

# CHAPTER 2

# NURSE EDUCATION, RESEARCH AND EVIDENCE-BASED PRACTICE

LORNA MOXHAM

## KEY TERMS

Aboriginal and Torres Strait Islander health worker 26  
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## LEARNING OUTCOMES

After completing this chapter, you will be able to:

- Describe the different types of educational nursing programs.
- Discuss aspects of entry to registered nursing practice.
- Explain the importance of continuing nurse education and professional development.
- Identify ways the nurse can participate in research activities in practice.
- Differentiate quantitative and qualitative approaches in nursing research.
- Describe the nurse's role in protecting the rights of human participants in research.
- Identify the steps of the research process.

In Australia, nurse education is controlled through a regulatory authority. Prior to 2010, each state and territory had an independent statutory regulatory authority that was responsible for the registration of nurses and midwives. These were governed by different Acts of Parliament. On 26 March 2008, the Council of Australian Governments (COAG) signed the Intergovernmental Agreement (IGA) for a National Registration and Accreditation Scheme for the Health Professions. Australia's national registration and accreditation scheme began on 1 July 2010.

From this date, a new national law came into effect. The *Health Practitioner Regulation National Law Act 2009* was enacted on 1 July 2010 and governs **Australian Health Practitioner Regulation Agency (AHPRA)** activities.

Australia now has one national board that is setting the standards and policies for the regulation of all nurses and midwives, the **Nursing and Midwifery Board of Australia (NMBA)** (see <[www.nursingmidwiferyboard.gov.au](http://www.nursingmidwiferyboard.gov.au)>).

The NMBA is supported by AHPRA, which provides services. The NMBA is also supported by state and territory boards. These boards make decisions about individual notifications and registration issues, guided by national policy and delegations.

While the primary role of the boards is to protect the public, the boards are also responsible for registering practitioners and students, as well as other functions for the professions (see <[www.ahpra.gov.au/National-Boards.aspx](http://www.ahpra.gov.au/National-Boards.aspx)>). The 15 national boards are:

1. Aboriginal and Torres Strait Islander Health Practice Board of Australia
2. Chinese Medicine Board of Australia
3. Chiropractic Board of Australia
4. Dental Board of Australia
5. Medical Board of Australia
6. Medical Radiation Practice Board of Australia
7. Nursing and Midwifery Board of Australia
8. Occupational Therapy Board of Australia
9. Optometry Board of Australia
10. Osteopathy Board of Australia
11. Paramedicine Board of Australia
12. Pharmacy Board of Australia
13. Physiotherapy Board of Australia
14. Podiatry Board of Australia
15. Psychology Board of Australia.

The key functions of AHPRA are to:

- support each of the national boards
- manage the registration processes for health practitioners and students around Australia
- provide offices in each state and territory where the public can make notifications about a registered health practitioner or student
- on behalf of the boards, manage investigations into the professional conduct, performance or health of registered health practitioners, except in New South Wales where this is done by the Health Care Complaints Commission
- on behalf of the national boards, publish national registers of practitioners so that important information about the registration of individual health practitioners is available to the public

- work with the Health Complaints Commissions in each state and territory to make sure the appropriate organisation investigates community concerns about individual registered health practitioners
- support the boards in the development of registration standards and codes and guidelines
- provide advice to the Ministerial Council about the administration of the national registration and accreditation scheme.

With regard to nursing and midwifery, inaugural NMBA members were appointed for 3 years by the Australian Workforce Ministerial Council on 31 August 2009. Information about current NMBA members can be accessed from <[www.nursingmidwiferyboard.gov.au/About/Board-Members.aspx](http://www.nursingmidwiferyboard.gov.au/About/Board-Members.aspx)>.

The functions of the NMBA include:

- registering nursing and midwifery practitioners and students
- developing standards, codes and guidelines for the nursing and midwifery profession
- handling notifications, complaints, investigations and disciplinary hearings
- assessing overseas-trained practitioners who wish to practise in Australia
- approving accreditation standards and accredited courses of study.

The National Registration and Accreditation Scheme requires that information about every registered health practitioner in Australia is published on a single national register. Accurate reports regarding the number of practitioners registered in each profession in Australia are now available. Statistics related to nursing and midwifery can be accessed from <[www.nursingmidwiferyboard.gov.au/About/Statistics.aspx](http://www.nursingmidwiferyboard.gov.au/About/Statistics.aspx)>.

The NMBA registration standards define the requirements that applicants, registrants or students need to meet to be registered. The NMBA has developed the following registration standards, which can be seen in full at <[www.nursingmidwiferyboard.gov.au/Registration-Standards.aspx](http://www.nursingmidwiferyboard.gov.au/Registration-Standards.aspx)>:

#### 1. *Core registration standards*

With the exception of registered students and non-practising registrants, these standards apply to applicants for registration and currently registered nurses and midwives.

- Criminal history registration standard
- English language skills registration standard
- Registration standard: Continuing professional development
- Registration standard: Recency of practice
- Registration standard: Professional indemnity insurance arrangements

#### 2. *Endorsement*

- Registration standard: Endorsement as a Nurse Practitioner
- Registration standard for endorsement for scheduled medicines for midwives
- Registration standard for endorsement for scheduled medicines Registered Nurses (rural and isolated practice)

The Australian Nursing and Midwifery Accreditation Council (ANMAC) is responsible for the accreditation of all nursing and midwifery education providers and programs of study leading to registration and endorsement in Australia. This is achieved by ensuring national consistency and quality in nursing and midwifery education through a robust assessment process using contemporary accreditation standards (ANMAC 2014). Accreditation standards are used to assess whether a program of study, and the education provider that provides the program of study, provides graduates of the program with the knowledge, skills and professional attributes to practise the profession.

In developing standards, accreditation authorities take account of relevant national and international standards and codes and consult stakeholders. Each accreditation authority publishes on its website the approved accreditation for the profession and information about any reviews of the standards and opportunities for stakeholder input to those reviews. See <[www.ahpra.gov.au/Education/Accreditation-standards.aspx](http://www.ahpra.gov.au/Education/Accreditation-standards.aspx)>.

An online search is available for all approved programs of study leading to registration, endorsement and notation of applicants for registration as an Enrolled Nurse (EN), Registered Nurse (RN) and midwife. This can be accessed at <[www.nursingmidwiferyboard.gov.au/Accreditation/Approved-programs-of-study.aspx](http://www.nursingmidwiferyboard.gov.au/Accreditation/Approved-programs-of-study.aspx)>.

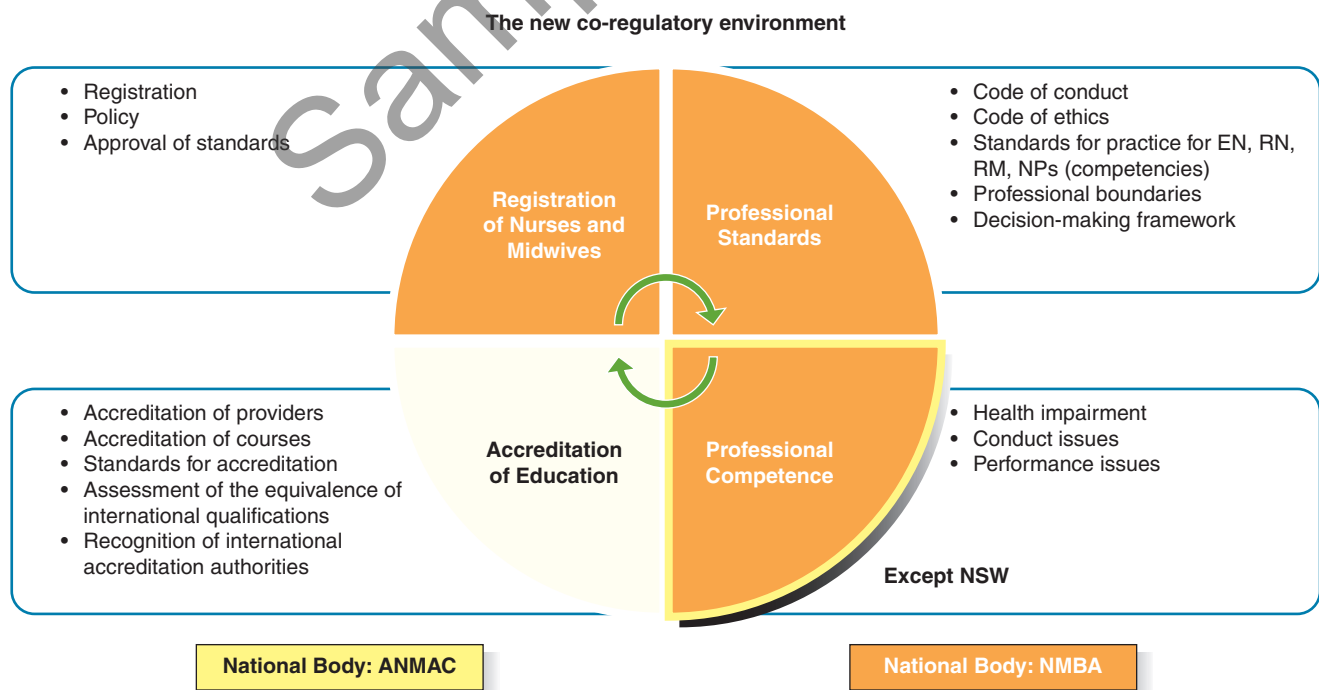
The co-regulatory environment involves a collaborative relationship between ANMAC and the NMBA. Figure 2.1 illustrates this relationship.

The above regulatory standards are an example of a type of overarching systematic governance. Another set of standards that nurses need to be aware of are the National Safety and

Quality Health Service (NSQHS) Standards. There are eight NSQHS standards: (1) Clinical Governance; (2) Partnering with Consumers; (3) Preventing and Controlling Healthcare-Associated Infection; (4) Medication Safety; (5) Comprehensive Care; (6) Communicating for Safety; (7) Blood Management; and (8) Recognising and Responding to Acute Deterioration. More information about these standards can be found at <[www.nationalstandards.safetyandquality.gov.au/](http://www.nationalstandards.safetyandquality.gov.au/)>. As you progress through this textbook you will see examples of how the standards are applied.

The traditional nurse education–apprenticeship model taught the knowledge and skills that would enable a nurse to practise in the hospital where they trained. However, given the dynamic nature of nursing and that it is now based in the higher education sector, curricula are constantly revised to meet the needs of nurses working in a variety of settings and jurisdictions. Nursing education is based on a broad knowledge of biopsychosocial, spiritual and cultural needs. Nursing practice is evidence based, with curricula having a strong focus on critical thinking, the application of nursing and supporting knowledge for health promotion, health maintenance and health restoration, as provided in both community and hospital settings in urban, regional and remote locations (see Figure 2.2).

Nursing care, at all levels, is person-centred. This is a core value of nursing practice. The principles of person-centred care date back to ancient Greek times when particular attention was paid to individual details of each person. Person-centred care is an approach known to improve care outcomes and is essential for achieving the quality of care expected by the health care consumer.



**Figure 2.1** The new co-regulatory environment.

Source: ANMAC (2014), J. F. White, <[www.anmac.org.au/about-anmac](http://www.anmac.org.au/about-anmac)>.



**Figure 2.2** Nursing students learn to care for people in the community.

Source: Zivica Kerkez/Shutterstock.

## NURSE EDUCATION

Currently, there are two types of entry-level generalist nurses: the **Registered Nurse (RN)** and the **Enrolled Nurse (EN)**, who may or may not be **Endorsed (EEN)**. Endorsement enables some medication administration. Responsibilities, scope of practice and licensing depend on the type of registration or endorsement sought. In Australia, the majority of new RNs graduate from 3-year baccalaureate nursing programs offered in the higher-education sector (university), whereas the vocational education and training (VET, TAFE) sector trains ENs.

Although nursing programs vary, all nurses must be registered with the NMBA and meet its registration standards, including personal checks, in order to practise in Australia.

The nursing and midwifery registration types are:

- general registration
- limited registration
- non-practising registration
- student registration
- provisional registration.

Nurses from other countries may be granted registration or endorsement after successfully applying to the NMBA. Both licensing and registration must be renewed annually in order to remain valid for practice. For additional information about licensing and registration, see Chapter 4.

## Aboriginal and Torres Strait Islander health workers

An important group of health practitioners who contribute to better outcomes within the health care team are **Aboriginal and Torres Strait Islander health workers**. Feelings of discomfort, anxiety and confusion are common experiences for people when they visit health professionals. For many Aboriginal and Torres Strait Islander people, these feelings may be heightened by factors such as a lack of understanding of their culture and

values by the health professional. By helping to bridge cultural differences, the role of Aboriginal and Torres Strait Islander health workers is one of great importance.

The many tasks that health workers perform have a common objective, which is to improve the state of health within Aboriginal and Torres Strait Islander communities by assisting them to take a strong role in controlling and managing their own health and lifestyles.

One important responsibility that Aboriginal and Torres Strait Islander health workers have is to enhance effective communication between the health professional and Aboriginal and Torres Strait Islander people. Health workers are often advocates and act as interpreters so that the health professional is clear about signs and symptoms and the needs of the person. They can ensure that the person has a good understanding of the health advice and treatment provided. They also promote a better understanding of the cultural beliefs and health care practices of both parties.

To gain an even better understanding of the important role these service providers play in the delivery of safe, effective and efficient health care, visit the *Aboriginal and Islander Health Worker Journal* at <https://search.informit.com.au/browse-JournalTitle;issn=1037-3403;res=IELAPA>. The *Aboriginal and Islander Health Worker Journal* is a national publication written by and for Aboriginal and Torres Strait Islander health workers.

## TYPES OF NURSE EDUCATION PROGRAMS

After Florence Nightingale established the Nightingale Training School for Nurses at St Thomas' Hospital in England in 1860, the concept travelled quickly to Australia. Hospital administrators welcomed the idea of training schools as a source of free or inexpensive staffing. Nurse education in the early years took the form of an apprenticeship. With little formal classroom instruction, students learned by providing direct care to people in hospitals. There was no standardisation of curriculum or accreditation. Training was designed to meet the needs of the hospital, not the educational needs of the students.

Contemporary nursing education includes a variety of undergraduate and postgraduate courses and programs. Nurses can also access a variety of continuing professional development courses and are expected to engage in continual professional development (CPD) as part of their licence to practice. CPD opportunities include courses, seminars, conferences, workshops and all manner of training. They vary widely depending on the discipline or specialty area, the workplace situation and environment.

## Vocational nursing programs

Vocational programs graduate nurses as ENs or EENs and are provided by the **vocational education and training (VET) sector**. Courses in the VET sector are often conducted through Technical and Further Education colleges (TAFE).



Pre-enrolment courses prepare graduates to practise in a variety of settings. ENs and EENs usually provide basic direct care. EENs can administer a limited range of medications. Information about this can be found at <[www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/FAQ/Enrolled-nurses-and-medicine-administration.aspx](http://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/FAQ/Enrolled-nurses-and-medicine-administration.aspx)>.

Core elements of EN practice include assessment, intervention and evaluation of the person's health care status. ENs are important associates to RNs. They monitor the ongoing impact of nursing care and continually communicate the person's health care status to the RN. ENs must practise under the direction and supervision of an RN, while simultaneously accepting accountability and responsibility for their own practice.

Graduates of pre-enrolment courses must demonstrate achievement of the *Enrolled Nurse Standards for Practice* (NMBA 2016a). Being a competent practitioner is an essential aspect of high-quality and safe health care delivery, and is expected by the profession and the community. Competency standards consist of a set of professional attributes that enable performance. Therefore, competence encompasses more than just psychomotor skills and includes the knowledge, skills and attitudes required for safe practice. The standards are used in education to develop courses and are also used to assess whether a nurse demonstrates the required attributes. Competency standards for an EN are outlined in Box 2.1.

## Registered nursing programs

On 24 August 1984, the Commonwealth Government of Australia decided that RNs would be educated in universities rather than hospitals. The **Council of Deans of Nursing and Midwifery (CDNM)**, in its press release of 21 February 2005, described how the last intake of nurses into the hospital-based training system was in 1990 and from 1993 there have been no hospital-based nurse trainees. Studies of nurse education, such as *An Overview of Issues in Nurse Education* (Johnson & Preston 2000), the *National Review of Nursing Education: Our Duty of Care* (Commonwealth of Australia 2002) and *Gettin em n Keepin em*, the 2002 report by the Indigenous Nurse Education Working Group, all supported independent schools of nursing in institutions of higher-learning separate from hospitals.

To become a licensed RN in Australia now, a nurse needs to have graduated from a baccalaureate program. Overseas-educated nurses, even if they possess a bachelor's degree in nursing, must apply to the NMBA as licensing requirements may differ depending on the country of registration of the applicant.

## Degree programs

The mass movement to the tertiary sector for RNs occurred in Australia in 1985. Curricula differed markedly from hospital-based programs, particularly regarding the amount of clinical practice that students undertook. This became a focus of debate throughout the 1980s, continued vigorously into the 1990s and new millennium, and is still discussed today. As with ENs, RNs undertake their education and practice

### BOX 2.1

#### *Enrolled Nurse Standards for Practice (2016)*

- Standard 1: Functions in accordance with the law, policies and procedures affecting EN practice (10 indicators).
- Standard 2: Practises nursing in a way that ensures the rights, confidentiality, dignity and respect of people are upheld (10 indicators).
- Standard 3: Accepts accountability and responsibility for own actions (9 indicators).
- Standard 4: Interprets information from a range of sources in order to contribute to planning appropriate care (4 indicators).
- Standard 5: Collaborates with the RN, the person receiving care and the healthcare team when developing plans of care (6 indicators).
- Standard 6: Provides skilled and timely care to people whilst promoting their independence and involvement in care decision-making (6 indicators).
- Standard 7: Communicates and uses documentation to inform and report care (5 indicators).
- Standard 8: Provides nursing care that is informed by research evidence (6 indicators).
- Standard 9: Practises within safety and quality improvement guidelines and standards (4 indicators).
- Standard 10: Engages in ongoing development of self as a professional (6 indicators).

Standards all include competency elements and are an important guide and resource for nurses.

*Source:* NMBA (2016a). *Enrolled Nurse Standards for Practice* (2016). Retrieved from <[www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Professional-standards.aspx](http://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Professional-standards.aspx)>. Printed with permission of the Nursing and Midwifery Board of Australia.

according to standards of practice. The NMBA *Registered Nurse Standards for Practice* (2016b) can be found at <[www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Professional-standards.aspx](http://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Professional-standards.aspx)>. Nurse education has moved away from process-based curricula to programs informed by nursing standards which demonstrate the complex and dynamic nature of contemporary nursing.

Some Australian schools of nursing have introduced an accelerated Bachelor of Nursing (BN) program. These programs may include summer terms in order to shorten the length of time required to complete the curriculum, or may be a modified curriculum specially designed for students who already have an appropriate qualification, but in another field, and who gain recognition of prior learning for previous studies.

Some universities offer nursing students the opportunity to pursue an online program. Many accept credit transfers from other institutions and some offer students the opportunity to take challenge examinations when the students believe they are already competent in the knowledge or skills taught in a course.

The nurse who holds a bachelor's degree experiences greater autonomy, responsibility and participation in institutional decision making and in career advancement. Additionally, many specialty colleges within the profession require a bachelor's degree for initial recognition. These changes provide an incentive for nurses to continue their formal educational preparation.

## Postgraduate nurse education

Most Australian universities offer postgraduate nursing programs. Applicants must first meet requirements established by the university to gain entry. These vary between universities but there are often common requirements for admission, which include:

- The applicant must be a Registered Nurse, licensed or eligible for licensing.
- The applicant generally must hold a baccalaureate degree in nursing or a course deemed appropriate.
- The applicant must provide evidence of scholarly ability.

### Master's programs

Master's programs generally take from 1 to 2 years to complete. Degrees granted are quite varied and testamur nomenclature differs. Examples include Master in Nursing (MN), Master of Science in Nursing (MScN) and Master of Mental Health Nursing (MMHN).

Master's degree programs are postgraduate and provide specialised knowledge and skills that enable nurses to assume advanced roles in practice, education, administration and research (see Figure 2.3). Master's programs can be undertaken by coursework or research.

### Doctoral programs

Doctoral programs sit within higher degree by research (HDR) programs. They can be undertaken at most universities but depend largely on the availability of appropriate HDR supervisors.



**Figure 2.3** A Nurse Practitioner (NP) holds a master's degree and assumes an advanced practical role.

Source: Stefanolunardi, Shutterstock.

Graduates of these programs are awarded the degree of Doctor of Philosophy (PhD) or a professional doctorate (EdD). These programs further prepare the nurse for advanced clinical practice, administration, education and research.

Content and approach vary between doctoral programs. Some research projects focus on clinical areas, others may focus on nursing education or client outcomes and experiences. HDR projects use a variety of methodologies and methods and are only limited by the availability of appropriate research supervision. No matter what the topic, all programs emphasise research.

## Entry to practice

Entry level for professional practice in Australia is a bachelor's degree. It is the responsibility of NMBA and ANMAC to define the legal and ethical boundaries of nursing practice and to designate the title to be used by those practitioners who meet the criteria for registration.

## RESEARCH NOTE

### Empowerment: The experiences of Recovery Camp for people living with a mental illness

C. Picton, C. Patterson, L. Moxham, E. K. Taylor, D. Perlman, R. Brighton & T. Heffernan (2018). Empowerment: The experience of Recovery Camp for people living with a mental illness. *Collegian*, 25(1), 113–118.

Mental health recovery is still largely clinically defined and as such can lack person centredness. To address this, recovery-oriented experiences are required which recognise the holistic and diverse needs of individuals. The aim of this study was to examine the experiences of people living with a mental illness who participated in a recovery-oriented program called Recovery Camp. The study aimed to examine how the program may have related to and contributed to their mental health recovery.

A descriptive phenomenological approach guided the study. Consenting participants ( $n = 5$ ) were interviewed and asked about their subjective experience of Recovery Camp. The interviews

were digitally audio recorded and transcribed verbatim. Data were analysed using van Kaam's psychophenomenological method.

The paper presents the perspective of consumers regarding the ways in which Recovery Camp facilitated mental health recovery. Data analysis revealed five themes (self-determination, participation, extending self, relationships and positive change) and a core essence of meaning (empowerment).

**Implications** Personal mental health recovery for people living with mental illness can be enhanced through recovery-oriented mental health care approaches. Findings contribute to existing literature regarding therapeutic recreation and its link to mental health recovery.

There is widespread support for articulation from EN programs to bachelor's programs and a desire to strengthen collaboration between these programs. Some universities are dual sector institutions, making these transitions more seamless.

### Continuing professional education/ professional development

Continuing professional education (CPE) and professional development (PD) are terms that refer to formalised experiences designed to build upon or revise the knowledge or skills of practitioners. Compared with advanced education programs, which result in an academic degree, the courses tend to be more specific and shorter. Participants may receive certificates of completion or attain specialisation within a specific area. The Australian College of Nursing (ACN) offers many CPE and PD courses. Information about the ACN can be found at <[www.acn.edu.au](http://www.acn.edu.au)>.

Continuing professional education is the responsibility of every practising nurse and AHPRA monitors this through annual licence renewal. Constant updating and growth are essential to keep abreast of scientific, technological and societal change as well as changes within the nursing profession and the emergence of new evidence. A variety of educational and health care institutions conduct continuing education programs. They are usually designed to:

- keep nurses abreast of new techniques and knowledge
- help nurses attain expertise in a specialised area of practice
- provide nurses with information essential to nursing practice; for example, knowledge about legal aspects of nursing.

Some specialist colleges such as the Australian College of Mental Health Nurses require nurses to obtain a certain number of CPE credits to become credentialled. All nurses are required to maintain their capability for practice (see Box 2.2).

#### BOX 2.2

#### Registration standard: Continuing professional development

This registration standard sets out the NMBA's minimum requirements for continuing professional development (CPD) for Enrolled Nurses, Registered Nurses and midwives and applies to all Enrolled and Registered Nurses and midwives.

As regulated health professionals, nurses are responsible and accountable for ensuring they are safe and have the capability for practice. This includes ongoing self-management and responding when there is concern about other health professionals' capability for practice. Each person is responsible for their own professional development and contribution to the development of others. They are also responsible for providing information and education to enable people to make decisions and take action in relation to their health.

Detailed information about this requirement can be found at <[www.nursingmidwiferyboard.gov.au/Codes-Guidelines-State-ments/Codes-Guidelines/Guidelines-cpd.aspx](http://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-State-ments/Codes-Guidelines/Guidelines-cpd.aspx)>.

### In-service education

An **in-service education** program is administered by an employer and is designed to upgrade the knowledge or skills of employees. For example, an in-service program may inform nurses about new equipment, specific isolation practices or methods of implementing a nurse theorist's conceptual framework. Some in-service programs are mandatory, such as cardiopulmonary resuscitation, manual handling and fire safety programs. In-service education is often delivered by nurse educators employed by the health service.

## NURSING RESEARCH AND EVIDENCE-BASED PRACTICE

Nurses actively generate, publish and apply research in practice to improve health care and enhance nursing's scientific and evidence base. There is a strong emphasis on **evidence-based practice (EBP)**; that is, the use of some form of substantiation in making clinical decisions. This substantiation, or evidence, can arise from tradition, authority, experience, trial and error, logic or reason, or, importantly, nursing research.

Although the focus for nurses is the use of research findings in practice, the degree of participation in research depends on the nurse's educational level, position, experience and practical environment. As early as 1854, Florence Nightingale demonstrated the importance of research in nursing care. When Nightingale arrived in Crimea in November 1854, she found the military hospital barracks overcrowded, filthy, rat and flea infested, and lacking in food, drugs and essential medical supplies. As a result, men died from starvation and diseases such as dysentery, cholera and typhus. By systematically collecting, organising and reporting data (evidence), Nightingale was able to institute reforms and significantly reduce mortality rates.

Although the Nightingale tradition influenced the establishment of Australian nursing schools, the research approach did not take hold until the twentieth century.

Nursing journals were established to serve as a vehicle to communicate nurses' research and scholarly productivity. Some are dedicated to research, others combine clinical and research manuscripts and some focus on nursing education (see Box 2.3). The breadth and diversity of nursing research is reflected in the examples of recent nursing studies shown in Box 2.4. Journals all have different rankings and impact factors which constantly change.

A major goal of nursing research is to improve health care and outcomes. Evidence can be gained from a qualitative, quantitative or mixed methods approach. No matter the research paradigm, research design and analysis is based on a systematic, scientific approach. Within research approaches there are different world views, as shown in Table 2.1. These include post-positivism, constructivism, transformative and pragmatism.



**BOX 2.3****Nursing research journals****Examples of research journals in nursing**

*Applied Nursing Research*  
*Australian Journal of Advanced Nursing*  
*Contemporary Nurse*  
*International Journal of Nursing Research*  
*International Journal of Nursing Studies*  
*Journal of Advanced Nursing*  
*Nursing Research*  
*Nurse Researcher*  
*Nursing and Health Sciences*  
*Research in Nursing and Health*

**Examples of clinical and specialty nursing journals that publish research**

*Australian Critical Care*  
*Australian Journal of Rural Health*  
*Cancer Nursing*  
*International Journal of Mental Health Nursing*  
*Journal of Emergency Nursing*  
*Journal of Nursing Education*  
*Neonatal, Paediatric and Child Health Nursing*  
*Nurse Education Today*  
*Nursing Ethics*  
*Nursing and Health Science Education*  
*Journal of Nursing Administration*  
*MedSurg Nursing*  
*Nursing Administration Quarterly*  
*Nursing Outlook*  
*Oncology Nursing Forum*

**Approaches to nursing research**

There are three approaches commonly used in nursing research. These approaches originate from different philosophical perspectives and use different methods for data collection

**BOX 2.4****Examples of Australian nursing studies**

- Moxham, L., Taylor, E., Patterson, C., Perlman, D., Brighton, R., Sumskis, S. & Keough, E. (2016). Can a clinical placement influence stigma? An analysis of measures of social distance. *Nurse Education Today*, 44, 17–174. Doi: 10.1016/j.nedt.2016.06.003.
- Patterson, C., Procter, N. & Toffoli, L. (2016). Situation awareness: When nurses decide to admit or not admit a person with mental illness as an involuntary patient. *Journal of Advanced Nursing*, 72 (9), 2042–2053.
- Halcomb, E. J. & Ashley, C. (2019). Are Australian general practice nurses underutilised?: An examination of current roles and task satisfaction. *Collegian*. Doi: <https://doi.org/10.1016/j.colegn.2019.02.005>.

**Table 2.1** Research approaches

Post-positivism	Constructivism
<ul style="list-style-type: none"> <li>■ Determination</li> <li>■ Reductionism</li> <li>■ Empirical observation and measurement</li> <li>■ Theory verification</li> </ul>	<ul style="list-style-type: none"> <li>■ Understanding</li> <li>■ Multiple participant means</li> <li>■ Social and historical construction</li> <li>■ Theory generation</li> </ul>
Transformative	Pragmatism
<ul style="list-style-type: none"> <li>■ Political</li> <li>■ Power and justice oriented</li> <li>■ Collaborative</li> <li>■ Change oriented</li> </ul>	<ul style="list-style-type: none"> <li>■ Consequences of actions</li> <li>■ Problem centred</li> <li>■ Pluralistic</li> <li>■ Real-world practice oriented</li> </ul>
<small>Source: J. W. Creswell &amp; J. D. Creswell (2018). <i>Research Design: Qualitative, Quantitative, and Mixed Methods Approaches</i> (5th ed.). Los Angeles: Sage Publications, Inc.</small>	

and analysis. The best approach to use is the one that answers the research question.

**Quantitative research**

Quantitative research progresses through systematic, logical steps according to a specific plan to collect information, often under conditions of considerable control, which is analysed using statistical procedures. The quantitative approach is most frequently associated with positivism or logical positivism, a philosophical doctrine that emphasises the rational and the scientific (Polit & Beck 2018). Quantitative research is often viewed as ‘hard’ science and uses deductive reasoning and empirically measurable attributes.

In addition to Medical Research and Innovation Priorities, the Australian government has identified nine National Health Priority Areas. These can be seen in Box 2.5 along with the year they became a priority.

The following examples are research questions that best lend themselves to a quantitative approach (think about why this is the case):

- What is the effect of a 100 m sprint on blood pressure?
- What is the mortality rate after acute MI in 2020 in your hospital?

The quantitative research process is described on pages 33–35.

**Qualitative research**

The qualitative approach is often associated with naturalistic inquiry, which explores the subjective and complex lived experiences of human beings. The most basic way of characterising qualitative studies is to describe their aims as seeking answers to questions about the ‘what’, ‘how’ or ‘why’ of a phenomenon, and research that tends to focus on the qualities of things rather than quantity (Flick 2018). In qualitative research, data collection and analysis often occur concurrently.



**BOX 2.5****National Health Priority Areas**

The National Health Priority Areas (NHPAs) are a collaborative effort involving Commonwealth, state and territory governments to focus public attention and health policy on areas that contribute significantly to the burden of disease in Australia, and for which there is potential for health gain. For comprehensive information, please access <<http://wiki.engagededucation.org.au/health-and-human-development/unit-3/area-of-study-1-understanding-australias-health/national-health-priority-areas/>>.

The NHPAs and the year they were identified are:

- Injury Prevention and Control (1996)
- Asthma (1999)
- Cardiovascular Health (1996)
- Arthritis and Musculoskeletal Conditions (2002)
- Mental Health (1996)
- Dementia (2012)
- Diabetes Mellitus (1997)
- Obesity (2008)
- Cancer Control (1996)

Using the inductive method, data are analysed by identifying themes and patterns to develop a theory, model or framework that helps explain the processes under observation. The qualitative approach would be appropriate for the following types of research topics:

- What does it mean to live with schizophrenia?
- What are experiences of a Nurse Practitioner working in a remote community?
- What is it like to be a male nurse working in an ICU?

The qualitative research process is described on page 35.

### Mixed methods research

A mixed methods research design is used to overcome the limitations that a single approach may impose. This approach is becoming increasingly popular as researchers appreciate that problems are often complex and can best be answered by taking advantage of using multiple ways to explore a research question. Mixing quantitative and qualitative research and data enables a breadth and depth of understanding and substantiation. An example of a mixed method study is that undertaken by Pfaff et al. (2014), who used a mailed survey to measure perceived confidence in inter-professional collaboration among new graduate nurses. Following analysis of the survey data, they conducted interviews with 16 new graduate nurses to explain and expand upon the quantitative findings.

### Protecting the rights of human participants

Because nursing research usually focuses on humans, a major nursing responsibility is advocacy. Potential participants must be informed and understand the consequences of consenting to serve



**Figure 2.4** It is important for a potential participant to be fully informed before they consent.

Source: Antonio Guillem. Shutterstock.

as research participants (see Figure 2.4). Nurses can help potential participants assess whether an appropriate balance exists between the risk of participating in a study and the potential benefits.

**Human research ethics committees (HRECs)** play a central role in the ethical oversight of research involving humans. HRECs review research proposals involving human participants to ensure that they are ethically acceptable and in accordance with relevant standards and guidelines. There are numerous HRECs in institutions and organisations across Australia. Many other countries have similar systems.

The Australian Health Ethics Committee (AHEC) plays an important role in this system. HRECs are guided by relevant standards, such as those articulated in the *National Statement on Ethical Conduct in Human Research* (the National Statement) issued by the National Health and Medical Research Council (NHMRC) in 2007 and updated in 2018 (NHMRC 2018).

The National Statement requires that all research proposals involving human participants be reviewed and approved by a properly constituted HREC and sets out the requirements for the composition of an HREC. The National Statement also sets out the relevant ethical principles and values by which research should be designed and conducted, and hence to which HRECs should refer when reviewing research proposals. It identifies requirements and responsibilities for:

- organisations in establishing HRECs
- researchers in submitting research proposals to HRECs
- HRECs in considering and reaching decisions regarding these proposals and in monitoring the conduct of approved research.

In some circumstances, particularly multi-site clinical drug trials, HRECs charge fees for considering research applications.

The purpose of the National Statement is ‘to promote ethically good human research’. To fulfil this purpose participants be accorded the respect and protection that is due to them. It also involves fostering research that is of benefit to the community (National Statement).

The National Statement is intended to be used by:

- any researcher conducting research with human participants
- any member of an ethical review body reviewing that research
- those involved with research governance
- potential research participants.

For many years, adults have been the focus of much health care research, but paediatric research is also required so that children can also benefit from advances in knowledge. Because children are so vulnerable, extra precautions must be taken to ensure their rights are upheld and they are not harmed. It is critical to have expertise on panels that review prospective research studies and in research development so as to ensure rights are protected.

The rights and particular considerations concerning Aboriginal and Torres Strait Islander peoples are important. These are outlined in a document titled *Values and Ethics: Guidelines for Ethical Conduct in Aboriginal and Torres Strait Islander Health Research* (NHMRC 2011). *Keeping Research on Track: A Guide for Aboriginal and Torres Strait Islander Peoples about Health Research Ethics* (NHMRC 2005/2018) is a companion document to *Values and Ethics*. *Values and Ethics* and *Keeping Research on Track* are to be used together, along with the National Statement. Nurses wanting to conduct research with this group need to be aware of the document's contents so that the project is culturally appropriate and safe.

All nurses who practise in settings where research is being conducted with human participants, or who participate in research as investigators, play an important role in safeguarding the following rights.

### Right not to be harmed

The **risk of harm** to a research participant is exposure to the possibility of injury that is beyond everyday situations. The risk can be physical, emotional, legal, financial or social. For instance, withholding standard care from a woman in labour for the purpose of studying the course of natural childbirth poses a potential physical and emotional danger. Risks can also involve psychological factors, such as exposure to stress or anxiety, or social factors, such as loss of reputation or loss of privacy.

### Right to full disclosure

Even though it may be possible to collect data about a health service user as part of everyday care without their particular knowledge or consent, to do so is considered unethical. **Full disclosure**, the act of making clear the person's role in a research situation, is a basic right. It means that deception, either by withholding information about a person's participation in a study or by giving the person false or misleading information about what participating in the study will involve, must not occur.

### Right of self-determination

Many people are dependent, such as those in residential care facilities, and as a consequence feel pressured to participate in studies. They believe that they need to please the health professionals who are responsible for their treatment and care. The

**right of self-determination** means that participants should feel free from constraints, coercion or any undue influence to participate in a study. Nurses need to be aware of power differentials when recruiting potential participants, as many people will feel compelled to say 'yes'. Hidden inducements—for instance, suggesting to potential participants that by taking part in the study they might become famous, make an important contribution to science or receive special attention—must be strictly avoided.

### Right to privacy/confidentiality and anonymity

Privacy enables someone to participate in research without worrying about later embarrassment. The anonymity of participation is ensured if even the investigator cannot link a specific person to the information reported. **Confidentiality** means that any information a participant relates will not be made public or available to others without the participant's consent. Investigators must inform research participants about the measures that provide for these rights. Such measures may include the use of pseudonyms or code numbers, or reporting only aggregated data. The distinction between confidentiality and anonymity is an important one for nurses to fully understand.

### The quantitative research process

Quantitative research is used to test objective theories by examining the relationship between variables. These variables are typically measured using surveys. Data is then analysed using statistical procedures. We now discuss the steps in the quantitative research process.

### The research question or problem

The investigator's initial task is to narrow a broad area of interest to a circumscribed problem that specifies exactly the intent of the study. Ideas for research may arise from issues encountered in practice, questions that are difficult to resolve because of contradictions in the literature or areas in which minimal or no research has been done.

In formulating a research problem, Polit and Beck (2018) suggest that four criteria be used: significance, researchability, feasibility and interest to the researcher. A research problem has **significance** if it has the potential to contribute to nursing science by enhancing care, testing or generating a theory, or resolving a day-to-day clinical problem. 'So what?' is a phrase often used to determine if a research problem is significant.

**Researchability** means that the problem can be subjected to scientific investigation. Many significant problems that produce ambiguity and uncertainty in clinical situations may not be amenable to research. For instance, 'How can the government make all nurses happy?' is a relevant question to recruitment and retention, and despite being interesting, is a difficult question to answer. It simply cannot be answered through research as it is too big. Imagine how many variables there would be!

**Feasibility** pertains to the availability of time as well as the material, financial and human resources needed to investigate the

research problem. Conducting research involves the use of space, money, equipment, supplies, computers, recording devices, participants, research assistants and, most importantly, time.

A researcher expends a lot of time and energy when undertaking a research project. It is important, therefore, that researchers be genuinely interested in the research problem because their enthusiasm can be a factor for successful and timely completion (or not) of the research.

Quantitative research problems address the relationships between dependent and independent variables, except for descriptive research, which has no dependent variables.

The **dependent variable** is the behaviour, characteristic or outcome that the researcher wishes to explain or predict. The **independent variable** is the presumed cause of or influence on the dependent variable. As an example, a research problem might be ‘Do people who lose weight on a low-carbohydrate diet maintain their weight loss longer than those people who lose weight on a low-kilojoule diet?’ In this question, which is the dependent variable and which is the independent variable?

### Define the study’s purpose or rationale

The statement of the study’s purpose indicates what the researcher intends to do about the research problem that has been identified. The study purpose includes what the researcher will do, who the participants will be and where the data will be collected. Continuing the previous example, the purpose might be to ‘Collect data from male adult obese persons in the Northern Territory who have lost weight on either a low-carbohydrate or a low-kilojoule diet and compare how long they maintain their weight loss’.

### Review the related literature

Hart (2018) states that a literature review is important to acquire an understanding of the topic, know what has already been done on it, understand how it has been researched and grasp what the key issues are that need addressing. Reviewing the literature provides a complete picture, which could remain partially hidden if a single piece of research or other information is viewed in isolation. Sometimes combining the results of a group of studies can lead to more convincing and useful results than the individual studies alone.

### Formulate hypotheses and define variables

A **hypothesis** ( $H^0$ ) is a prediction of the relationship between two or more variables. Some studies are intended to *develop* hypotheses, whereas others are intended to *test* hypotheses. Some make no mention of a hypothesis. Hypothesis formulation requires sufficient knowledge about a topic to predict the outcome of the study but also requires **operational definitions**, which specify the instruments or procedures by which concepts will be measured. Continuing the example from above, one hypothesis might be ‘Obese persons are equally likely to maintain their weight loss whether they have lost weight using a low-carbohydrate or a low-kilojoule diet’.

### Select a research design to test the hypothesis

A research design is the overall plan for conducting the study to answer the research question/s or test the research hypotheses. The research design consists of both the methodology and the methods. It includes the study setting, participant group (inclusion and exclusion criteria), recruitment strategies, type of data to be collected and ethical considerations, as well as strategies to control extraneous variables and reduce bias. There are three major types of research design in quantitative research:

1. *Experimental design*: The investigator ‘manipulates’ the independent variable by administering an experimental treatment to some participants while withholding it from others. An example is a randomised control trial (RCT).
2. *Quasi-experimental design*: The investigator ‘manipulates’ the independent variable but without either the randomisation or the control that characterises true experiments.
3. *Non-experimental design*: The investigator does not ‘manipulate’ the independent variable.

### Select the participant group and setting

At this stage, the researcher identifies the participant group and decides on the setting. Participants can then be recruited after HREC approval. The **population** includes all possible members of the group who meet the criteria for the study. The participant group, or **sample** or study cohort, is the segment of the population from whom the data will actually be collected. Sometimes research participants are called subjects but if nurses are using a person-centred framework, they would call the person a participant, not a subject.

### Conduct a pilot study

A pilot study is a ‘dress rehearsal’ before the actual study begins. A trial run is conducted to assess the adequacy and feasibility of the research design. By identifying any problems or flaws during the pilot study, the investigators can refine and strengthen the research design.

### Collect the data

The research process relies on **empirical data**, collected from the observable world. Conclusions are derived from collected data. The most commonly used methods of collecting data in quantitative nursing studies are questionnaires/surveys, rating scales and biophysical measures.

The validity and reliability of measurement tools need to be established prior to the start of data collection. **Validity** is the degree to which the data collection tool (instrument) measures what it is supposed to measure. For example, if a nurse wants to measure blood pressure, a sphygmomanometer will work better than a survey. **Reliability** is the degree of consistency with which an instrument measures a concept or variable. If an instrument is reliable, repeated measurement of the same variable should yield similar or nearly similar results.



## Analyse the data

Collected data are organised, coded and analysed for the purpose of answering the research question or testing the hypotheses. Even before data collection is initiated, a process must be in place for analysing the results. This should be included in the research design. Data analysis may involve descriptive or inferential statistics. **Descriptive statistics**, procedures that summarise large volumes of data, are used to describe and synthesise data, showing patterns and trends. Descriptive statistics include measures of central tendency and measures of variability.

**Measures of central tendency** describe the centre of a distribution of data, denoting where most of the participants lie. These include the mean, median and mode. **Measures of variability** indicate the degree of dispersion or spread of the data. These include the range, variance and standard deviation. See Box 2.6 for definitions of these measures. Typically in a research report, the mean (a measure of central tendency) and standard deviation (a measure of variability) are reported together to give the reader an idea of the nature of the data distribution. The following is an example:

Systolic blood pressure

130 ± 30 mm Hg

The two statistics reported are the mean and the standard deviation. The number 130 indicates the mean systolic blood pressure, whereas 30 represents 1 standard deviation (SD) from the mean. Hence, 1 SD from the mean would include blood

### BOX 2.6

## Definitions of measures of central tendency and variability

### Central tendency

**Mean:** a measure of central tendency, computed by summing all scores and dividing by the number of participants; commonly symbolised as  $\bar{x}$  or  $M$ .

**Median:** a measure of central tendency, representing the exact middle score or value in a distribution of scores; the median is the value above and below which 50% of the scores lie.

**Mode:** the score or value that occurs most frequently in a distribution of scores.

### Variability

**Range:** a measure of variability, consisting of the difference between the highest and lowest values in a distribution of scores.

**Variance:** a measure of variance or dispersion, equal to the square of the standard deviation.

**Standard deviation:** the most frequently used measure of variability, indicating the average to which scores deviate from the mean; commonly symbolised as  $SD$  or  $S$ .

pressure from 100 mm Hg to 160 mm Hg (1 SD below 130 = 100 to 1 SD above 130 = 160).

After data have been analysed, nurse researchers determine whether the results are **statistically significant**; that is, that they are unlikely to have occurred by chance. Underlying this

## RESEARCH NOTE

### A multidisciplinary learning experience contributing to mental health rehabilitation

L. Moxham, C. Patterson, E. Taylor, D. Perlman, S. Sumskis & R. Brighton (2016). A multidisciplinary learning experience contributing to mental health rehabilitation. *Disability and Rehabilitation*. ID: TIDS-07-2015-068. <[www.tandfonline.com/doi/pdf/10.3109/09638288.2016.1146358](http://www.tandfonline.com/doi/pdf/10.3109/09638288.2016.1146358)>.

People who access health services often have a range of needs that require the involvement of members from a multidisciplinary team. Teaching future health professionals about the importance of a multidisciplinary approach can be challenging. The aim of the research was to examine a project called Recovery Camp that enhanced multidisciplinary health education through experiential and immersive engagement with people experiencing mental illness.

Future health professionals and people with a lived experience of mental illness took part in Recovery Camp—an innovative, five-day, therapeutic recreation initiative in the Australian bush. Results were presented in a case study format and provided the reflective quotes of participants. The quotes were analysed using a content analysis to identify core concepts.

Analysis identified a common appreciation of multidisciplinary learning. The interactions between students, and between students and consumers, promoted inter-professional practice and a holistic understanding of mental health care.

The study concluded that an immersive multidisciplinary approach, embedded within a recovery-based program,

enhances students' understanding of the significance of multidisciplinary mental health care and treatment.

**Implications** People with a lived experience of mental illness have a range of complex needs that require the involvement of members from a multidisciplinary rehabilitation team. This study suggests a multidisciplinary, experiential, immersive health education experience drawing on the principles of therapeutic recreation can promote interprofessional rehabilitative practice and an appreciation for holistic mental health care.

Research can be perceived by clinicians as difficult and is not often seen as 'core business'. However, many issues/problems arise that can and are solved by undertaking research. If you do not feel as though you can undertake research alone, consider doing a group project. Collaborate with people who you can learn from. Invite nurse academics to work with you. That way everyone in the research team benefits and outcomes ensure that we are delivering the best possible care we can to members of the Australian public.



is the notion of probability. By convention, a  $p$  (probability) less than .05 is considered the acceptable level of significance. A  $p$  value greater than .05 is considered statistically non-significant. In quantitative research, the desire is to generalise beyond the sample, so there is a need to determine the probability that the results obtained were due to chance rather than a true occurrence in the population. Hence, a  $p$  value of .05 means that the probability of the findings being caused by chance alone is 5 in 100.

### Communicate conclusions and implications

It is important to share knowledge. Implicit in conducting research is the requirement to share the knowledge generated with others. This can be done by publication in professional journals, books or reports, or by presenting the results at professional conferences, seminars or workshops. This is known as dissemination. Interpreting the results, communicating the findings and suggesting directions for further study conclude the research process. The summary reports of research also include a discussion of any limitations in applying the particular findings to the broader population. If the study involved human participants, which most nursing research does, the applicable HREC will also need a summary report.

### Evidence-based practice (EBP)

In EBP, the nurse integrates research findings with clinical experience, the preferences of the health service user and available resources in planning and implementing care. Such practice helps control cost by focusing on substantiated yet individualised approaches to care. Significant sources of EBP data are the Cochrane Database of Systematic Reviews and the Joanna Briggs Institute (JBI). Data found in these resources often combines research to increase the power of the findings of numerous studies, each too small to produce reliable results individually. The Cochrane Collaboration is an international organisation dedicated to making up-to-date, accurate information about the effects of health care readily available. JBI is an Australian and also international institute that collaborates with over 70 entities worldwide. The JBI promotes and supports the synthesis, transfer and utilisation of evidence through identifying feasible, appropriate, meaningful and effective health care practices to assist in the improvement of health care outcomes globally. For more information see <<http://joannabriggs.org>>.

Not everyone believes that EBP is the ideal approach to health care. Some are concerned that it creates a hierarchy of evidence in which the strictest controlled research studies are viewed as better indicators of proper care than are descriptive studies or expert opinions, including those of lived experience. Some believe that EBP focuses on problems rather than people and de-emphasises creative, personalised care created through nurses' critical thinking. Nurses are responsible for critiquing findings published in the literature. They should question and critically evaluate practice so it can be continuously improved and participate in investigating better ways to improve health.

## The qualitative research process

Qualitative research is not linear like quantitative research. Qualitative researchers do not use independent and dependent variables or manipulate aspects of the study to test a hypothesis. The intent of qualitative research is to thoroughly investigate, describe and explain a phenomenon. The researchers often collect narrative data that are obtained through interviews, focus groups or observation. These data are transcribed and often result in hundreds of pages that need to be organised and then interpreted. Data may be organised by some type of categorisation scheme such as concepts, actions or themes. The themes of the data are integrated to present a description or theory.

There are three common qualitative research traditions:

1. **Ethnography:** research that provides a framework to focus on the culture of a group of people.
2. **Phenomenology:** research that investigates people's life experiences and how they interpret those experiences.
3. **Grounded theory:** research to understand social structures and social processes. This method focuses on generation of categories that explain patterns of behaviour of the people in the study, and results in the development of a substantive theory.

## CRITIQUING RESEARCH

Nurses need to be able to conduct a critical appraisal of research. A research critique enables the nurse to evaluate the scientific merit of the study and decide how the results may be useful in practice. A critique involves intensive scrutiny of a study, including its strengths and weaknesses, statistical and clinical significance, and the generalisability or transferability of the results.

Polit and Beck (2018) propose that the following elements be considered in a critique of quantitative research:

- *Substantive and theoretical dimensions.* Nurses need to evaluate the significance of the research problem, the appropriateness of the conceptualisations and the theoretical framework of the study, and the congruence between the research question and the design used to address it.
- *Methodological dimensions.* The methodological dimensions pertain to the appropriateness of the research design, the size and representativeness of the study sample (in a quantitative approach) as well as the sampling design, validity and reliability of the instruments, adequacy of the research procedure and the appropriateness of data analytical techniques used in the study.
- *Ethical dimensions.* Nurses must determine whether the rights of human participants were protected during the course of the study and whether any ethical problems compromised the scientific merit of the study or the wellbeing of participants.
- *Interpretive dimensions.* For these dimensions, nurses need to ascertain the accuracy of the discussion, conclusions and implications of the study results. The findings must be related back to the original hypotheses or research question, and the conceptual framework of the study. The implications

and limitations of the study should be reviewed, together with the potential for replication or generalisability of the findings to similar populations.

- *Presentation and stylistic dimensions.* These are the manner in which the research plan and results are communicated. The research report must be detailed, logically organised, concise and well written. There are often set guidelines on presentation. Journals have distinctive

stylistic dimensions that must be strictly adhered to for publication.

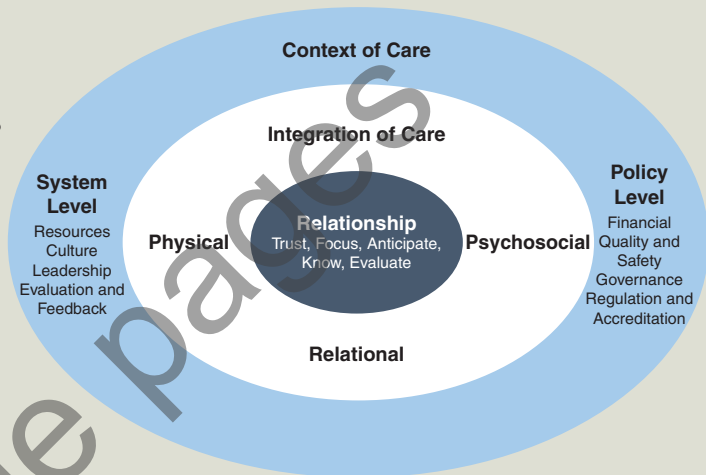
Qualitative research is critiqued for their relevance to other persons or situations with the same characteristics as those studied, and for usefulness in extending theory and nursing knowledge. A well-done qualitative study will have results that ‘ring true’ to the reader.

## CASE STUDY

A friend knows you are a nursing student. They tell you that they are considering nursing as a career and want your advice.

### Fundamentals of Care Framework in Context

1. What questions would you ask them before responding?
2. What information would you provide them about the current context of nursing education and practice (e.g. regulation, governance, accreditation, leadership)?
3. What went into your decision making when you chose your own nurse educational program?
4. How would the research process described in this chapter be potentially useful for someone considering entering nursing?



## Chapter 2 REVIEW

### CHAPTER HIGHLIGHTS

- Nurse education has changed dramatically since the mid-twentieth century. Early apprenticeship programs were designed to meet the service needs of the hospital, not the educational needs of the students. Today, nurse education is provided primarily in university settings and the vocational education sector (VET or TAFE) independent of hospitals’ needs—a concept proposed by Florence Nightingale.
- Licences to practise nursing are controlled by a national regulatory authority, the NMBA.
- The NMBA has developed a comprehensive set of standards to guide practice that all nurses should be aware of.
- Continuing education is the responsibility of each practising nurse to keep abreast of scientific and technological change and changes within the nursing profession.
- The concept of research and evidence-based practice has been embedded into nurse education programs, and nursing research journals have increasingly been established.
- All nurses practising in settings where research is conducted have a role in safeguarding the participants’ rights, particularly if they are health service users.
- Quantitative, qualitative and mixed methods research involves identifying a research problem/question, collecting data and analysing the data. Quantitative studies are reported using descriptive and analytical statistics, qualitative studies are reported in narrative format, while mixed methods studies use both.
- Curricula for nurse education are continually undergoing revisions in response to new scientific knowledge and technological, cultural, political and socioeconomic changes in the health care environment.

## CONCEPT CHECK

1. Which of the following is an example of continuing education for nurses?
  1. Attending a hospital's orientation program.
  2. Talking with a company representative about a new piece of equipment.
  3. Completing a workshop on ethical aspects of nursing.
  4. Obtaining information about the facility's new computer charting system.
2. Which of the following is a nursing responsibility when critiquing published nursing research?
  1. Assume that the research was properly conducted, after all, it has been published.
  2. Evaluate whether the findings are applicable to the nurse's specific area of practice.
  3. Implement the research findings if at least two studies have shown the same results.
  4. Request the raw data from the researchers so that the nurse can analyse the statistics again.
3. Quantitative research is most appropriate for which of the following studies?
  1. A study measuring the effects of sleep deprivation on wound healing.
  2. A study examining the bereavement process in spouses of people with terminal cancer.
  3. A study exploring factors influencing weight-control behaviour.
  4. A study examining a person's feelings before and after a bone marrow aspiration.
4. The use of a qualitative research process is most appropriate for which of the following studies?
  1. A study measuring nutrition and weight loss or gain in people with cancer.
  2. A study examining oxygen levels after endotracheal suctioning.
  3. A study examining a person's perceptions of stress after open-heart surgery.
  4. A study measuring differences in blood pressure before, during and after a procedure.
5. An 85-year-old woman in a residential care facility tells a nurse, 'Because the doctor was so insistent, I signed the papers for that research study. Also, I was afraid she would not continue taking care of me.' Which right is being violated?
  1. Right not to be harmed.
  2. Right to full disclosure.
  3. Right of privacy and confidentiality.
  4. Right of self-determination.

## FOCUS ON CRITICAL THINKING

1. Why are there different levels of nursing practice in Australia (e.g. RN, EN, AIN)? In what ways do these levels contribute to differences in care delivery?
2. Registered Nurse education has been in the tertiary sector since the mid-1980s. What professional changes have occurred as a result of the mass movement to the university sector?
3. Nursing and midwifery are governed by standards. Why is it important to have professional standards? How do they contribute to better health care outcomes?
4. You have been approached to do some research in your area, assessing if a nursing intervention has had a positive

outcome on person care. There are a number of issues that you will need to consider:

- How will you decide on your research design?
- What will inform your choice on the approach to take?
- Will you use a quantitative, qualitative or mixed methods design?
- Who should be part of the research team and what roles will they play?
- Will you publish the results in a journal? Which journal will you choose and why?
- What will the authorship list be? Who will be first and why?
- Are there any ethical considerations? What are they?

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Sample pages