*(8), 375-379.

Kildea, S., Goa, Y., Rolfe, M., Boyle, J., Tracy, S., & Barclay, L. (2017). Risk factors for preterm, low birthweight and small for gestational age births among Aboriginal women from remote communities in Northern Australia. *Women and Birth*, *30*(5), 398-405.

Kornelsen, J., Stoll, K., & Grzybowski, S. (2011). Stress and anxiety associated with lack of access to maternity services for rural parturient women. *Australian Journal of Rural Health*, *19*(1), 9-14. https://doi.org/doi:10.1111/j.1440-1584.2010.01170.x

Kornelsen, J., Barclay, L., Grzybowski, S., & Gao, Y. (2016). Rural health service planning: the need for a comprehensive approach to costing. Rural and Remote Health. *Rural And Remote Health*, *16*(3604). www.rrh.org.au/journal/article/3604

Kruske, S., Kildea, S., & Barclay, L. (2006). Cultural safety and maternity care for Aboriginal and Torres Strait Islander Australians. *Women and Birth*, *19*(3), 73-77. https://doi.org/https://doi.org/10.1016/j.wombi.2006.07.001

Kruske, S., Kildea, S., Jenkinson, B., Pilcher, J., Robin, S., Rolfe, M., Kornelsen, J., & Barclay, L. (2016). Primary Maternity Units in rural and remote Australia: Results of a national survey. *Midwifery*, *40*, 1-9. https://doi.org/https://doi.org/10.1016/j.midw.2016.05.004

Longman, J., Pilcher, J., Morgan, G., Rolfe, M., D'onoghue, D., Kildea, S., Kruske, S., Grzybowski, S., Kornelsen, J., Oats, J., & Barclay, L. (2015). *ARBI Toolkit: A resource for planning maternity services in rural and remote Australia*. S. C. U. ePublications.

Longman, J., Kornelsen, J., Pilcher, J., Kildea, S., Kruske, S., Grzybowski, S., Robin, S., Rolfe, M., Donoghue, D., Morgan, G., & Barclay, L. (2017). Maternity services for rural and remote Australia: barriers to operationalising national policy. *Health policy*, *121*(11), 1161-1168. https://doi.org/10.1016/j.healthpol.2017.09.012

Miller, K. J. M. D., Couchie, C. R. M., Ehman, W. M. D., Graves, L. M. D., Grzybowski, S. M. D., Medves, J. R. N. P., Dupuis, K. M. D., Dunikowski, L. M. L. S., Marturano, P., Senikas, V. M. D., Wilson, R. M. D., & Wootton, J. M. D. (2012). Rural Maternity Care. *Journal of Obstetrics and Gynaecology Canada*, *34*(10), 984-991. https://doi.org/10.1016/S1701-2163(16)35414-7

Mills, J., Birks, M., Francis, K., Miles, M., & Jones, J. (2010). Australian rural remote registered nurses' experiences of learning to provide antenatal services in general practice: A pilot study. *International Journal of Nursing Practice*, *16*(4), 319-325. https://doi.org/10.1111/j.1440-172X.2010.01859.x

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & The, P. G. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLOS Medicine*, *6*(7), e1000097. https://doi.org/10.1371/journal.pmed.1000097

National Rural Health Alliance inc. (2012). *Fact sheet 25 - Rural maternty services: Investing in the future*.

O'Brien, D., Butler, M. M., & Casey, M. A participatory action research study exploring women's understandings of the concept of informed choice during pregnancy and childbirth in Ireland. *Midwifery*, *46*, 1-7. https://doi.org/10.1016/j.midw.2017.01.002

Peters, M., Godfrey, C., Khalil, H., McInerney, P., Parker, D., & Soares, C. (2015). Guidance for conducting systematic scoping reviews. *International Journal of Evidence-Based Healthcare*, *13*(3), 141-146. https://doi.org/10.1097/XEB.0000000000000050

Pilcher, J., Kruske, S., & Barclay, L. (2014). A review of rural and remote health service indexes: are they relevant for the development of an Australian rural birth index? [journal article]. *BMC Health Services Research*, *14*(1), 548. https://doi.org/10.1186/s12913-014-0548-7

Rolfe, M., Donaghue, D., A, Longman, J., Pilcher, J., Kildea, S., Kruske, S., Kornelsen, J., Grzybowski, S., Barclay, L., & Morgan, G. (2017). The distribution of maternity services across rural and remote Australia: does it reflect population need? *BMC Health Services Research*, *17*(163). https://doi.org/10.1186/s12913-017-2084-8

Shipway, T., Johnson, E., Bell, S., Martin, J., & Clark, P. (2016). A Case Review: In-Flight Births Over a 4-Year Period in the Northern Territory, Australia. *Air Medical Journal*, *35*(5), 317-320. https://doi.org/https://doi.org/10.1016/j.amj.2016.04.005

Sweet, L., Boon, V., Brinkworth, V., Sutton, S., & Werner, A. (2015). Birthing in rural South Australia: The changing landscape over 20 years. *Australian Journal of Rural Health*, *23*(6), 332-338. https://doi.org/doi:10.1111/ajr.12214

Thompson, R., & Wojcieszek, A. (2012). Delivering information: A descriptive study of Australian women's information needs for decision-making about birth facility. *BMC Pregnancy and Childbirth*, *12*(51), 1 - 10.

Tran, T., Longman, J., Kornelsen, J., & Barclay, L. (2017). The development of a caseload midwifery service in rural Australia. *Women and Birth*, *30*(4), 291-297. https://doi.org/https://doi.org/10.1016/j.wombi.2016.11.010

Van Wagner, V., Epoo, B., Nastapoka, J., & Harney, E. (2007). Reclaiming Birth, Health, and Community: Midwifery in the Inuit Villages of Nunavik, Canada. *Journal of Midwifery & Women's Health*, *52*(4), 384-391. https://doi.org/https://doi.org/10.1016/j.jmwh.2007.03.025

Yates, K., Kelly, J., Lindsay, D., & Usher, K. (2013). The experience of rural midwives in dual roles as nurse and midwife: "I'd prefer midwifery but I chose to live here". *Women and Birth*, *26*(1), 60-64. https://doi.org/https://doi.org/10.1016/j.wombi.2012.03.003

Appendix 2: TTHS HREC Ethics Approval

Appendix 3: JCU HREC Ethics Approval

Appendix 4: Participant Information Sheet

Participant Information Form A

PROJECT TITLE: Birthing in remote Queensland: An interpretive phenomenological approach investigating the experiences of registered nurses.

You are invited to participate in this research study that aims to gain an insight into the perceptions and experiences of registered nurses, providing care to pregnant women in a remote setting and who do not hold formal midwifery qualifications. Please read this participant information sheet and the consent form carefully before agreeing to participate. If you would like any further information, please do not hesitate to contact the Principal Investigator via the contact details listed at the end of this information. The study is being conducted by Michelle McElroy and will contribute to her Doctor of Philosophy degree at James Cook University.

Purpose and background of the research

With the closure of 43% of maternity services in Queensland over the last 20 years, the likelihood that a remote nurse will encounter pregnant women is high. The purpose of this research is to provide nurses the opportunity to describe their experiences and perceptions of caring for pregnant women and women birthing their babies in a remote healthcare setting that has no maternity services. The provision of practical obstetric workshops enables nurses to develop skills in basic and emergency care, however they do not directly focus on addressing psychological concerns. This research hopes to gain a deeper understanding of what it is like for these nurses, while also offering strategies to improve the experience for both registered nurses and childbearing women.

Research procedure

If you agree to be involved in the study, you will be asked to participate in an informal interview. The interview will be conducted over the Zoom platform so you will need access to a computer/laptop, with audio and camera enabled (a smart phone would also be suitable), in a quiet location where you will be undisturbed for approximately 45 – 60 minutes. The interview will be with the Principal Investigator and yourself only. The date and time of the interview will be mutually decided between yourself and the Principal Investigator. The Interview will be audio recorded and then transcribed by the Principal Investigator. You may notice, when you receive the invitation for the Zoom meeting, that there are 2 hours allocated for the interview. Please do not be alarmed by this, it is only ensuring time in the Principal Investigator's diary.

Security and storage of data

The Zoom audio recording will be downloaded directly to a password protected hard drive on a laptop belonging to the Principal Investigator and will stay there for the duration of the study. Your interview and your identity will be allocated a participant number, once this number has been generated, your actual

identity will not be stored. During the study, all data will be kept secure in password protected documents and database.

Benefits and advantages to your participation

It is hoped that this study will contribute to the knowledge and understanding of remote area nurses' experiences of caring for birthing women outside a maternity facility. It also has the potential of a wider impact for improving healthcare for pregnant women living rurally.

Potential benefits of the research will include:

- Rural nurses having ability to tell their story in their own words through cathartic reflection.
- Upon completion, having the ability to read others' stories through publication of the study
- Improving psychological health of rural nurses.
- Potential for improving knowledge and confidence.

Risks

As a participant, you will be asked to recount your stories, some of which may be potentially distressing, depending on your experiences. You will be given the opportunity to stop the interview at any point should you become distressed. Access to Queensland Health Employee Assistance Program (EAP – free confidential service) is available. If you wish to access this program for support or counselling you can call OPTUM 24 hours, seven days per week.

- Telephone: 1800 604 640
- Visit the OPTUM website
- Lifeline: 13 11 14

Taking part in this study is completely voluntary and you can stop taking part at any time without explanation or prejudice.

Your responses and contact details will be strictly confidential and DE identified. The data from the study will be used in research publications and reports (research thesis, journal articles). You will not be identified in any way in these publications.

If you have any questions about this study and for return of consent form, please contact Michelle McElroy or Kristin Wicking (see below).

Principal Investigator: Michelle McElroy
College of Healthcare Sciences
James Cook University
Phone:
Email: michelle.mcelroy@jcu.edu.au

Advisor: Dr Kristin Wicking
College of Healthcare Sciences
James Cook University
Phone:
Email: Kristin.wicking@jcu.edu.au

Appendix 5: Participant Consent Form

This administrative form has been removed

Appendix 6: Interview Protocol

Interview Protocol

Semi-structured one-on-one Interviews (via Zoom) about the experiences and perceptions of remote area nurses working in North West Hospital and Health Services rural and remote facilities will be conducted:

- Prior to the interview, participants will be asked to read/complete the **Information Form A and Consent Form B**
- The participant will be asked about their experiences and/or perception of caring for a pregnant woman in a rural and remote setting when there is no midwifery qualified personnel there
- Each interview will be scheduled for 45 - 60 minutes with the option to extend for a further 30 minutes.
- Each interview will commence with:
    - Acknowledgement of consent and reassurance of confidentiality
    - An introduction and overview of the research
    - An overview of the interview
    - Reiteration that the participant can access the Employee Assistance Program (EAP) free of charge and in complete confidentiality.
    - Reiteration that the interview can be stopped at any point by the participant with an option to:
        - Continue.
        - Continue at a later date.
        - Discontinue altogether.
    - Participant will be asked if there are any internet connection issues, are they happy to continue the interview over the telephone – either landline or mobile?
    - Participant will be asked if they are happy for the Principal Investigator to contact them after the interview if there is any clarification on a point needed during transcription of the interview?
    - Questions:

        I. What year did you qualify as a registered nurse
        II. What do you consider rural/remote nursing to be
        III. How long have you worked in a rural/remote facility and what led you to rural nursing?
        IV. Have you completed any obstetric/midwifery courses e.g., CRANA/Imminent birth?
        V. Can you tell me if you have ever cared for a pregnant or laboring woman in a rural/remote facility without a midwife or obstetrician being there?
        VI. Can you tell me about that experience?

            Prompts:
            - Can you elaborate on that point?
            - How did that make you feel?
            - Did you get chance to reflect/debrief?
            - What, if anything, could have been done differently?

VII. If you have not actually cared for a pregnant or laboring woman in a rural/remote facility without a midwife or obstetrician being there. What are your perceptions and thoughts about providing that care?

Prompts:

- Can you elaborate on that point?
- What has made you feel that way?

VIII. Have any of these experiences and/or perceptions altered your practice?

IX. Have any of these experiences and/or perceptions changed how you feel about remote area nursing?

- Caveat – Any other questions that may arise during conversation.

Appendix 7: Advertising Poster

Birthing in remote Queensland:
An interpretive phenomenological approach investigating the experiences of registered nurses

This research will give you the opportunity to tell your story, express your feelings, thoughts, fears, excitement, anticipation!

- Have there been times in your nursing career where you have looked after a birthing pregnant woman?
- Have you heard dramatic birthing stories set in remote locations? How did these events and stories make you feel?
- What are your thoughts and experiences of looking after a pregnant woman?
- Are you a RN without a midwifery qualification who is interested in participating in research that gives you a voice? If so, contact:

Michelle McElroy (Principal Investigator)
T: 07 47815149
E: michelle.mcelroy@jcu.edu.au

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