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SECOND EDITION

Fundamentals of

Nursing Models, Theories and Practice

HUGH P. MCKENNA,
MAJDA PAJNKIHAR AND
FIONA A. MURPHY

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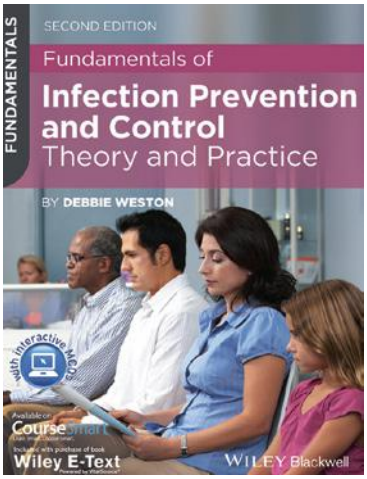

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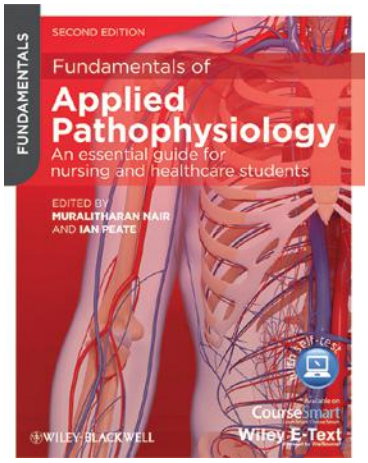

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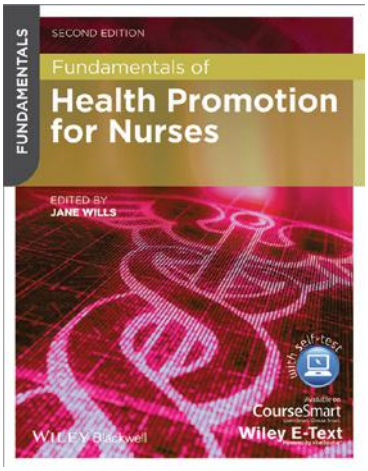

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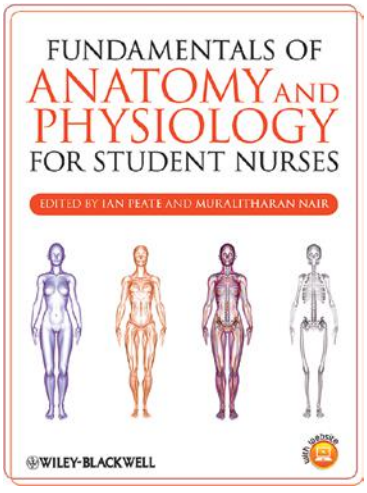

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SECOND EDITION

Fundamentals of Nursing Models, Theories and Practice

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Dedication

This book is dedicated to all the patients, families and communities with whom we have worked over the years. It is also dedicated to those scholars and students who have shaped our thinking on nursing theories.

In addition, we wish to acknowledge the patience and fortitude of our friends and families, specifically Tricia, Gowain and Saoirse McKenna, Grega and Jasna Pajnkihar, Boris Kac and Phil, Katie and Kieran Murphy. M.P. would also like to thank Dr Verena Tcshudin and Dominika Jakl for their help.

Hugh P. McKenna
Majda Pajnkihar
Fiona A. Murphy

Preface

The stimulus for this second edition was the very positive feedback we received for the first edition from nursing students, nurse lecturers and clinical nurses. It helped that the publishers were extremely keen on an updated version being produced. Initially, there was some reluctance on our part because we felt that the first book had dealt with the subject matter very thoroughly. However, on reflection we realised that in the intervening years there had been a growth in discussion and debate about nursing theory. A preface to a later edition of a book should set out to explain in what respects that edition differs from the previous one. There are a number of differences. Fiona Murphy and Majda Pajnkihar have joined the team and they bring with them new insights into how theory can inform nursing practice and research and how this, in turn, improves the quality and safety of patient care. The literature has been updated considerably and we have taken account of developments outside the USA and the UK. In particular, Majda provides information on how nursing theories are being taught and used in Slovenia, Croatia, Russia and Poland. Readers will also find that we have included more exercises. These include key concept boxes, reflective exercises, multiple choice questions, true/false questions, additional reading sources and a number of case studies.

Therefore, for these reasons and many others, we believe that this new edition is a considerable improvement on the previous book. It still takes the reader on a journey, from presenting the case for the use of theory in nursing practice through to considering the extent to which practice influences the development of theory, the definitions of theory and the different types of theory. We illustrate for readers the fact that theory is linked to science and why this is important for the profession of nursing. We spend a considerable amount of time outlining the different ways in which nurses know and the role of research and reasoning in building nursing knowledge.

One of the main movements for the profession worldwide is the emergence of new nursing roles. We show how such roles are linked to theories and we highlight the importance of 'role theory'. We describe how grand nursing theories have evolved and the importance of mid-range and practice theories for guiding patient care. We unravel the often controversial relationship between nursing theories and nursing models, and examine these terms in detail and compare and contrast them, taking into account their advantages and disadvantages. We show how the biomedical model has influenced nurse education, practice and research over the years, and not always for the benefit of nursing.

We make a case for nursing being mainly about building and sustaining interpersonal relationships with patients, their families and communities. Several nursing theories have their roots in such relationships. We share a number of these with the readers, explaining Hildegard Peplau's theory in considerable detail. We consider the differences between a

normal interpersonal relationship and a therapeutic interpersonal relationship, stressing that practising nurses use both. We also outline the actual and potential barriers to the development of therapeutic interpersonal relationships.

Selecting an unsuitable theory can have a detrimental effect on patient care, and when this happens nurses are often reluctant to admit it and they try to mould the patient's needs to fit the theory rather than moulding the theory to fit the patient's needs! Conversely, we believe that a theory that is appropriate for practice will benefit patients and improve the working practices and morale of nurses. Therefore, choosing an appropriate theory to underpin nursing practice or nurse education needs a great deal of thought. We discuss 12 different criteria that can be used to help readers select a nursing theory for practice.

Since the first edition of this book, there has been a great deal written about evidence-based practice. We believe that no reasonable nurse would argue that an important part of every clinical nurse's role is to ensure their practice is informed by the best available evidence. We show the link between theory and research and best evidence. We discuss how theory is generated by research, tested by research and evaluated by research. We also highlight how theory can help to shape a research study.

Every day in clinical practice, nurses are exposed to phenomena that influence patient care. Sometimes such phenomena are ignored because they seem commonplace or unimportant. We guide the readers through the process of identifying these phenomena, naming them and finding relationships between them. This provides an insight into how readers can construct a nursing theory.

Finally, we highlight how the worth of a theory is ascertained. The characteristics of a good theory are reviewed and these are presented as the basis for evaluating and analysing nursing theory. The particular place of testing a theory is considered, and the relationship between theory evaluation and theory testing is clarified.

We hope you enjoy reading this textbook as much as we have enjoyed writing it. We anticipate that it will open up new and interesting perspectives in your thinking about nursing theories and how they can be used to increase the knowledge base for the profession and enhance clinical practice.

Hugh P. McKenna
Majda Pajnkihar
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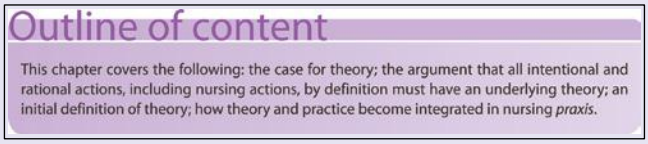


Outline of content

This chapter covers the following: the case for theory; the argument that all intentional and rational actions, including nursing actions, by definition must have an underlying theory; an initial definition of theory; how theory and practice become integrated in nursing *praxis*.

Learning outcomes

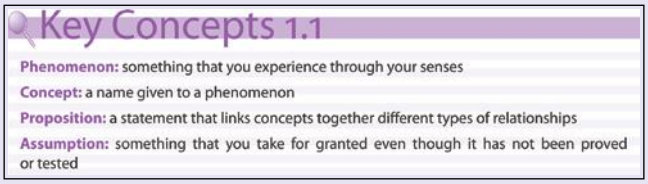
At the end of this chapter you should be able to:

1. Understand what nursing theory is
2. Define theory
3. Understand the construction/development of a theory
4. Discuss the relationship between nursing theory and science
5. Evaluate the relationship between nursing theory and practice
6. Know the limitations of the nursing theory
7. Understand the importance of nursing theory for contemporary nursing

Learning outcome boxes give a summary of the topics covered in a chapter.

How to use your textbook

Key Concept boxes give definitions of theories.



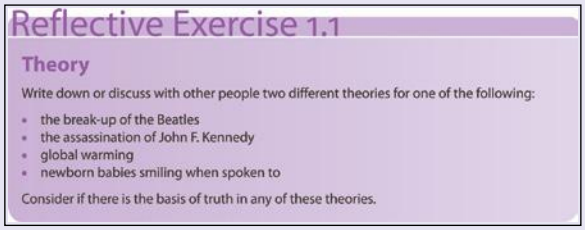
Key Concepts 1.1

Phenomenon: something that you experience through your senses

Concept: a name given to a phenomenon

Proposition: a statement that links concepts together different types of relationships

Assumption: something that you take for granted even though it has not been proved or tested



Reflective Exercise 1.1

Theory

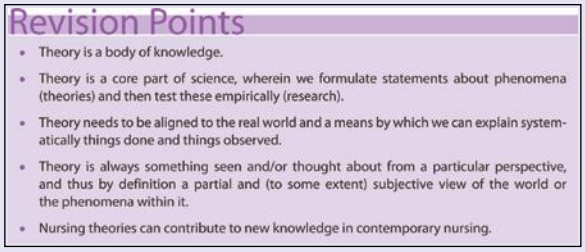
Write down or discuss with other people two different theories for one of the following:

- the break-up of the Beatles
- the assassination of John F. Kennedy
- global warming
- newborn babies smiling when spoken to

Consider if there is the basis of truth in any of these theories.

Reflective Exercises provide ways to put theories into practice.

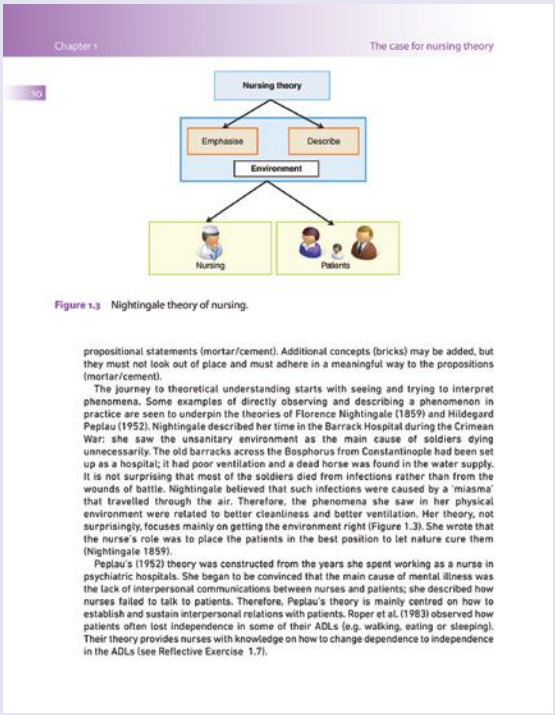
Each chapter ends with a list of **Revision Points** to summarize important topics.



Revision Points

- Theory is a body of knowledge.
- Theory is a core part of science, wherein we formulate statements about phenomena (theories) and then test these empirically (research).
- Theory needs to be aligned to the real world and a means by which we can explain systematically things done and things observed.
- Theory is always something seen and/or thought about from a particular perspective, and thus by definition a partial and (to some extent) subjective view of the world or the phenomena within it.
- Nursing theories can contribute to new knowledge in contemporary nursing.

Your textbook is full of **illustrations and tables**.



Chapter 1 The case for nursing theory

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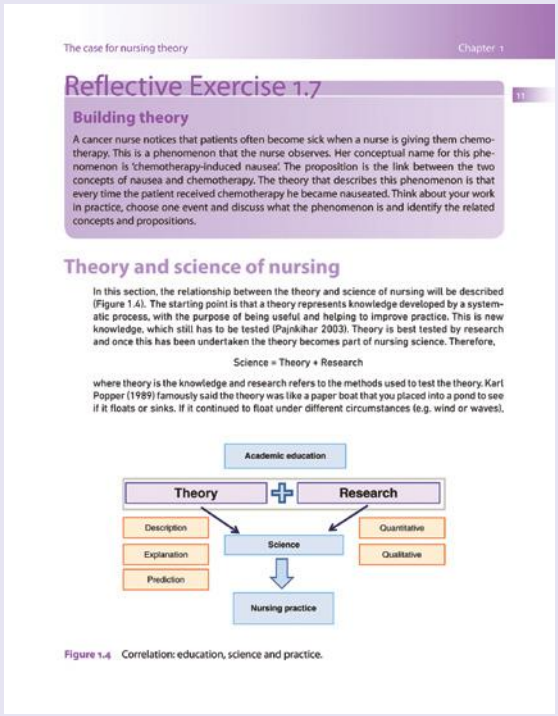
Figure 1.3 Nightingale theory of nursing.

propositional statements (mortar/cement). Additional concepts (bricks) may be added, but they must not look out of place and must adhere in a meaningful way to the propositions (mortar/cement).

The journey to theoretical understanding starts with seeing and trying to interpret phenomena. Some examples of directly observing and describing a phenomenon in practice are seen to underpin the theories of Florence Nightingale (1859) and Hildegard Peplau (1952). Nightingale described her time in the Barrack Hospital during the Crimean War: she saw the unsanitary environment as the main cause of soldiers dying unnecessarily. The old barracks across the Bosphorus from Constantinople had been set up as a hospital; it had poor ventilation and a dead horse was found in the water supply. It is not surprising that most of the soldiers died from infections rather than from the wounds of battle. Nightingale believed that such infections were caused by a 'miasma' that travelled through the air. Therefore, the phenomena she saw in her physical environment were related to better cleanliness and better ventilation. Her theory, not surprisingly, focuses mainly on getting the environment right (Figure 1.3). She wrote that the nurse's role was to place the patients in the best position to let nature cure them (Nightingale 1859).

Peplau's (1952) theory was constructed from the years she spent working as a nurse in psychiatric hospitals. She began to be convinced that the main cause of mental illness was the lack of interpersonal communications between nurses and patients; she described how nurses failed to talk to patients. Therefore, Peplau's theory is mainly centred on how to establish and sustain interpersonal relations with patients. Roper et al. (1983) observed how patients often lost independence in some of their ADLs (e.g. walking, eating or sleeping). Their theory provides nurses with knowledge on how to change dependence to independence in the ADLs (see Reflective Exercise 1.7).



The case for nursing theory Chapter 1

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Reflective Exercise 1.7

Building theory

A cancer nurse notices that patients often become sick when a nurse is giving them chemotherapy. This is a phenomenon that the nurse observes. Her conceptual name for this phenomenon is 'chemotherapy-induced nausea'. The proposition is the link between the two concepts of nausea and chemotherapy. The theory that describes this phenomenon is that every time the patient received chemotherapy he became nauseated. Think about your work in practice, choose one event and discuss what the phenomenon is and identify the related concepts and propositions.

Theory and science of nursing

In this section, the relationship between the theory and science of nursing will be described (Figure 1.4). The starting point is that a theory represents knowledge developed by a systematic process, with the purpose of being useful and helping to improve practice. This is new knowledge, which still has to be tested (Pajnkihar 2003). Theory is best tested by research and once this has been undertaken the theory becomes part of nursing science. Therefore,

Science = Theory + Research

where theory is the knowledge and research refers to the methods used to test the theory. Karl Popper (1989) famously said the theory was like a paper boat that you placed into a pond to see if it floats or sinks. If it continued to float under different circumstances (e.g. wind or waves),

Figure 1.4 Correlation: education, science and practice.

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The case for nursing theory

Outline of content

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Introduction

Before nursing students and registered nurses recognise the content and function of theory, they often ask themselves question such as the following. What are nursing theories? Why study them? What has this got to do with nursing? How can something that is divorced from action, that is by definition abstract and conjectural, be of value to something like nursing, which is one of the most practical of activities?

This book will help to answer these questions. Theories exist everywhere in society. There are numerous theories of the family, of the internal combustion engine, of how cancer cells multiply, of changes in the weather. There are even lots of theories as to who killed President John F. Kennedy or Marilyn Monroe. The world is full of theories, some tested as accurate, some untested and some speculative. It is no surprise, then, that there are theories of nursing. But what do theories do? In essence, they are simply used to describe, explain or predict phenomena (see Reflective Exercise 1.1). This will be explored in detail later.

Reflective Exercise 1.1

Theory

Write down or discuss with other people two different theories for one of the following:

- the break-up of the Beatles
- the assassination of John F. Kennedy
- global warming
- newborn babies smiling when spoken to

Consider if there is the basis of truth in any of these theories.

Now, none of the theories that you outlined for any of the topics in Reflective Exercise 1.1 may be true. In fact, they may be erroneous or downright preposterous. The point is that we all use theories to explain what goes on in our lives or in the world. But if you wanted to, you could probably test or find out whether your theories are true. Later on in this chapter we will outline what theories are made of and how they are formed.

In many ways, theories are like maps. Maps are used to give us directions or to help us find our way in a complicated landscape or terrain. Maps often make simple what is a very complex picture. At their best, nursing theories also give us directions as to how to best care for patients. But why have we got so many nursing theories (over 50 at last count)? If you take any large city, there are many maps. For instance, in London, there are street maps, underground maps, electricity supply maps, Ordinance Survey maps and so on. Consider the London Underground map or the Moscow or Paris Metro maps – they are simple and easy to follow but they do not look anything like the complex reality of the underground networks they represent. In other words, they make a complex system understandable.

Similarly, nursing is highly complex and we need different theories to help us understand what is going on. A theory that can be used in emergency care may not be much use in mental health care, and a theory that can be used to help nurses in a busy surgical ward may be of little use in community care.

Nursing theories can provide frameworks for practice and in many clinical settings they have been used in the assessment of patients' needs. For instance, in the UK one of the most popular nursing theories was designed by three nurses who worked at Edinburgh University – Nancy Roper, Winifred Logan and Alison Tierney. They based their theory on the work of an American nurse called Virginia Henderson. Her theory outlined how nurses should be focused on encouraging patients to be independent in certain activities of daily living (ADLs) such as sleeping, eating, mobilising etc. Roper et al. took this a step further by identifying 12 ADLs. They stressed that it was the nurses' role to prevent people having problems with these ADLs. If this could not be achieved then nurses should help the patients to be independent in the ADLs. If this was not possible then nurses should give the patient and/or the patient's family the knowledge and skills to cope with their dependence on the ADLs. Many clinical nurses used the ADL theory to assess patients. They simply see how independent the patient is for each ADL and then focus their care on those for which the patient is dependent.

Therefore, theory can help us to carry out an individual patient's care and can contribute to better observation and recognition of specific patient needs, be they biological, social or psychological. Nursing theories are often derived from practice. In other words, nursing theorists have constructed their theories based on what they have experienced when working with patients and their families. Understanding the basic elements of a theory and its role, as well as taking a critical view of it, can help to develop a body of knowledge that nurses need for everyday work.

In this book we want to highlight the need for and use of nursing theory and its function. We will try to convince you of the importance of nursing theories to the nursing profession, to nursing education and especially to practice. This first chapter will introduce you to new words and ideas and it will take some concentration to understand the terminology. You may decide to read it in small doses, rather than all of it in one sitting. However, once you have mastered this first chapter, the rest of the book will be relatively easy to understand and, believe it or not, enjoyable. Several aspects of nursing theory are discussed in later chapters, and when reading those, dipping back into this first chapter will be helpful. Have a look at Reflective Exercise 1.2.

Reflective Exercise 1.2

Terminology

When you get involved in a new subject, you often have to learn new words to understand the topic. If you are a nursing student, you have had to learn many new anatomical or psychological words and phrases. Also, think of all the new words you would have to learn to take on any of the following hobbies:

- photography
- astronomy
- music
- gardening

See how many more you can think of. People accept learning new terms as part of understanding something in which they have an interest. The same is true in nursing theory.

The necessity and meaning of theory

Some people argue that in the real world of practice most nurses are not concerned with theories and that they are of interest only to nursing academics. However, our position is that there is no such thing as nursing without theory, because there is no such thing as atheoretical nursing. Nursing is theory in action and every nursing act finds its basis in some theory. For instance, if a nurse is talking to a patient, she may be using communication theory. At its simplest, a communication theory would include a speaker, a listener, a message and understanding between the speaker and the listener. Similarly, if she is putting a dressing on a patient, she may be using a theory of asepsis from the field of microbiology. Nurses may not always have a named theory in mind or they may even reject the notion that they are using a theory at all. Yet nurses do what they do for a reason and where there is a *reason* or *purpose* in mind, there is, more often than not, a theory.

When providing care to a patient, we are doing something in a *purposeful* manner. While doing it, we are seeking to understand, to uncover meaning, to determine how we should act on the basis of our understanding. This process describes theorising or *theory construction*. In this sense, theory is not some rarefied academic pursuit, but something that every nurse employs many times a day.

From the moment we start to think about something intentionally, we are constructing a theory. When we speak of construction, we are referring to how something is built or how the parts are put together to form a whole structure. Frequently we are referring to a building that has been constructed, such as a house or a bridge. When we bring *thoughts* together to form some understanding, we are also constructing. In this instance we are producing a *mental* building that has about it a sense of wholeness, which can be explained and shared with others through language.

This draws attention to another significant aspect of this process: when we think, we do so in language. A set of symbols that label the mental images are constructed, made up of our thoughts and the connections we make between them. In daily life too, people use different words and symbols to express meaning. In the same way, all theorists constructing their own theory use their own language and symbols to express and describe the theory. For example, an American nurse theorist, Jean Watson (1979), developed a theory that differentiates nursing from medicine, and advocates a moral stance on caring and nursing as a service driven by specific value systems regarding human caring. According to this theory, the purpose of nursing is to preserve the dignity of clients.

Similarly, another American theorist, Dorothy Orem (1991) began to see that most people are self-caring, e.g. they feed themselves, they get themselves out of bed and they wash themselves. This is a normal way of living for most of the population. Orem saw that self-caring is very important for the preservation of dignity and independence. How would you feel if someone started feeding you or helping you to walk when you could do these things very well yourself? Her theory focused on encouraging patients and helping them towards as much self-caring as possible (Pajnkihar 2003).

Therefore, theory involves thinking (describing) and seeking meanings and connections (explaining), and often leads to actions (predicting). Such knowledge included in different nursing theories can help not only to describe and explain what is significant about patient care, but also to assist with the prediction of what would work with different patients' problems (Pajnkihar 2003). As we outlined earlier, there are many nursing theories to help us describe, explain or predict caring practices. However, we need to be selective in the use of

theories and this will be dealt with in a later chapter. We can, of course, adopt, adapt or develop our own theories, but many of the existing ones have been researched and found to be useful guides for practice and so might be more useful than simply constructing our own. But as with the map analogy discussed earlier, we need to consider them as guides that inform our actions (Meleis 1997, 2007). It has been said that there is nothing as practical as a good theory, so theories only have value if they can be applied in practice.

Theory defined

The issue of what theory actually *is* will be returned to frequently in this and subsequent chapters. There are almost as many definitions of theory as there are nursing theories. Various definitions are offered here with the intention of showing differences in describing and defining what a nursing theory is.

To best understand the various definitions of theory, it would be useful to describe the bits that make up a theory – the working parts of a theory. We have already alluded to some of these. For instance, theories describe, explain or predict phenomena. The singular of phenomena is phenomenon. But what, you may ask, are phenomena? Put simply, phenomena are things we witness through our senses. So a patient falling is a phenomenon, a dog barking is a phenomenon and a wet floor is a phenomenon. Kennedy's assassination was a phenomenon and wound healing is a phenomenon (see Reflective Exercise 1.3).

Reflective Exercise 1.3

Phenomena

Consider your average day in class or at work. Identify five phenomena that you have seen, heard, smelled, touched or tasted.

As you have read, theories seek to explain, describe or predict these phenomena.

When we put a name to a phenomenon, it becomes a concept. To take the examples discussed earlier of a patient falling, a dog barking, a wet floor and an assassination are all concepts. They tend to encapsulate what the phenomenon is. If we can define the concepts, they help clarify our view of the phenomena. So, concepts are the building blocks of a theory (see Reflective Exercise 1.4).

Reflective Exercise 1.4

Concepts

See if you can put a label or name to the five phenomena you identified in Reflective Exercise 1.3. If you can provide a name such that any other person hearing it would know what the phenomenon is then so much the better. Try to define each of the concepts in one sentence.

When two or more concepts are linked, this is called a proposition. The obvious proposition from one of the concepts introduced earlier would be the link between a wet floor and a patient falling. So a proposition would be that the patient fell because of the wet floor. This would be termed a causal proposition. There are different types of propositions and, as you will see in the following, they can be seen as the cement or mortar that binds the concepts (bricks) together to form the structure (a theory) (see Reflective Exercise 1.5).

Reflective Exercise 1.5

Proposition

Consider the names (concepts) you gave to your five phenomena in Reflective Exercise 1.4. Think of other possible concepts they could be linked to. For example, let's say one of your phenomena was seeing a car crash on your way to work or to class. The name you put on this to make it a concept was 'road traffic accident'. Anyone seeing this concept would know what the phenomenon was. What other concepts in the situation could be linked to this concept? Let's say that the traffic lights were not working at that junction or the road was wet and slippery. These are also phenomena and can be expressed as concepts. When you form linkages or relationships between different phenomena, you are developing propositions.

Another term that you will find when you study nursing theory is assumption. An assumption is something that you accept as true even though it has not been tested. For instance, I think readers can assume that people are composed of biological, psychological and social dimensions. If you take the example of the car crash, you may assume that the driver did not want to crash (see Key Concepts 1.1).

Key Concepts 1.1

Phenomenon: something that you experience through your senses

Concept: a name given to a phenomenon

Proposition: a statement that links concepts together different types of relationships

Assumption: something that you take for granted even though it has not been proved or tested

From these exercises you will hopefully be able to understand some of the definitions that exist to explain nursing theory. For example, Dickoff and James (1968: 105) defined nursing theory as a 'conceptual system or framework' whereas Chinn and Jacobs (1979: 2) saw theory as 'an internally consistent body of relational statements about phenomena which is useful for prediction and control'. Chinn & Jacobs later developed the definition further. The more recent definition is more complex (Chinn & Jacobs 1987), but you should understand its meaning: 'a set of concepts, definitions and propositions that project a systematic view of phenomena by designating specific interrelationships among concepts for the purpose of

describing, explaining, predicting or controlling the phenomenon'. The definition highlights the content, context and function of the theory, pointing to the construction of a theory (concepts, definitions and propositions) and the interrelationships between theory elements and functions of a theory (describing, explaining and predicting).

It is important to note here that this description is close to the original meaning of the term 'theory'. It is derived from the Ancient Greek term *theoria*, meaning a spectacle, i.e. something that is witnessed – in other words, a phenomenon!

Another definition, this time by Im and Meleis (1999: 11), drew attention to a theory as something that is purposefully structured: 'an organised, coherent and systematic articulation of a set of statements related to significant questions in a discipline that are communicated in a meaningful whole to describe or explain a phenomenon or a set of phenomena'. This clearly states that the theory is a body of knowledge of nursing, and provides answers to questions that are of interest to nursing.

However, more recently, Chinn and Kramer (2008: 219) defined theory as 'a creative and rigorous structuring of ideas that project a tentative, purposeful, and systematic view of phenomena'. Earlier in this chapter, we wrote that theories may reflect fact or, indeed, be totally untrue. When a theory is tested many times and stands up to that test, in theoretical language it is beginning to take on the shape of a law. Theofanidis and Fountouki (2008: 16) stated that a theory can be defined as 'a statement representing a law waiting to happen'. For example, let us say a theory of skin integrity led nurses to turn bed-bound patients once every two hours to prevent pressure ulcers. If this was consistently tested through research and found to be true then the theory could be taking on law-like properties.

According to these various definitions, a nursing theory is constructed out of specific nursing phenomena represented as concepts, definitions, assumptions and propositions that help describe, explain or predict how nursing may support and help patients, families or society (see Key Concepts 1.2 and Reflective Exercise 1.6).

Key Concepts 1.2

***A priori* knowledge:** knowledge that arises before experience or, more accurately, without the need for experience

***A posteriori* knowledge:** sometimes called propositional knowledge, this is where knowledge emerges from experience, and we make deductions arising from this. In this instance, it is termed *a posteriori* to denote that it is derived from empirical experience, which, in all instances, precedes it and is its source

Reflective Exercise 1.6

Defining theory

Using your learning and library resources, look up the definitions for phenomena, concepts, propositions, description, explanation and prediction. See if you can find six different definitions of a theory. They do not have to be from the nursing literature. You should find that most of the definitions are composed of the words in the list.

To summarise, the definitions point out that:

- Theory consists of an organised and coherent set of concepts (two or more), definitions and propositions (two or more) that encapsulate specific phenomena in a purposeful and systematic way.
- The proposition(s) must claim a relationship or relationships between the concepts contained in the statement.
- It is a purposeful process and demands creative and rigorous structuring and tentative description of phenomena.
- The purpose of a theory is to describe, explain and/or predict.
- Theories use specific language, ideas or sometimes symbols to give answers to practice-based nursing problems.
- Theories are made up of mental building blocks and they can be explained and shared with others through language.

Some of the definitions proposed here are rather complex. In one sense, they are certainly comprehensive, but in attempting to achieve this, they run the risk of being difficult to understand. It is important, therefore, to spend some time reflecting on the definitions and the various terms used.

Reflection on the definition

Theory often means different things to different people. For example, we have emphasised in our definition above the notion that theory requires concepts (two or more) linked by propositions (one or more) (Figure 1.1). Nevertheless, not everyone agrees with this, and in completing Reflective Exercise 1.6, you will already be aware that there is no shortage of differing definitions. We must at least be aware that there are these differences; that there *are* in fact various ways in which people use the term 'theory'.

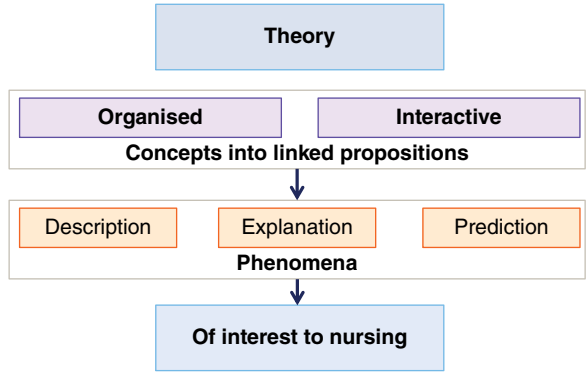

Figure 1.1 The links between theory and practice.

Theory or model

There is also some confusion about the terms *theory* and *model*. These are often used interchangeably. Some authors, such as Jacqueline Fawcett (2005a), see them as very different, whereas others, like Afaf Meleis, see them all as theories, with models simply being a theory at an earlier stage of development or not as advanced – but a theory nevertheless. Therefore, the differences between a theory and a model lie in the level of abstractedness and the level of development. Models are more abstract and are associated with notions of something practical that illustrate real situations. For example, toys (cars), anatomical models (bodies), nursing practice simulators and diagrammatic representations are all models. This difference will be explained in more detail in Chapter 5.

Construction of theory

As we saw earlier, theory consists of *concepts* linked by statements that propose particular types of connections that join these concepts together (*propositions*). Another way of expressing this is that concepts are linked by propositions that demonstrate their relationships. Extending the notion of theory as construction, we might view this in terms of the concepts (bricks) and statements (mortar or cement) metaphor shown in Figure 1.2.

The concepts (bricks) may be of different forms and levels of abstraction, from concrete to abstract (of different shapes and sizes, and made of different materials). They may be 'people' bricks, 'object' bricks or even bricks consisting of more abstract concepts such as 'love' or 'care'. They may be joined together to make descriptive, explanatory or predictive

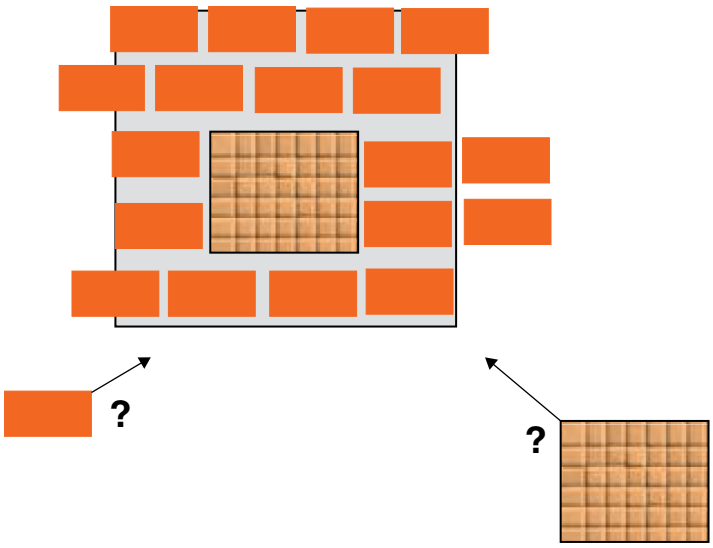

Figure 1.2 Theory as construction.

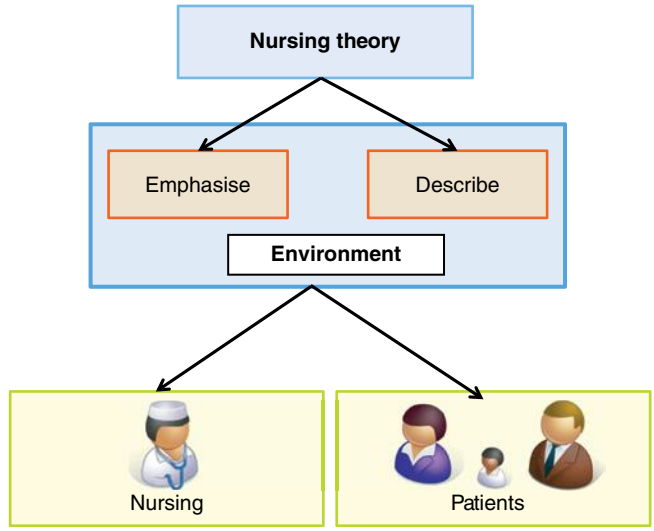

Figure 1.3 Nightingale theory of nursing.

propositional statements (mortar/cement). Additional concepts (bricks) may be added, but they must not look out of place and must adhere in a meaningful way to the propositions (mortar/cement).

The journey to theoretical understanding starts with seeing and trying to interpret phenomena. Some examples of directly observing and describing a phenomenon in practice are seen to underpin the theories of Florence Nightingale (1859) and Hildegard Peplau (1952). Nightingale described her time in the Barrack Hospital during the Crimean War: she saw the unsanitary environment as the main cause of soldiers dying unnecessarily. The old barracks across the Bosphorus from Constantinople had been set up as a hospital; it had poor ventilation and a dead horse was found in the water supply. It is not surprising that most of the soldiers died from infections rather than from the wounds of battle. Nightingale believed that such infections were caused by a 'miasma' that travelled through the air. Therefore, the phenomena she saw in her physical environment were related to better cleanliness and better ventilation. Her theory, not surprisingly, focuses mainly on getting the environment right (Figure 1.3). She wrote that the nurse's role was to place the patients in the best position to let nature cure them (Nightingale 1859).

Peplau's (1952) theory was constructed from the years she spent working as a nurse in psychiatric hospitals. She began to be convinced that the main cause of mental illness was the lack of interpersonal communications between nurses and patients; she described how nurses failed to talk to patients. Therefore, Peplau's theory is mainly centred on how to establish and sustain interpersonal relations with patients. Roper et al. (1983) observed how patients often lost independence in some of their ADLs (e.g. walking, eating or sleeping). Their theory provides nurses with knowledge on how to change dependence to independence in the ADLs (see Reflective Exercise 1.7).

Reflective Exercise 1.7

Building theory

A cancer nurse notices that patients often become sick when a nurse is giving them chemotherapy. This is a phenomenon that the nurse observes. Her conceptual name for this phenomenon is 'chemotherapy-induced nausea'. The proposition is the link between the two concepts of nausea and chemotherapy. The theory that describes this phenomenon is that every time the patient received chemotherapy he became nauseated. Think about your work in practice, choose one event and discuss what the phenomenon is and identify the related concepts and propositions.

Theory and science of nursing

In this section, the relationship between the theory and science of nursing will be described (Figure 1.4). The starting point is that a theory represents knowledge developed by a systematic process, with the purpose of being useful and helping to improve practice. This is new knowledge, which still has to be tested (Pajnkihar 2003). Theory is best tested by research and once this has been undertaken the theory becomes part of nursing science. Therefore,

Science = Theory + Research

where theory is the knowledge and research refers to the methods used to test the theory. Karl Popper (1989) famously said the theory was like a paper boat that you placed into a pond to see if it floats or sinks. If it continued to float under different circumstances (e.g. wind or waves),

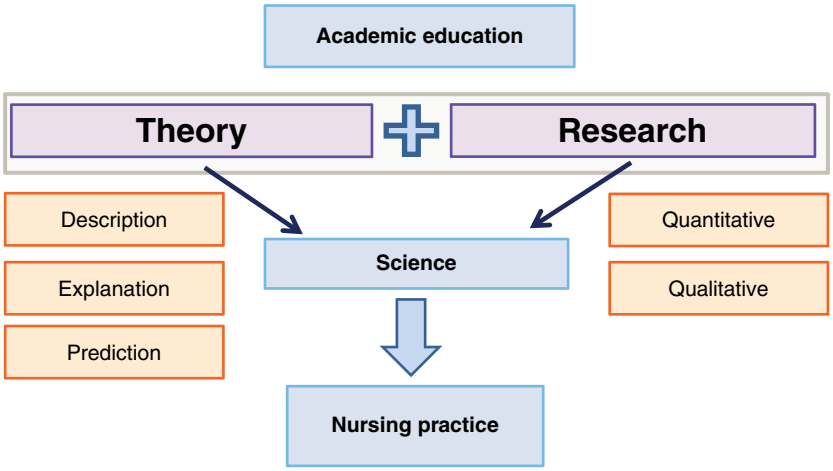

Figure 1.4 Correlation: education, science and practice.

then you could be confident that it was a good paper boat (theory). However, if it sank after many successes then there was a question over the soundness of the design. This can be also seen with nursing theory. If nurses were to research a new theory of oral hygiene for cancer patients and find it effective every time, then such a theory would enter nursing science and become standardised practice. However, if at a later date some researchers found that it did not work or was not effective with people who had a particular form of cancer then the theory would have failed and its position in nursing science would have to be re-evaluated.

From this explanation of what science is and what theory is, we can assert the following: when a nursing **theory** is developed, it forms a body of knowledge that describes, explains and/or predicts phenomena from practice and that gives nursing professional meaning and relevance. Once research shows that theory does what it should do and does so consistently – the end product contributed to nursing **science**.

For Meleis (2012: 28) science is 'a unified body of knowledge about phenomena that is supported by agreed-on evidence. Science includes disciplinary questions and provides answers to questions that are central to the discipline.' For Keck (1998: 16) science is both a 'unified body of knowledge concerned with specific subject matter and the skills and methodologies necessary to provide such knowledge'. Jacox (1974: 406) explained that science as a process incorporates 'methods or research strategies by which knowledge is developed and tested', whereas science as a product is referred to as 'a body of accumulated knowledge that purports to describe some selected aspects of the universe' (Pajnkihar 2003).

Within nursing, science is defined as 'the process, and the result of ordering and patterning the events and phenomena of concern to nursing' (Jacobs & Heuther, 1978: 66). Nursing science, therefore, can be described as a body of knowledge, developed by different methods and approaches that nurses can use to describe, explain and/or predict phenomena. When described as a product it means a theory; when described as a process it means the way (research methods used and research process) in which a theory is developed (Pajnkihar 2003).

Therefore, nursing science is simply nursing theory that has been tested. How nurses practise and how they use this knowledge in their practice to treat patients can be said to be the art of nursing. It is obvious that nursing as a science and as an art are both related to nursing research. The purpose of the science of nursing is to develop knowledge that is applicable and useful in nursing practice (Pajnkihar 2003).

There is no doubt about the worth of having reliable scientific knowledge to underpin nursing practice. Ada Sue Hinshaw (1989: 335) asserted that the nursing profession has a responsibility to society to develop a relevant, accurate and reliable knowledge base for guiding nursing practice. Not only should this knowledge be reliable, but it should also be relevant and accurate, because society's needs and problems are changeable through time. Because such changes occur in nursing care over time, a theory may be continually modified through its use in practice (Pajnkihar 2003).

The main reason for establishing the science of nursing is to acquire sound knowledge that is a relevant and reliable guide to nursing. We can agree that it should be established by way of systematic and rigorous research.

Research is essentially concerned with extending what is already known about nursing and the soundest research findings must be evaluated, published and disseminated before they influence practice. Thus, for theory-based practice, nurses need accurate and reliable knowledge and skills to evaluate evidence and to justify its application to enhance practice and care (Pajnkihar 2003). Im and Chang (2012) also pointed out that theories are essential to nursing science and research. Relationships between research and theory are explained more fully in Chapter 8.

Other interpretations of theory

For some people, theory is simply a term that differentiates thinking (theorising) from doing (practice). This has a parallel in some people believing that poetry or art have little to do with the practicalities of the real world. When nurses say that theory is of no relevance to their work, it is often the term 'theory' that they are rejecting. An important extension of this meaning is where 'theory' is used as a synonym for the entire body of knowledge that underpins nursing. More precisely, when we speak of a discipline's *theory*, we are referring to its *body of knowledge*, whether or not this is linked to any practical value.

At the outset of this chapter we emphasised that nursing practice is based on theories, but not everyone agrees on this. Some people assert that theory has no relevance to practice and therefore to nursing. Marrs and Lowry (2006) maintained that, on the one hand, there are nursing theorists who emphasise 'knowing' and, on the other, practising nurses focus on 'doing' and deny that theories are useful to them in their everyday practice. In essence, this is separating the 'what' and 'why' of nursing from the 'how' of nursing. We would not subscribe to this view; rather we take a similar stance to Khairulnissa and Moez (2011), who argued that theory is not relevant if it cannot be directly applied and used in nursing practice.

The idea that theory is separate from practice is problematic in nursing; if theory has no relevance to practice, by definition it can have no relevance to nursing. Those who reject such a premise nevertheless recognise the problem of turning theory into practice. This is referred to as the *theory–practice gap* (see Reflective Exercise 1.8).

Reflective Exercise 1.8

The theory–practice gap

Produce a brief one-page (300 word) account of the theory–practice gap. Reflect carefully on whether this is a bad thing or a good thing in any discipline. After all, the research findings in any profession are almost always ahead of the findings being disseminated and being introduced into practice. Therefore, perhaps there will always be a theory–practice gap and it is a good thing. However, you can argue the contrary to this view. Finally, consider ways in which this problem of the gap may be overcome.

As this matter is taken up again in Chapter 3, you should retain the results of this exercise.

Jacobs and Huether (1978: 66) deny nursing the status of science on the terms outlined earlier. Rather, they favour the development of nursing practice based on a strong body of theoretical knowledge, believing that without this, nursing lacks cohesiveness. To improve this, they, along with Schwirian (1998: 37), suggested that nursing should develop scientifically, thus helping to close or minimise the gap between practice and theory.

Main paradigms and philosophies and their influence on the development of nursing science

The term 'paradigm' is closely associated with Thomas Kuhn (1970). He introduced the word to the scientific community to explain how disciplines develop their knowledge (Meleis 2012). The simplest definition of a paradigm is that it is the way in which we view the world. A nursing paradigm is considered to offer a perspective on what nursing is, and it is influenced not just by different scientific traditions but by the problems of the nursing discipline that require different perspectives for understanding (Kim 1989: 169).

Nurses practise within a particular world view, which has significant implications for the profession and patients (Nagle & Mitchell 1991). Let's look at two contradictory nursing paradigms:

- **Paradigm 1.** All patients are dependent and the nurse's role is to carry out all those activities that the patients cannot do themselves.
- **Paradigm 2.** All patients need to be independent and the nurse's role is to encourage patients to do as much as they can for themselves.

These two world views or paradigms of nursing can influence how we nurse, how we teach nursing and how we manage nursing. As Monti and Tingen (1999) asserted, paradigms act as guidelines for resolving problems and derive theories and laws (Pajnkihar 2003). Kuhn (1970) argued that science without theory is pre-paradigmatic; that is, it is haphazard, has no guiding principles and in fact is not science at all (see Reflective Exercise 1.9).

Reflective Exercise 1.9

The theory–paradigm relationship

Each discipline or science has a particular paradigm – a conceptual orientation or way of seeing the world. The development of nursing theories will also be influenced by the prevailing paradigm within nursing. Consider the two paradigms outlined earlier. How would theories differ if the nursing profession adopted one rather than the other?

It will not surprise you to learn that there are numerous paradigms in nursing. We can classify theories into one of four influential paradigms: systems, interactional, behavioural and developmental. In later chapters you will see that some theories are affiliated to one or other of these paradigms. Certainly, we might argue that one or other paradigm is the best source of truth for nursing. The counter-argument is that none can be a 'best source' and that they are looking at different things or at the same things from different angles. This relates to one of the earlier understandings of theory we addressed in this chapter – the idea of theory as a spectacle or a view from a particular perspective. If we take the view that nursing by definition must look to the needs of the whole person within a whole physical and social world, and that its dominant orientation is *holistic*, then paradigms that fragment

the whole person into parts are counterproductive. On this argument, nursing theories that are based on the paradigms from other disciplines (psychological, biological, sociological etc.) may not be good for nursing. It could also be argued that for nurses to research these paradigms would be a case of developing those disciplines rather than nursing. But Tan (2011) claimed that, in fact, nursing knowledge is derived from various sources and different disciplines. Colley (2003) argued that we need to discover our own scientifically tested body of knowledge and Bultemeier (2012) maintained that a unique body of knowledge is important, especially if we want to share it with other nurses or professionals. This debate on borrowed theory versus home-grown theory will be returned to in Chapter 7 when we discuss how to select a suitable theory for practice.

One American theorist, Rosemary Parse (1987), has written that nursing is based on two distinct paradigms. In recognising how parts are integral to the whole person and that the whole person is greater than the sum of his or her parts, she coined the term 'simultaneity paradigm'. In contrast to this, she identified the 'totality paradigm', where the parts are more important than the whole person. In the simultaneity position, the person is seen as an irreducible whole, while in the totality paradigm, the person is seen as greater than the sum of his or her parts. This is relevant in nursing, where we deal not with simple anatomical parts but with complex persons. Nurses work in the complex world of human beings where looking at the whole person is preferable to looking only at parts, such as the heart, personality, and emotion.

One way of explaining the difference between the simultaneity and totality paradigms is through the analogy of a birthday cake. Suppose we had a birthday cake with 'Happy Birthday to Mary' written in the icing. When you slice the cake you get a number of separate parts. To Mary, the cake is greater than simply all the separate slices. It represents celebration, a happy occasion, a milestone in her life. This reflects the simultaneity paradigm, where the whole person is more than just a collection of biological, psychological and social parts. Consider the opposite view, where the slices of the cake simply make up the cake and when you look at one slice the birthday message is lost. This reflects the totality paradigm where we focus on individuals' diseases or pathologies rather than on the whole person. To a proponent of this paradigm, a coronary patient is simply that – pathology. That the presenting patient is a chief executive, has seven children and also has some financial problems are not matters worthy of consideration.

Earlier, the case was made for the value of theory and also the need to keep such theory under constant review (e.g. the paper boat sinking). Kuhn (1970) has argued that a discipline without a body of theory is unscientific. There is an element of common sense in synthesising both arguments. If we *do* need theory that is sound, tested and up-to-date, by definition we are speaking of a growing body of theory in the sense that Kuhn proposed. Yet in taking this position, we must also be cognisant of the nature of such theory and its limitations. As you saw in Reflective Exercise 1.9, theories tend to be specific within a particular paradigm or world view, and as such may provide only a partial view of the real situation.

Colley (2003: 37) stated that 'true professionalism in nursing will only occur when all nurses will take an interest in theory development and contribute to its introduction to practice'. However, Tan (2011: 34) claimed that 'nursing has generated a body of knowledge unique to its profession, and at the same time begun working collaboratively to integrate nursing knowledge with other disciplines'.

One approach for the nursing profession is to devise all-encompassing frameworks that show not only the elements that make up the totality of the body of knowledge, but also the relations and differences between these elements. This may be seen as

particularly important in nursing, where knowledge is being drawn from many different disciplines and paradigms. We call a body of knowledge so structured a *taxonomy* (from the Ancient Greek words *taxis* meaning arrangement, and *nomie* meaning method). Similarly, Carper (1978), in the nursing context, speaks of *ways* of knowing in nursing as encompassing empirics, ethics, personal knowing and aesthetic knowing. The types of knowledge that nurses might use in their practice are dealt with in Chapter 2 (see also Reflective Exercise 1.10).

Reflective Exercise 1.10

The place of theory in science

Review your literature, this time looking up the terms science, research, world view and paradigm. What you should seek are further commentaries on how theory might influence science and how science (or a particular science's world view) might influence how its practitioners construct and use theory.

Make brief notes for later reference when we expand on some of these issues in Chapter 2.

Kääriainen et al. (2011) claim that we need tested theories to develop nursing science because they give more valid information about the concepts and their usefulness. How to select a suitable model or theory and more detailed explanation of the advantages and disadvantages of borrowed theories are given in Chapter 7.

Theory and practice of nursing

Education and research foster the conditions for knowledge development in nursing. Any theory that supports everyday nursing actions and decision-making by nurses for the benefit of clients has to emanate from practice and return to inform practice. McCrae (2012) suggested that nursing struggles to assert itself as a profession because of the need for a unique body of knowledge. Johnson (1959: 212) stated that 'no profession can exist for long without making explicit its theoretical bases for practice'. Therefore, nursing cannot claim to be a profession if it does not have a body of knowledge that guides its work. Theories are a major part of this body of knowledge and so theory helps to develop nursing (Pajnkihar 2003, 2011).

McKenna (1997) stated that nothing is more practical than nursing theory and that 'there is no such thing as nursing without theory'. A theory has to be 'alive' in order to inform practice. Nursing theory helps us to focus on the essential elements that give nursing its unique structure, character, presence and strength (Gorman 2009), and also helps us to define the unique role of nurses in the health care service (Colley 2003; Bultemeier 2012). According to Fawcett (2012b), theories are the best evidence for evidence-based nursing practice. According to Selanders (2010), nursing theory provides the guidelines for decision-making, problem-solving and intervention development, and

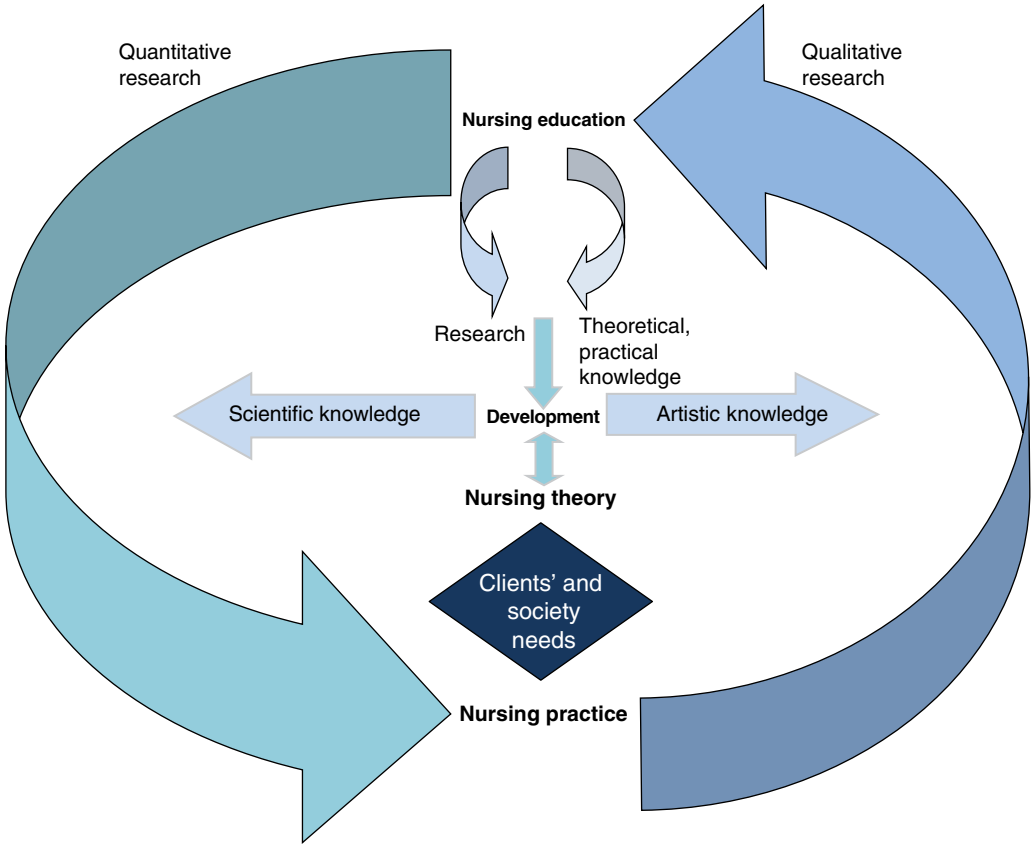

Figure 1.5 Basic structure of nursing. Reproduced from Pajnkihar M (2003) Theory development for nursing in Slovenia. *PhD thesis*. Manchester: University of Manchester, Faculty of Medicine, Dentistry, Nursing and Pharmacy.

in the long term serves as the framework for research, thus leading to the development of more refined theory (Figure 1.5).

Parker (2006: 15) asserted that practice 'must continue to contribute to thinking and theorising in nursing just as theory must be used to advance practice'. Both are guided by inherent values and beliefs. But one theory will never be able to explain the entire phenomenon of nursing (Colley 2003). Theory can never 'see' the whole, but it illuminates for us the meaning in different phenomena.

Because many nursing theories exist, they need to be reviewed, compared, analysed, evaluated and tested before being used in a care setting. Nurses have frequently selected theories uncritically without using good criteria for theory selection, analysis and evaluation, or basing their choice on scientific evidence (Pajnkihar 2003). 'Adaptation' of a theory in practice needs to be done on the basis of what patients need for best care (Pajnkihar 2009, 2011). Theory analysis, testing and evaluation are explained in greater detail in Chapter 9.

Do we really need theory?

Because we need 'a reliable body of knowledge', this means that in a constantly changing health care context it must be a *growing* body of knowledge that has to be constantly *updated* and *modified*, and continually subjected to *tests of refutation* (remember the paper boat). However, the argument here is two-fold: because we *do* need the 'tested theory', we need to continue to 'produce'. As such, theory is always open to question. We are *always* testing the theory in the live situation and each situation is to some extent unique. We have to 'fit' the theory to the situation, adapt it and look for alternatives if it is not readily applicable. In so doing we are questioning, analysing, synthesising and seeking patterns in the specific clinical situation, formulating propositional explanations and trying them out. Nurses who do this have been described as 'knowledgeable doers'. Benner et al. (1999) had spoken of 'clinical wisdom'. In our context we might describe it as the thoughtful, reflective, analytical, insightful, critical practice of nursing being a process of theorising in practice (which we refer to as *praxis* meaning 'living theory'). On this basis every competent nurse is a theorist.

Authors of books and articles on nursing theories tend to describe the unquestioning acceptance in practice of nursing theories that were developed in other countries as wrong. This is especially the case when they fail to be accepted or to be supported by practising nurses. The reasons for this lies not in the nursing theories themselves, but in the level of knowledge of nurse educators and clinical nurses and in the uncritically accepting of other people's nursing theories (Pajnkihar 2003).

Nursing theories today

It could be argued that the first nursing theory was that developed by Florence Nightingale and described in her book *Notes on Nursing* (Nightingale 1859). For some reason there was a hiatus in any further development of nursing theory for over 100 years. Then in 1952, Hildegard Peplau published her theory on interpersonal relationships in nursing. This marked the start of a further 30 years of theory development – mostly in the United States of America. This was due to a range of professional, social and political factors. There follows a brief overview of how nursing theories are accepted by nurses in different European countries. The examples are limited but the same themes can be generalised to most European countries.

Nursing theories in the United States

Most of the existing nursing theories emanated from the US. As stated previously, it started with Peplau in 1952 and continued through the 1960s, 1970s and 1980s. During this time about 40 theories were constructed. At one time there it appeared that there was a race among American academic nurses to come up with the ultimate nursing theory. Their emergence had a lot to do with the move of nurse education into the university system and a disenchantment with the biomedical model, which sees the patient as a collection of signs and symptoms, diseases and pathologies. Nursing theorists were treated like rock stars and many had their own literature and conference circuits. They even had their own followers – for example, those who supported Roger's (1980) theory were called Rogerians and those who supported Parse's (1981) theory were called Parsarians! Today, there is less hype about nursing theories in the US, but some of the more meaningful ones have stood the test of time.

I would include in this the theories of Parse, Orem, Roy and Watson (see the reference list). The main reason for their longevity and popularity is the research that has been undertaken to test and verify them.

Nursing theories in the UK

In the UK, the entrance of nursing education to universities began in the 1970s and McKenna (1997) noted that nurse teachers began to search for this unique knowledge for the discipline. For these reasons, in the 1980s and 1990s, British nurses began to develop theories. Today the most widely used nursing theory in the UK is that constructed by Roper, Logan and Tierney (RLT) (1980, 1985, 1990). It is interesting to note that the unquestioned and uncritical imposition of nursing theories in the 1980s on busy clinical nurses in the UK did theoretical nursing more harm than good. In the past they tended to be introduced by nurse academics, nurse teachers or nurse managers. Rather than clinical nurses seeing them as helpful, they were perceived as getting in the way of care. This was the result of each theory generating a large volume of paperwork. There is some evidence that there is a renewal of interest in nursing theories in the UK, with clinicians seeing them as helpful rather than a hindrance. Nonetheless, Bond et al. (2011) found that there was no increase in the use of nursing theories. The history of nursing theory development will be dealt with in greater detail in a later chapter.

Nursing theories in Slovenia

Although theories were already included in the Slovene nurse educational curriculum in the 1980s, they were not implemented in nursing practice. In the past, nurses who engaged in clinical practice had little opportunity to acquire any knowledge about nursing theories (Pajnkihar 2003). Apart from not understanding the theories in the classroom, students did not often have an opportunity to come across them in practice. Hence, graduates starting practical work inherited already established patterns of thinking and working in the clinical setting. Although they recognised the essential need for theory in practice, they also acknowledged that nursing theories currently implemented in education cannot realistically be applied in practice, because they are largely incomprehensible. The fact that they are written in English presents an additional obstacle for Slovene nurses.

However, Slovene education today is still largely based on Virginia Henderson's 'activities of living' theory and practice is widely influenced by the biomedical model. It follows that nurses cannot realistically expect to have their practice guided by a range of nursing theories. Furthermore, they cannot accept them in practice for the reason that the theories selected were developed for nurses in different health and nursing environments and cultures. It is probable that Slovene nurses *can* use different theories from other countries, but they need to be evaluated and tested in Slovene health and nursing environments before they are institutionalised (Pajnkihar 2003).

Nursing theories in Russia

In Russia, the westernised theories of Nightingale, Henderson, Orem, Roy, Allen and Neuman were introduced on the expert advice of just one internationally known Russian nurse. However, the theories are rarely used in practice. In addition, the amount of literature available in the Russia language on these theories is small (personal communication, November 2011).

Nursing theories in Poland

In Poland it has been reported that clinical nurses stay close to the biomedical model, and some use Nightingale's and Henderson's theories. However, during a research project, the authors introduced the nursing theories of Nightingale, Henderson, Orem, Roy, Neuman, Maslow and Taylor to a group of 100 Polish nurses (Zarzycka et al. 2013). The results showed that the most frequently used theory was Nightingale's, followed by Orem and Henderson.

Nursing theories in Croatia

In Croatia nursing theories were accepted into nursing education, but as with other countries they did not find acceptance in nursing practice. This was mainly because there were not enough supporters of these theories to spread knowledge and enthusiasm about them. The level of knowledge about theory is low and the amount of literature in the Croatian language on the subject is scarce. A similar problem occurs here as in other EU countries where nursing education was transferred into universities decades after it did so in the USA or in the UK. They did not go through the same theorising process. However, after being taught theories, Croatian nurses find mid-range theories very useful in supporting their practice. A more detailed description of mid-range theories will be undertaken in Chapter 3.

Level of education and knowledge development

There are big differences between the education of nurses in the USA and Europe. In the latter, nursing education was recently placed within universities, but mostly at diploma level only (Bologna Level 1 and 2). Nurses in central and eastern Europe still have to make huge efforts to introduce developments that are taken for granted elsewhere, such as doctoral education for nursing. Therefore, the shortage of nurse educators with postgraduate academic qualifications is acute. The lack of knowledge about alternative theories in nursing and the fact that there is no research on theory selection or application are big problems.

Nursing theories in contemporary nursing

Today people demand improved safety, quality, productivity, effectiveness and efficiency to maintain or improve patients' rights and equality. Due to financial and economic crises there are fewer resources and fewer nurses available in health care systems. There is a danger that individual patient-centred nursing care may disappear. Nonetheless, there is an increasing requirement for holistic, compassionate, person-centred and individualised care. Despite the criticism of nursing theories, they can help us to achieve these requirements. For example, as seen earlier, empowering patient self-care and autonomy is congruent with the theory of self-care developed by Dorothea Orem (1980, 1991). Similarly, supporting patients towards independence in their ADLs is core to Roper et al.'s theory. Callista Roy (1980) emphasised the need for patients to adapt to their environment and to their own abilities. Therefore, if used appropriately, these nursing theories and others can demonstrate cost-effectiveness through reducing dependency, encouraging self-care, and help in the early detection of patients' problems.

Caring theories could significantly advance the nurses' knowledge about their own and clients' personal values and beliefs in order to protect human dignity and respect and value

individuality. Research carried out in Slovenia into Jean Watsons' 'carative factors' of nursing care showed that nurses believed that they were especially caring when they assisted patients in fulfilling their basic human needs and in giving hope (Pajnkihar 2013).

Theories can provide a systematic basis for assessing, planning, implementing and evaluating care and offer a way to 'revitalise' the nursing process. New frameworks for our work for more holistic and individualised care can be established. In times of crisis, we can preserve or return to the fundamental values that are increasingly demanded nowadays. However, in order to do that, we first need some basic theoretical knowledge and hopefully this book will provide you with the grounding to realise the importance of nursing theory.

Conclusion

Praxis is understood as knowledge in action. We are constantly being called to 'base' or 'inform' our practice on sound evidence. In praxis, theory and theorising become integral parts of our practice, and our practice is in turn the living enactment of our theory and theorising. This chapter makes the argument that practice must be informed by theory and that theory is in turn informed by practice.

In this chapter we have argued that theory is necessary in nursing. We have defined it as a means by which we can describe, explain and predict phenomena of importance to nursing care. In so doing, we have recognised the problems that exist. There are different views about what theory actually is. There are vastly different positions ranging from the view that theory is mere conjecture and of no value at all, to the view that it is essential to the construction of knowledge and our application of this in practice. We have, nevertheless, also recognised that theory is always a view from a particular perspective and always a tentative description, explanation or prediction of reality. We are, it was argued, always called on to challenge theory and to recognise that it must be adapted to each unique patient, rather than having the patient adapt to the theory.

In one sense this opening chapter has raised many questions about nursing theory, but by doing so it has arguably met one of its main aims: the recognition that theory *is* an important issue that must be addressed in nursing. In the remaining chapters, we will describe and discuss the related issues in greater depth.

Revision Points

- Theory is a body of knowledge.
- Theory is a core part of science, wherein we formulate statements about phenomena (theories) and then test these empirically (research).
- Theory needs to be aligned to the real world and a means by which we can explain systematically things done and things observed.
- Theory is always something seen and/or thought about from a particular perspective, and thus by definition a partial and (to some extent) subjective view of the world or the phenomena within it.
- Nursing theories can contribute to new knowledge in contemporary nursing.

Additional reading

Pajnkihar M. & Butterworth T. (2005) Nursing in Slovenia: a consideration of the value of nursing theories. *Journal of Research in Nursing*, **10**(1), 45–56.

Tan K.K. (2011) The state of nursing science. *Singapore Nursing Philosophy*, **12**(1), 22–33.

Zarzycka D., Dobrowolska B., Slusarska B., Wronska I., Cuber T. & Pajnkihar M. (2013) Theoretical foundations of nursing practice in Poland *Nursing Science Quarterly*, **26**(1), 80–84.

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where you can find self-assessment tests to check your progress.

2

Knowing in nursing and nursing knowledge

Outline of content

Knowledge and knowing are defined, by introducing defining terms and proceeding to consider how knowledge is constructed. Rationalism, empiricism and critical thinking are presented as means of producing knowledge. The influences of positivism, logical-positivism, post-positivism, critical theory and constructivism on how we perceive and construct knowledge are explored. Different categories of knowledge and different patterns of knowing in nursing are presented. The role of reasoning and research in constructing nursing knowledge are outlined.

Learning outcomes

At the end of this chapter you should be able to:

1. Define 'knowing' and 'knowledge'
2. Discuss three key phases in the philosophy of knowledge
3. Discuss the differences between 'know how', 'know that' and 'know why' knowledge, giving examples from nursing practice
4. Discuss Carper's (1978) 'ways of knowing' and Kerlinger's (1986) 'categories of knowledge' and give examples from practice
5. Identify two main strategies to develop nursing knowledge

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Introduction

In Chapter 1, theory and its relationship to nursing practice was introduced, as was recognising the importance of knowledge in theory development for nursing. In this chapter we will focus more on knowledge and the types of knowledge that nurses might use in their practice. The idea of what counts as knowledge is complex and changes with different cultural and historical contexts. Therefore the first section of this chapter takes us through a short history of the philosophy of knowledge. We will:

- touch on three key phases – rationalism, empiricism and historicism – all of which influence the kind of knowledge that nurses use in their practice;
- look more closely at knowledge itself, in particular what types of knowledge nurses might use in their practice and whether some types of knowledge are more valued than others;
- look at the differences between 'know how', 'know that' and 'know why' knowledge;
- consider the works of Carper (1978) and Kerlinger (1986);
- consider ways that nurses might produce knowledge for their practice.

Defining knowing and knowledge

As with most of the ideas presented in this book, defining knowing and knowledge is not as straightforward as it may appear (see Key Concepts 2.1). It was Francis Bacon (1561–1626) who said: 'If you dissemble sometimes your knowledge of that you are thought you know, you shall be thought, another time, to know that you know not'. He was reminding us that we should always challenge what we know and take little for granted. However, there are distinct differences between knowing and knowledge. According to Chinn and Kramer (2004), *knowing* refers to the individual human processes of experiencing and comprehending the self and the world in ways that can be brought to some level of conscious awareness. This implies that because it alters with experience, knowing is always changing. Notice that it is also about how we comprehend ourselves and the world in which we live. Therefore, as we mature and as the world changes, our knowing also changes. There is a more esoteric view of knowing from the Jewish Talmud (cited in Levine 1994):

> ...the child in the womb of his mother looks from one end of the world to the other and knows all the teaching, but the instant he comes in contact with the air of earth an angel strikes him on the mouth and he forgets everything.
>
> But not all is forgotten; we all have instincts such as blinking, sucking and retina dilatation. These ways in which humans survive are underpinned by instinctive knowing.

Key Concepts 2.1

Knowing: individual human processes of experiencing and comprehending the self and the world in ways that can be brought to some level of conscious awareness

Knowledge: knowing that we can share or communicate to others

Chinn and Kramer (2004) also defined knowledge. To them it is simply the knowing that we can share or communicate to others. This implies that there may be knowledge that we will not share or cannot communicate to others and so, by their definition, this is not knowledge! However, if you share or communicate your knowing with others, this 'knowledge' becomes part of their store of knowing (see Reflective Exercise 2.1). Similarly, if they share knowledge with us, it becomes part of our store of knowing. In nursing we share knowledge in many different ways, such as through speaking, use of the written word and through our behaviour. In Chapter 1 you learned that we experience phenomena through our five senses: hearing, seeing, touching, smelling and tasting. Similarly we obtain knowledge through these five senses.

Reflective Exercise 2.1

Shared knowledge

Think about the nursing course you are attending at the moment. In what way is knowledge being shared?

Philosophies of knowledge

In the main there are three philosophical views on how knowledge develops:

- rationalism
- empiricism
- historicism.

An overview of these is presented in Table 2.1.

Table 2.1 Philosophies of knowledge.

	Key concepts	Key writers and movements
Rationalism	Reason	René Descartes – 'I think, therefore I am' Cartesian dualism
Empiricism	Sensory experience	John Locke – *tabula rasa* (blank slate) Auguste Comte Positivism The Vienna Circle – logical positivism Karl Popper – principle of falsification (post-positivist empiricism)
Historicism	Interpretative-constructionist	Thomas Kuhn – paradigm shifts The influence of phenomenology – Edmund Husserl and Martin Heidegger Critical science – the Frankfurt School (enlightenment, empowerment, emancipation) Postmodernism

Rationalism

Rationalism has its stem in *ratio* the Latin word for 'reason'. Charles Darwin stated that of all the faculties of the human mind, reason stands at the summit (Barnhart & Barnhart 1976). It is a philosophy of science that emphasises the role that reason has to play in the development of knowledge and the discovery of truth.

Rationalism is founded on the idea that theorists, without access to data obtained through the senses, can generate theory through mental reasoning. They do this by formulating propositions through theorising how one concept could be related to others. This 'armchair theorising' has been ridiculed, mainly because of the absence of hard data. Nonetheless, the absence of data has not stopped people taking such theories seriously. For example, Freud used rationalism to develop his theories of psychoanalysis; he had very little data to support his theories on the Oedipus complex, or the id, ego and superego (Freud 1949).

In essence, rationalists theorise without data and then experiments are set up in the real world to see if the theory can be corroborated. This is best described as the 'theory then research' approach (Reynolds 1971) and can also be called deductive or *a priori* reasoning. In terms of knowledge, this is seen as arising before experience or, perhaps more accurately, without the necessity of experience. It precedes experience or the need for this. Knowledge of this form is said to be independent of any need for supporting evidence or experience. It is self-evident. Since Einstein presented his theory of relativity many years before the methods were available to test it, it is perhaps the best known example of the development of such knowledge.

René Descartes

Rationalism as an approach to knowledge development can be traced to René Descartes (1596–1650), the 17th-century French philosopher and mathematician. He spent most of his adult life in Holland and influenced other famous rationalists such as Antoine Arnauld (1612–1694), Benedict de Spinoza (1632–1677) and Gottfried von Leibniz (1646–1716). Nine years before his death, Descartes published a book entitled *Meditations on First Philosophy* (1641). This was to influence the development of knowledge for the next 300 years. Perhaps the best word to signify his contribution to rationalism is 'doubt' He realised that to arrive at new knowledge you must put former opinions and experiences in doubt. When we do this we can build knowledge from first principles (Stokes 2004).

As noted earlier, most of our knowledge comes from our senses. However, Descartes suggested that the senses can play tricks on us. For example, we may think something looks cold but when we touch it, it is hot, or we may believe a creaking floorboard or a branch blowing against a window to be an intruder. Descartes considered sensory deceptions such as these and reflected that they could be the work of a malignant being, a demon whose role is to fool us by sending us false sensory information. Such misconceptions are often used to good effect in Hollywood films such as *The Matrix* (Wachowski & Wachowski 1999).

When Descartes reasoned that all his knowledge may be false through being fooled by the demon, he came to doubt all that he previously held to be true and to exist. He even began to doubt his own existence. However, he realised that there was one thing that the demon could not falsify. He reasoned that when he thinks, he must exist or else he would not be able to think. Such reasoning led him to the one certain piece of *true* knowledge '*Cogito, ergo sum*' (I think, therefore I am). Following this, he held that by means of reason alone, knowledge and certain universal self-evident truths could be discovered, from which the sciences could then be deductively derived.

Cartesian dualism

Descartes was a devout Catholic and he reasoned that God created two classes of substance that make up the whole of reality. One class comprised thinking substances, or minds, and the other comprised extended substances, or bodies. This mind–matter split, called 'Cartesian dualism', is based on the assumption that we are rational individuals with rational minds and that our minds are divorced from our bodies and from other matter.

Rationalism as a philosophy of science was very influential and Descartes' mind–body split underpins much of the biomedical model referred to in Chapter 1. Physicians were often trained to look for anatomical signs and physiological symptoms and come up with a diagnosis. Similarly, when nurses assess patients objectively from a physical and pathological perspective while ignoring their thoughts, emotions and feelings, they are practising Cartesian dualism. We still hear experienced nurses referring to a coronary or a stroke being admitted! This is reminiscent of the birthday cake analogy in Chapter 1 – by seeing only the slice, they miss the whole cake and its meaning (see Reflective Exercise 2.2).

Reflective Exercise 2.2

Theory – Cartesian dualism in practice

Next time you are in practice, listen to the handover. Do the nurses focus mainly on physical or psychological aspects of the patient, or do they consider both? Do they take any account of social factors?

Empiricism

In contrast to rationalists, empiricists believe that knowledge is derived entirely from sensory experience. In other words if something cannot be perceived through the five senses, it does not exist. Empiricism denies the possibility of spontaneous ideas or *a priori* reasoning as a predecessor to scientific knowledge. Rather, empiricists formulate concepts and propositions that attempt to explain the phenomena they have experienced. These propositions may be turned into hypotheses which can be tested through experimental research. The end result is knowledge in the form of theory. Empiricism can be described as the 'research then theory' approach (Reynolds 1971) and because the theory comes last, this type of knowledge development can also be called inductive or *a posteriori* reasoning, which is on the basis of observable evidence (see Key Concepts 2.2).

Key Concepts 2.2

***A priori* knowledge:** knowledge that arises before experience or more accurately without the need for experience

***A posteriori* knowledge:** sometimes called propositional knowledge, this is where knowledge emerges from experience, and we make deductions arising from this. In this instance, it is termed *a posteriori* to denote that it is derived from empirical experience which in all instances precedes it and is its source

John Locke and empiricism

The origin of empiricism can be traced to a number of English philosophers such as John Locke (1632–1704) and David Hume (1711–1776). Locke was the first to put forward empiricist principles in his *Essay Concerning Human Understanding*. He spent 20 years writing the book postulating on how the mind collects, organises and makes judgments based on all the data that come to us through our senses. He had read Descartes but had rejected the rationalist philosophy as not helping to explain human understanding. For Locke there can be no innate knowledge: rather everything we know must be gained from experience. To him, knowledge was derived through the outside world writing on our minds through our senses. Therefore, he envisioned the mind at birth to be a blank slate, what he referred to as *tabula rasa* (Stokes 2004). As the child develops, this slate is written on by experience.

Primary and secondary qualities

Locke distinguished between primary and secondary qualities. Primary qualities are objective and include shape, solidity, number and motion. By contrast, secondary qualities are more subjective and include colour, smell and taste. The reason why they are termed secondary is that they are produced in our minds by the effect of primary qualities on our senses. To Locke, primary qualities really exist in the world and secondary qualities exist in our minds. For example, the primary qualities of a cancer can be observed and its size, shape and position measured. Less important for empiricists might be pain, fear and distress that the cancer produces in the patient. These would be labelled secondary qualities by Locke. Put very simplistically, from an empiricist perspective, cancer biologists would mainly be concerned with the size, position and type of cancerous growth, whereas nurses would mainly be concerned with the secondary qualities – the effect the growth was having on the patient and his or her family. Neither may be right, but the philosophies underpinning the education and training of different health professionals may go some way to explaining these different perspectives.

Auguste Comte and positivism

Ninety-four years after Locke's death, the French philosopher Auguste Comte (1798–1857), gave empiricism a new twist. He is best remembered for being a student activist and an anti-Establishment figure and he saw science as a means of changing and possibly overthrowing political movements. One of his many legacies is that he founded the discipline of sociology as a means of applying the methods of science to the study of people and society.

In his six-volume work *Course of Positive Philosophy* (1830–42), Comte used the term 'positive' philosophy to differentiate it from the negative philosophy that he believed underpinned woolly and metaphysical thinking. Adopting such a 'positivist' approach meant that through the use of robust scientific methods human problems would be solved and social conditions improved. To him, scientists should focus on ordering in a rigorous manner confirmable observations and this alone should constitute human knowledge (see Reflective Exercise 2.3).

Reflective Exercise 2.3

Exploring knowledge

In this chapter we carry forward in more detail issues about knowledge first encountered in Chapter 1. We now recognise that knowledge is shared and that accepted knowledge is derived from different sources – mainly rational thinking (reasoning) and experience (formally encountered in empirical methods).

Reflect a little further on these issues by exploring the literature. Seek definitions of knowledge, rationalism and empiricism. Consider how rationalism and empiricism are encountered in nursing practice.

Comte also identified a hierarchy of six sciences which had been founded on systematic observation:

- astronomy
- biology
- chemistry
- mathematics
- physics
- sociology.

These form the 'gold standard' against which other disciplines would be judged. By contrast, to Comte, subjective approaches to knowledge development were not perceived as meaningful pursuits and so reflection and intuition as a basis for knowledge development were shunned and denigrated by positivists.

Throughout his life, Comte had been plagued by mental health problems and he had even attempted suicide on occasions. In his later years his mental illness returned and with it a softening of views regarding positivism. For instance, in some of his last writings, such as *The Catechism of Positive Religion*, he stated that the intellect should be the servant of the heart! Nonetheless, it is for his earlier work on positivism that Comte will be best remembered. Many scientists argued that it was the only true source of knowledge. In essence, the doctrine involved the following logic: our minds interpret the world through our senses, and because the world is subject to the laws of science, events outside the mind can be observed, described, explained and predicted. Therefore, to make sense of the outside world, all we had to do was to observe it and undertake experiments to test hypotheses that were formulated from such observations.

For positivists, objective truth exists and the goal of science is to go out and discover it; to them this forms our knowledge base.

'The Vienna Circle'

At the turn of the 20th century, a group of philosophers, including Moritz Schlick (1882–1936) and Ludwig Wittgenstein (1889–1951), formed an organisation called 'The Vienna Circle'. They built on Comte's ideas and coined the term 'logical positivism', placing an even stronger emphasis on the importance of induction and scientific verification.

For most of the first half of the 20th century, 'respected' scientists adopted the logical positivist view of science. However, the philosophical force behind logical positivism dissipated just prior to the Second World War when most of its supporters left Nazi Germany and Austria. Today, in the first decade of the 21st century it is seen as a spent force in scientific enquiry (McKenna 1997).

Popper: principle of falsification

Karl Popper was one of a group of philosophers known as the 'new scientists' and was influenced by Descartes. Popper argued that the way to true knowledge was by conjecture (developing theory through reason) and refutation (testing the theory through rigorous research to see if it could be falsified). To him, the mark of a scientific theory is whether it makes predictions that can be falsified through testing (Popper 1965).

Although initially a supporter of the Vienna Circle, he began to reject induction as a scientific approach and replaced their emphasis on verification with his principle of falsification. In other words, theories should not be tested to see if they can be supported; rather, they should be tested to see if they can be falsified. If you test a theory 19 times and it holds true it may not hold true on the 20th occasion. In Popper's view, we can learn much more from the 20th test than from the previous 19. The example of the paper boat was used in Chapter 1. The same principle can be explained another way: let's say you were to construct a kite and test it to see if it will fly. It may fly perfectly the first 20 times you try it, but then on the next few attempts it crash lands. To Popper this lack of reliability would be an important discovery and you would have to go back to the drawing board to redesign the kite (see Key Concepts 2.3).

Key Concepts 2.3

Popper's (1965) principle of falsification: theories should not be tested to see if they can be supported; rather, they should be tested to see if they can be falsified.

Later in his life he began to question the logical positivists' desire to reject subjectivity as a way of knowing. What could seem to be a 'road to Damascus' change, Popper admitted that there was a place for intuition and imagination when one is using scientific empiricism!

Post-positivist empiricism

Today, thanks to philosophers like Karl Popper, logical positivism has been replaced by post-positivist empiricism, a much milder form of positivism. Gortner (1993) supported the use of this form of empiricism in the development of nursing science. She felt it was unfortunate that it is still being tarnished in the literature by being confused with logical positivism. Modern empiricists accept the shortcomings of verification and recognise that the world is complex and some behaviours and events can be reduced to their basics for study purposes and some cannot.

Empiricism is still highly regarded as a scientific approach in the physical sciences of biology, physics and chemistry. Furthermore, all of the many experiments, quasi-experiments and randomised controlled trials carried out within nursing and health care

are clearly based upon empiricism. In 1993, when referring to nursing theories, Gortner argued that Roy's (1989) theory 'reflects clearly the thinking of an empiricist scholar' (p. 481). The same can be said of the theories of Orem (1995), Neuman (1995) and Henderson (1966). We see the influence of empiricism again now in the evidence-based practice movement with its emphasis on the 'gold standard' of the randomised controlled trial (see Reflective Exercise 2.4).

Reflective Exercise 2.4

Nursing and empiricism

Look up a clinical care guideline or a care pathway that you are interested in. See what kind of 'evidence' it is based on. In particular, is the evidence obtained from randomised controlled trials?

Historicism

So far we have dealt with knowledge that is objective and can be perceived through the senses. Much of this knowledge can be measured. The Italian astronomer Galileo Galilei (1564–1642) maintained that we should 'measure what is measurable, count what is countable, and what is not countable, make countable'. However, there are many phenomena of interest to nurses that cannot be measured. How would you calibrate compassion, measure empathy or quantify a presence? True rationalist or empirical principles could not be applied to these. The philosophy of knowledge best suited to this perspective is called historicism.

Historicism recognises that we are all influenced by our different history and different experiences, values and beliefs. From these influences, we construct our own realities and we interpret events from this construction. Therefore, another term for this view is the interpretative-constructionist approach. In other words we interpret what is real and construct this as knowledge (see Reflective Exercise 2.5).

Reflective Exercise 2.5

Nursing and historicism

Consider the following example. Two nurses observe an elderly patient getting out of bed but they interpret it differently. One may believe that the patient is dependent and in danger of falling and should not be attempting to get out of bed. The other may perceive the patient to be gaining independence and is therefore pleased that they are getting out of bed. They see the same thing but construct a different reality.

What would be your interpretation?

These nurses observe the same clinical phenomenon, yet past experience, reflection and intuition lead them to understand and interpret it differently. Furthermore, each may have a personal or internationally accepted theory that structures what they perceive. Such 'theoretical baggage' influences how we attempt to understand what we experience. So, to different people, reality (and knowledge of that reality) is often a personal thing, the product of individual reflection, perception, perspective and purpose rather than being static and objective. Realising this, philosophers such as Kuhn (1977), Toulmin (1972) and Feyerabend (1977) challenged the positivist view and stressed the importance of history and perception in the development of science. They rejected the idea of there being objective truths, arguing instead that the development of knowledge is a dynamic process and so there are no final and permanent truths.

Kuhn and scientific revolutions

Prior to Thomas Kuhn's book *The Structure of Scientific Revolutions* (1977), many scientists, particularly from the empiricist/positivist traditions, believed that different research studies built upon one another in a progression of the science, leading eventually to ultimate truth. By contrast, Kuhn (1922–1996) asserted that science progressed through a series of revolutionary steps. After each revolution, there is a period of 'normal science' where a particular paradigm (remember, we called this a 'world view' in Chapter 1) reigns supreme and scholars accept it as a basis for knowledge and truth. Rejecting this paradigm during a period of normal science would be frowned upon by the scientific community. However, according to Kuhn, this paradigm is eventually questioned, leading to what he refers to as a 'scientific revolution'. This may be because it fails to deal adequately with some new phenomenon, or a new, more powerful paradigm has great explanatory power. As more evidence accumulates to show that the old way of thinking has outlived its usefulness, a 'paradigm shift' occurs. Kuhn maintained that paradigm shifts are not cumulative and the new paradigm is not built on the previous paradigm. The new paradigm becomes the focus for a new period of normal science.

One example of this would be Ptolemy's teaching that the Sun orbited the Earth. This paradigm held sway for centuries in what Kuhn would call 'normal science'. However, when Copernicus (1473–1543) challenged this with his theory that the Earth moved around the Sun, a paradigm shift took place. Other examples includes Newton's theory of gravity being replaced by Einstein's theory of relativity or the contemporary focus on community care as opposed to institutional care for those with mental health problems. Paradigm shifts occurred because the old paradigms were not able to explain new experiences or solve new problems. Kuhn's views did much to undermine the empirical/positivist view of science.

Laudan and scientific evolution

Larry Laudan (1977) challenged Kuhn's view that knowledge development was a revolutionary process. Rather, he believed that knowledge was developed in an evolutionary way with new knowing being influenced by previous knowing. This *evolutionary* approach of Laudan is an attractive one for nurses because it recognises a pluralistic view to knowledge development and application. After all, the problems facing nursing are forever changing and staff must select the theory and paradigm that are best suited to solving these problems.

More recently, Afaf Meleis (1985), the US-based Egyptian nurse metatheorist, argued that the revolutionary and evolutionary approaches to knowledge development are too simplistic on their own to explain nursing's experience of knowledge development. She coined the term

'convolution' to explain how nursing knowledge has developed. She maintained that nursing as a discipline has progressed not through evolution or revolution but through a convolutionary series of peaks, troughs, detours, backward steps and crises. This gives the impression that knowledge development in nursing is confusing and uncoordinated. There may be some truth in this as nursing is still a young scientific discipline, one that Kuhn (1977) might place in a pre-paradigmatic stage of development.

The influence of phenomenology

Edmund Husserl (1859–1938) was a German philosopher and the founder of phenomenology. Phenomenology is the study of the meaning of phenomena to a particular individual and a way of understanding people from the way things appear to them (George 2001). In contrast to the empiricists and positivists, Husserl believed that science involved the exploration of perceptions, judgments, beliefs and other mental processes. He argued that, because of its refusal to count anything other than observable entities and objective reality, positivism was not capable of dealing with human experience. He maintained that one way to truth was to consider the essence of things, and the best way of noting this was to explore what meaning the mind has for that thing (Husserl 1962 trans).

The task of 'phenomenology' is to discover what life experiences are like for people. Understanding their 'lived experience' requires the use of reflection, which is the basis of phenomenology. While Descartes was sceptical about the external world (see earlier), Husserl was sceptical about self-knowledge. Therefore, he recommended that phenomenologists should 'bracket existence'. This means that when they are exploring the essence of an occurrence or event, they should suspend previous views and influences, as these would merely distort their true perception of it (see Key Concepts 2.4).

Key Concepts 2.4

Metatheorist: a person who studies and writes about theories. The best known metatheorists in nursing are Afaf Meleis and Jacqueline Fawcett

Heidegger and hermeneutic phenomenology

Martin Heidegger (1889–1976) maintained that as a way of generating knowledge, phenomenology should make manifest what is hidden in everyday taken-for-granted experience. He argued that prior experiences and influences may be used positively in a phenomenological study. Hermeneutics, a branch of phenomenology much influenced by Heidegger, is based upon the idea that all texts and human activities are filled with meaning and can be subject to rigorous interpretations. Therefore, within hermeneutics, to know is to understand through interpretation. In Heidegger's philosophical view, the understanding of phenomena is not about measuring, analysing and classifying. Once more the 'hard science' is being softened to take account of meaning and perception rather than detached quantification (Stokes 2004), but it is not about being less rigorous or systematic.

Phenomenology and nursing

An example of a use of phenomenology in nursing is Patricia Benner's (1984) work *From Novice to Expert. Excellence and Power in Clinical Nursing Practice*. In this landmark publication, Benner used a phenomenological approach to analyse experienced nurses' accounts of their practice. Benner then applied a 'model of skill acquisition', which proposed that in the acquisition and development of skills, students pass through five levels of competency: novice, advanced beginner, competent, proficient and expert. Novices and beginners need rules, but experts have a huge range of experience to draw on and no longer need rules. They have an 'intuitive grasp' of the situation and can immediately identify and concentrate on the important aspects (see Reflective Exercise 2.6).

Reflective Exercise 2.6

From novice to expert (Benner 1984)

Can Benner's ideas apply to you? Use Benner's five levels of competency to assess yourself at the beginning of a clinical placement and at the end. Where do you think you start from? Are you a novice, advanced beginner, competent, proficient or expert? Did you think you progressed over the placement from one level to another?

Critical science

We referred earlier to the Vienna Circle, which was a group that believed staunchly in logical positivism. Contemporaneously, a rival group existed called the Frankfurt School, which was located in the University of Frankfurt am Main in Germany and was established by Max Horkheimer, who became its director in 1930. The Frankfurt School gathered together dissident Marxists and was very much anti-positivist in its teachings. They saw positivism as an inappropriate way of viewing knowledge development in the social sciences. Rather they favoured the critical science approach.

Critical science is also a variant of phenomenology but goes further, stressing that meanings should not be merely elicited but should be open to criticism (Habermas 1971). It is a very political philosophy and an attractive approach for those nurses who wish to leave behind subservience to the male-dominated health service. It has given rise to feminist research methodologies and action research and, as such, may be perceived as a science of freedom. There are three major concepts within critical theory:

- *Enlightenment* – knowledge of self in relation to the world and education of the oppressed in terms of their potential capacity to bring about change.
- *Empowerment* – social transformation through some form of educative process.
- *Emancipation* – a state of reflective clarity where people have a sense of themselves and can determine freely and collectively the directions they should take in life (Emden 1991).

Critical theory's focus on education, enlightenment, emancipation, empowerment, critique and change is an attractive perspective to many nurses and is supported by the increase in the number of feminist and action research studies in nursing in recent years.

Postmodernism

Postmodernism emerged in the later decades of the 20th century essentially as a reaction against the unrealistic assertions of positivism and the perceived empty promises of 'modernism' (Lyotard 1984). The central force within postmodernism was essentially scepticism – that is, the critical questioning of the knowledge presented by science, particularly the claims (where these existed) for discovering or establishing irrefutable absolute truth. Aligned with this was the notion that knowledge is relative rather than absolute, to a greater or lesser extent context-bound or culture-specific, and often subject to multiple meanings. In relation to its central focus – the questioning of science's absolute and exclusive claim to 'truth' – the postmodern orientation served a useful purpose. But it also carried within its orientation some fatal shortcomings:

1. Its extreme and uncompromising rejection of all constructed knowledge. According to House and Howe (1999), the postmodern critique of all knowledge in effect nullified all knowledge claims. This, some might argue, was a totally preposterous position: to be sceptical of *all* knowledge to the extent of *rejecting* it would leave us in the extreme position of believing nothing and therefore (presumably) having no rational (knowledge) position upon which to base our actions. By querying all knowledge claims, even its own position on 'knowledge', and offering no constructive alternative way forward, postmodernism itself had nowhere to go, no way forward. It brought the world greater scepticism, but no answers and no alternatives.
2. Postmodernism was to an extent already jousting with imaginary windmills. It is, of course, the case that even today critics of science speak of its excessive positivistic shortcomings. Indeed, this is not uncommon in nursing where the tendency to lean too much upon the natural or traditional sciences is criticised and labelled positivism. As we discussed earlier, positivism as a movement had long gone by the final quarter of the 20th century, and the post-positivistic position was already taking a more balanced and reasonable position in respect of recognising the limits of science and the need to view knowledge claims in a sceptical and critical way. Indeed, it might be argued that, unlike postmodernism, post-positivism contained within it a balancing critique *and* a viable way forward.

In this section of the chapter, we have looked at three main philosophies of knowledge: rationalism, empiricism and historicism. All of these have influenced health care, nurses and nursing. For example, the early nurse theorists such as Orem (1995), Roy (1980) and Neuman (1995) were influenced by empiricism when they were developing their theories of nursing. Later nurse theorists such as Watson (1985a) were influenced by postmodernism. Parse (1981) and Rogers (1980) were heavily influenced by historicism. In the next section, we will look at types of knowledge and knowing with a specific focus on how these relate to *nursing* knowledge.

How do nurses know?

As we saw at the beginning of the chapter, it can be a difficult task to clearly identify knowledge and the differences between knowledge and knowing. Now we will look at particular types of knowledge that are thought to be important in nursing; these are summarised in

Table 2.2 Types of knowledge.

1. 'Know that' – propositional knowledge; 'know how' – practical knowledge; 'know why'	
2. Ways of knowing (Carper 1978)	Empirics Aesthetics Ethics Personal knowing
3. Categories of knowledge (Kerlinger 1986)	Empirical Tenacity Authority A priorism

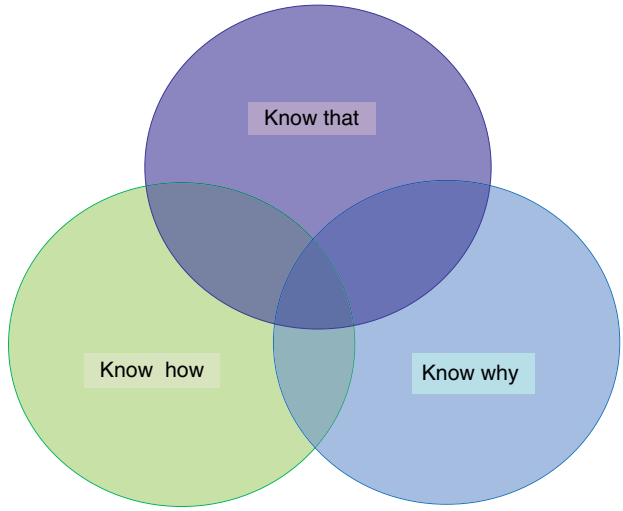

Figure 2.1 'Know that', 'know how' and 'know why' knowledge.

Table 2.2. We will look at two key writers – Carper (1978) and Kerlinger (1986) – both of whom discussed types of knowledge, but to begin with we will look at 'know that', 'know how' and 'know why' knowledge (Figure 2.1).

Know that' or propositional knowledge

'Know that' knowledge is also called propositional knowledge as it is based upon reasoning and intentional thought processes. This is best understood if we recognise that a *proposition* is in essence an *idea* rather than a *thing* (some object that exists in the real world) or an *action* (some practical deed). More specifically, it is an assertion that something exists or that some relationship or other applies. Implicitly, this means that the proposer (the individual or individuals making a proposition) believes or assumes the existence of the relationship in question. But the assertion is still in question. That is, it still has to be shown and in this sense it is open to question until it is adequately

demonstrated. This is very different from practical knowledge which is not an idea being asserted, but is demonstrated only in action – we know how to *do* something, or we do not, as the case may be.

Propositional knowledge can be seen as emerging in two quite different ways, *a priori* and *a posteriori*, which we touched on earlier in the chapter:

- *A priori* knowledge is knowledge that arises before experience or, more accurately, without the need for experience; think of Descartes' rationalism.
- *A posteriori* knowledge, sometimes called propositional knowledge is where knowledge emerges *from* experience, and we make deductions arising from this. In this instance, it is termed *a posteriori* to denote that it is derived from empirical experience which in all instances precedes it and is its source. Knowledge of this form is what people usually mean when they speak of *scientific* knowledge – knowledge based on evidence that is derived through research. Think of Hume's empiricism.

Justified true belief

We stated earlier that the nature of knowledge derived by *a priori* or *a posteriori* means is that it is something held to be true or acceptable. However, the conditions necessary for knowledge to be acceptable usually involve how it meets the test of being *justified true belief*. This is widely held as the test of knowledge.

- First, we must believe something is true.
- Secondly, we must have good grounds for holding this belief: it must be justified on the basis of rational logical thinking, as in *a priori* knowledge, or on the basis of observable evidence, as in *a posteriori* knowledge.
- Thirdly, it must be true. It is possible to believe something is true, to have what appears to be strong justifications for the belief, but for the knowledge to be false rather than true. Conversely, we may assert that something is true, have no really good grounds for justifying the belief, but yet by good luck or chance it is true. Philosophers who study knowledge would argue that, even if the knowledge *is* true by chance in the second case, in both these examples, the knowledge is not considered to be sound knowledge. However, we must be careful of giving an impression that this all relates to the idea that there *can* be absolute truth. Truth (or more properly accepted knowledge) is a relative thing. It is very much embedded in context and culture, and is furthermore held to be always open to critical review – indeed this is taken to be its strongest point!
- Fourthly – *defeasibility* (which in this context is taken as a potential or capacity to be defeated). That is, such knowledge is always by definition *propositional*, and that is exactly why we use the term. The knowledge is conditionally true; it is the best position we have, but only until it is disproved and this is always a possibility. Indeed, nowadays we do not usually judge knowledge on the idea of truth at all. We judge it on the extent to which it withstands challenges. Remember that Karl Popper argued that knowledge should be judged on the extent to which proposed knowledge (conjecture) can withstand attempts to reject it (refutation).

'Know how' or practical knowledge

The process of attaining *practical* knowledge is perhaps more difficult to explain than propositional knowledge. Practical (unlike propositional) knowledge is largely to do with skills acquisition. It is, as we have noted, recognised as being fundamentally different from propositional or 'know that' forms of knowledge. It is to do with manual skill and the associated

psychomotor dexterity, but also extends into something that is more cognitive and indicates adroitness about what to do in particular circumstances, i.e. a form of practical wisdom (Benner 1984; Benner and Wrubel 1989; McKenna 1997).

Such practical knowledge is not easily defined or *described* in rational language (language that is expressed in terms of logical reasoning, such as 2 + 2 = 4). This is because it is *expressed* in the doing rather than the describing. Sometimes such know-how is termed *tacit knowledge* because it is more easily understood as something that resides in the individual, so that the term *personal knowing* is also used (Polanyi 1958, 1967; Slevin and Kirby 2003). In essence, it is unspoken and indeed cannot be spoken of, except obliquely. It shows itself, quite literally, in the doing.

In this form of knowledge, people can practise an activity until – no matter how complex – it becomes easier to do it at increasingly higher levels of competence. We recognise a smoother and more refined performance of the skills. They become 'second nature', in that the person can perform them without having to think of what is being done in a rational fashion at all. Indeed, the person performing the skill *seems* to be doing it almost unconsciously and, to an extent, this is so. We start to describe this level of skill expertise (Benner 1984). However, it is important to recognise that what is happening here *is* a performance.

It may seem that this is an unconscious or habitual thing, but that belies what is really going on. Complex patterns and subtle changes are being sensed, and refinements and adjustments are constantly being made without these being thought about in a logical step-by-step fashion. Indeed, to do this would immediately break the rhythm, interrupt the smooth performance and cause the expression of the 'skill' to deteriorate or even collapse in an instant. We might indeed say this is all habitual and that the person is doing it unconsciously.

Just because we realise that propositional knowledge is different from know-how, and that we cannot have propositions that directly guide know-how, does not mean we cannot reflect upon its nature (see Reflective Exercise 2.7). We can indeed do this, and having a theory *about* know-how is different from having a theory *of* know-how (in the sense of a theory that actually guides it).

Reflective Exercise 2.7

'Know how' and 'know that'

The notion of know-how was introduced by the British philosopher Gilbert Ryle. His original publication (Ryle 1949) was the first modern statement to suggest that know-how is different from propositional knowledge, and a sophisticated form of knowing in its own right. The idea of know-how is extremely important in nursing.

For this exercise, read further around the topic. You should not need to buy or read Ryle's original work as the internet is replete with descriptions of Ryle's original arguments. Spend some time exploring these and then proceed to write (up to a single A4 page maximum) a case for the importance of Ryle's concepts in nursing.

Jazz music and practical knowledge

David Sudnow is a distinguished social scientist; he is also a musician. Note the following excerpt from his description of how his skill as a jazz musician emerged after many years of practice. You should remember that it is in the nature of jazz music that it is an iterative and intuitive

process. While there may be (though not always) some thread in terms of a beat and/or melody running through a performance, even the musicians do not know at the start where the music will take them. The piece quite literally moves into new directions, exploring new spaces, from second to second. There is, of course, a natural end to the piece, but even this is something the musician intuitively senses. Sudnow (2001: 128–129) wrote of his jazz piano music thus:

> ... I now unselfconsciously follow one piece of advice – heard a long time before from jazz musicians ... *Sing while you're playing*. A 'speaking I' is struck by the awesomeness of finding myself singing as I play, singing right along with the movements of my fingers, reaching for next sounds with a synchronous reach of two body parts, an achievement formerly quite impossible. How do I know what each of these little slices of space will sound like, as a joint knowing of my voice and fingers, going there together, not singing *along* with the fingers, but singing *with* the fingers? How is that possible? I take my fingers to places so deeply mindful of what they will sound like that I can sing these piano pitches *at the same time*, just as I make contact with the terrain.

This is not something that is exclusive to jazz musicians. Even in the apparently highly structured area of classical music, a notable and famous example of 'singing along' was the celebrated Canadian pianist Glenn Gould. Gould died prematurely some years ago, but he is still regarded by many as the most gifted interpreter of the music of J.S. Bach, and his two recordings of Bach's *Goldberg Variations* (made almost 30 years apart) are considered to be perhaps the definitive piano recordings in the classical music genre. In most of his recordings, despite the attempts of sound engineers to suppress it, Gould can be heard humming. He is in a world in which voice and fingers are complementing each other, but where the artistry is directed into sound through fingers.

What makes David Sudnow's account so fascinating is the extent to which he approximates something close to describing exactly what is going on in a complex skill. But it is only an approximation. He does not *really* understand it himself; or, at least, he does not understand it in rational terms that can be explained in logical language. He does of course *know* in certain ways. He knows how to perform this complex skill (jazz music performance), something that we have referred to as 'knowing how' or know-how.

Knowing more than we can tell

This knowing is also an awareness, and indeed a highly honed and sensitive awareness within which the performers knows the next step (in Sudnow's case, the next sequence of keys) without knowing *how* they know this. Sudnow, who has explored this phenomenon in depth, and written a book about it, can only speak about the 'awesomeness' of this, saying 'How is that possible?' The famous expression of Michael Polanyi (1967) that 'we can know more than we can tell' is clearly at play here. Sudnow is one of the most prominent social scientists in the United States, indeed in the whole world. He is a communicator *par excellence* and in his book he presented a widely acclaimed account of such knowledge in action. Yet, at the end of the day, he like all others can only approach that which is beyond the rational to a certain point. Rational explanations can take us no further. It is not only that the practical knowledge being exhibited is, by definition, complex. It is also because the language of description, which is the language of propositional knowledge, theory and rational thinking, is not suited to uncovering what is going on. Terms such as personal knowing, tacit awareness and intuitive responding are, in fact,almost alien to this scientific language.

Practical knowledge as performance

Practical knowing, as noted earlier, is largely a performative knowing. That is, it is a performance art or an expressive art form or skill, in that it exists exclusively within the act of doing. As may be clear from the preceding discussions, it is difficult to express in words and, when we try to do so, it is already in the past. In a sense, it is already gone and beyond our grasp.

It is possible that such *know how* knowledge is less valued than *know that* knowledge. Students often look with astonishment at experienced nurses who are performing a highly skilled task. The aesthetically pleasing art of the doing – almost without thinking – is perceived by the student to be *extraordinary* and they think they will never be as skilled. The nurse probably thinks it is *ordinary*, and one day, when qualified and experienced, the student too will perceive it as ordinary.

However, the suggestion that at least some aspects of practice are beyond our cognitive grasp (in terms of rational explanations) is a rather astounding realisation in respect of nursing, or indeed in any health care profession. We are saying, in effect, that a substantial amount of nursing activity is beyond our capacity to describe in rational or propositional terms. Furthermore, because it can only be expressed in the doing, it is also to some extent beyond the capacity of evidence-based health care. If the arguments presented here hold, there are important aspects of practice that are not amenable to evidence as they cannot be addressed in evidential (propositional) terms at all. They may be referred to as 'practice-based evidence' rather than 'evidence-based practice'!

Practical knowledge as sophisticated knowledge

While the examples used earlier are from fields such as music, the principles underlying such forms of knowing are similar in all practice knowing situations. This may seem a rather exotic claim to be making in respect of nursing. However, some of the skills involved in nursing require every bit as much in terms of dexterity and coordination of mind and body as does an activity such as juggling. And in nursing we also find that our practice is every bit as creative as the jazz performances described by David Sudnow (2001), and involve the need to respond appropriately to often instantaneous and chaotic changes in circumstances (see Reflective Exercise 2.8).

Reflective Exercise 2.8

Tacit knowing

Picture the following scenario. During a clinical handover, a senior staff nurse asks that you pay particular attention to Mr Smith in Bay 5. When you ask why, she is unsure but asks you to do so nonetheless. He was admitted today for observation because he was breathless, but the diagnostic tests have not shown any abnormalities. The ward round is over and one hour later Mr Smith has a cardiac arrest. Thankfully he survives. When you ask the staff nurse later how she knew there was something wrong, she is unable to tell you.

In your nursing career you will see many examples of tacit knowing, some that you yourself will have.

Join a small group of you fellow students or friends and try to explain what is going on. You may wish to refer to Michael Polyanyi's (1967) work.

Gnostic and pathic touch

In an interesting paper, Max van Manen (1999) differentiated between what he terms *gnostic* and *pathic* touch. In gnostic touch, the clinician is touching, feeling (palpating) to obtain knowledge. In this sense he is not touching the other in a personal or relational sense. He is in an almost mechanical sense trying to feel through, in order to gain this knowledge (is there a swelling, what degree of tenderness exists, are the anatomical structures normally aligned?). He is feeling through the *body*, not touching the *person*. Thus we have the term 'diagnosis' (from the Greek terms *dia*, meaning distinguishing, looking through, to discern + *gnosis* meaning to know, knowledge). The *pathic* touch, conversely, is a touching of or reaching out to the person. From its Greek origins of *pathos*, meaning suffering or hurt, we find that *pathic* touch reaches out to comfort, to relieve pain.

There is a great deal of skill involved in these touches. The diagnostic touch is only acquired through extensive experience and a building up of expertise. There comes a time when the expert doctor or nurse diagnostician's powers (certainly in respect of the diagnostic touch or palpation) appear almost magical. They are every bit as astounding and awe-inspiring as Sudnow's jazz riffs. This is also the case with pathic touch, which involves a reaching out, not to the physical body, but to the person, in a healing purpose. This may involve highly developed skills of massage or manipulation, but sometimes no less effective is the touch that conveys the way in which the nurse is simply present, there *for* the person, reaching out to their pain and aloneness. We speak here of knowing when to reach out, whether to do so in silence or with voice as well as touch, the knowing how to listen, the knowing what to say or not, in each given moment.

Martha Rogers was a well-known American nurse theorist. Her theory was not widely used but it did cause nurses to think differently. You will know that we as human beings are three-dimensional – we have height, depth and width. Rogers (1980) believed that we had a fourth dimension, one that was like a sixth sense or an energy field. Therefore, according to Rogers, you can touch a person without actually touching them – their surrounding energy field means that you can move over them without making contact and still pick up signs and symptoms of distress or lack of wellness.

Reflective Exercise 2.9

From pathic to sympathetic

Words commonly used in clinical practice (and indeed in other areas concerning human relations) are the terms *empathy* and *sympathy*. As you will see, these are derived from the Greek term *pathos*. You may recall that this term connotes feelings or emotions, often extended to include feelings of suffering.

The terms sympathy and empathy, while derived from the same etymology (*pathos*), are said to be different modes of relating to others.

Do literature searches for these two terms. Consider how each may contribute in practice situations. There is no further reading or writing work to be done here. However, over the few days after reading this, attempt to identify what you feel are examples of sympathy and empathy being acted out in your world. To what extent are these examples accompanied by what we earlier termed pathic touch?

All these are sophisticated skills that extend beyond psychomotor actions, often requiring responses that differ from encounter to encounter, and often even within each encounter. But perhaps what van Manen's work also shows is how what we have called practical knowledge and what is termed theoretical or propositional knowledge come together in practice. In both the gnostic and pathic touch, there are tacit dimensions of knowing of the form discussed earlier. However, there is also a recognised need to integrate this with propositional knowledge. The diagnostic clinician (doctor or nurse) is using a highly developed skill of palpation, but he or she must relate this to knowledge of the anatomy, physiology and pathological processes of disease. Similarly, behind pathic touch, and the practical knowing of how and when to use this, there is a high level of knowledge derived from the human and social sciences, and from the humanities.

'Know why' knowledge

However, there is another dimension that is seldom explored and that is 'know why' knowledge. This goes a stage further than 'know how' and 'know that' knowledge. For example, a nurse may 'know how' to position a patient who has chronic obstructive airways disease so that they are more comfortable. The nurse may also 'know that' the research indicates that this is the best way to nurse patients with this disease. But there is another dimension to this scenario; the nurse may 'know why' this is the case. They know that if such patients are nursed flat, their abdominal organs will press on their diaphragm and this will increase pressure on their lungs and cause greater difficulty with breathing. It would seem that when providing care, many nurses have 'know how' knowledge, fewer have 'know that' knowledge and fewer still have 'know why' knowledge.

Reflective Exercise 2.10

Different ways of knowing

- Practical knowledge is *know-how*, contained in the doing, tacit, intuitive, personal, complex and performative.
- Propositional/theoretical knowledge is *know that*, descriptive, explanatory, predictive, prescriptive, contemplative, rational, justified.

These are some of the differences suggested between these two forms of knowing. Make a two-column table and, using library searches, make two comprehensive lists of the characteristics that differentiate the two types of knowing. Use these lists to construct your own brief (150 word) statement defining each type.

While practical/know-how and theoretical/know-that knowledge forms are very different, they share one vitally important characteristic. They are both within the practice of nursing. They both contribute to safe and efficient treatment and care in respect of health and well-being. In addition, they are not opposed or disruptive to each other, but of necessity complementary. We need to know *what* to do (theoretical propositional knowledge), we need to know *how* to do it (practical know-how) and we also need to know *why* we are doing it. In delivering adequate nursing care, all of these are needed.

Categories of knowing

Carper's ways of knowing in nursing

'Know how', 'know that' and, to a lesser extent, 'know why' knowledge have been recognised as being very relevant to nursing practice. There was however a tendency to focus on 'know that' knowledge to the neglect of others, which is why the paper by Barbara Carper written in 1978 was so significant. In the first article in the first issue of a new US journal, *Advances in Nursing Science*, Barbara Carper identified four patterns of knowing in nursing. It proved to be a seminal paper and these four patterns of knowing were: *empirics*, the science of nursing; *aesthetics*, the art of nursing; *ethics*, moral knowing, and *personal knowing* (Figure 2.2).

Empirics

By now you can probably predict what type of knowing 'empirics' signifies. According to Carper, empirics represents the knowing that is obtained by rigorous observation or measurement. It provides knowledge that is verifiable, objective, factual and research-based. It also coincides with Kerlinger's empirical knowledge, which we will discuss later in the chapter. Empirics is organised systematically into scientific principles, theories and laws for the purpose of describing, explaining and predicting phenomena of special concern to nursing. The ability to quantify empirical data allows objective measurement that yields evidence that can be replicated by multiple observers or researchers (Carper 1992). Empirics would correspond with 'know that' or propositional forms of knowledge and has its roots in empiricism.

Figure 2.2 Patterns of knowing in nursing (Carper 1978).

Aesthetics

As you will have gathered from previous sections, empirics is a rather narrow perspective. Nursing practice may also be perceived as an art and Carper acknowledged this in the pattern of knowing called 'aesthetics'. It gives us the knowledge that focuses on the craft of nursing that involves tacit knowledge, skill and intuition. It reflects Rhyl's 'know how knowledge' and has its roots in the philosophy of historicism. Aesthetic knowledge is subjective, individual and unique. It enables us to go beyond that which is explained by existing laws and theories and accept that there are phenomena that cannot be quantified, measured or calibrated. Therefore, intuition, interpretation, understanding and valuing make up the central components of aesthetic knowing.

We could argue that, armed with this aesthetic knowing, nurses might place less emphasis on empirics knowing. For instance, there are many research-based scales that are used to assess and predict patients' risk of pressure damage. Nonetheless, clinical judgment based on experience and intuition is also used. Similarly, research evidence may provide guidance on when patients can mobilise postoperatively, but the intuitive expertise of the nurse regarding the patient's ability could justifiably override this.

Ethics

Carper's third pattern of knowing is called 'ethics'. This type of knowing provides us with knowledge about what is right and wrong and what is good and bad, desirable and undesirable. It is expressed through moral codes and ethical decision making. In everyday practice, nurses often have to make choices between competing interventions. These choices and judgments may have an ethical dimension, and to select the most appropriate position or action requires careful deliberation. For example, for ethical reasons, some nurses may decide not to participate in a particular treatment even though the results of clinical trials or other studies (empirics) confirm that it is effective for some conditions. For example, we know of nurses who will not participate in electroconvulsive therapy or therapeutic abortions. Ethical evidence may also be used to make decisions about the costs of treatment or whether terminally ill people should be actively resuscitated.

Personal knowing

Like aesthetics, 'personal knowing' is subjective, yet is about us being aware of ourselves and how we relate to others. It represents knowledge that focuses on self-consciousness, personal awareness and empathy. If, as various theorists argue, caring is an interpersonal process (Peplau 1995a) where interactions and transactions between people are central (King 1981), then we must know our own strengths and weaknesses in order to be expert practitioners. Most nurses do not possess an arsenal of surgical instruments: what we have is ourselves and we can use this resource therapeutically to make a positive difference to patients. At our best we do not perceive patients as objects, but instead have a genuine relationship with those requiring care. We can learn as much from a caring relationship as they do and a good caring relationship will depend on our own self-regard. Therefore, personal knowing requires self-consciousness and active empathic participation on the part of the knower (Carper 1992). Here again, the influence of historicism is evident.

It is possible that nurses may sometimes reject empirical evidence because of their personal knowing. For example, consider the situation where a nurse is working with a patient or a family member who is going through a grief reaction. Despite research findings that suggest a linear movement through a number of grieving stages, the nurse's personal experience of a family bereavement may indicate that not everyone has to go through all these phases or in the order suggested by the empirical evidence.

Experienced nurses use these four patterns of knowing interchangeably. For instance, experienced oncology nurses will be aware of the research and theoretical basis for providing chemotherapy (*empirics*) and have the skills and intuition to ensure the patient understands the treatment and is as comfortable as possible while receiving it (*aesthetics*). However, the issue of withholding chemotherapy because of the severe side-effects and sometime poor prognosis is a moral decision to be made with the patient (*ethics*). Finally, knowing themselves and their inner resources is important in the construction of an interpersonal therapeutic relationship with the client (*personal knowing*) (see Reflective Exercise 2.11).

Reflective Exercise 2.11

The four ways of knowing

Construct a patient care situation in which you would use all four of Carper's ways of knowing.

This can be in any speciality or clinical setting. Try to see how the four ways are linked and decide which of the four is the most important for that particular scenario.

Carper revisited

Carper's work has undergone careful analysis by many authors (see Silva et al 1995; White 1995; Meleis 2006). White (1995), for example, added socio-political knowing to Carper's original four, arguing that nurses need to have knowledge of the context within which they practice. More recently, Johns (2009) incorporated Carper's ideas into his framework for reflecting on practice.

As you reflect on these four patterns of knowing you will note the complexity of nursing knowledge. The patterns are not mutually exclusive; there is overlap, interrelation and interdependence. By recognising that there are legitimate ways of knowing, other than empirical knowing, Carper has made a valuable contribution to the examination of knowledge development in nursing. Further, as outlined in the preceding section, it may be possible in some circumstances to reject empirical knowing because of the influence of one or more of the other three ways of knowing.

Chinn and Kramer (2004) stated that:

- empirics removed from the context of the whole of knowing produces control and manipulation;
- removing ethics produces rigid doctrine and insensitivity to the rights of others;
- removing aesthetics produces prejudices, bigotry and lack of appreciation of meaning;
- removing personal knowing produces isolation and self-distortion.

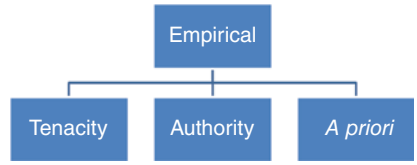

Figure 2.3 Ways of knowing (Kerlinger 1986).

Kerlinger's ways of knowing

Another way of thinking about knowledge is through the work of Kerlinger (1986) (Figure 2.3).

- *Empirical* knowing is knowing something through rigorous research. This involves the identification of variables within hypotheses and subjecting them to experimental manipulation. Here 'hard evidence' is required in order to be certain that something is or is not true. You will note that this reflects a positivist viewpoint.
- Knowing through *tenacity* is knowing something because it has always been believed to be true.
- Knowing though *authority* is knowing something because a respected or authoritative person said so.
- *A priori* knowing is knowing something because reason tells you it is true.

The end result of each of these ways of knowing is knowledge; what differs is how the knowledge is acquired (see Reflective Exercise 2.12).

Reflective Exercise 2.12

Kerlinger's ways of knowing

From the experiences you have had on your nursing course so far, identify some examples of Kerlinger's four categories

To illustrate Kerlinger's approach, consider the example of knowing that providing information to patients preoperatively will ensure better postoperative recovery. Nurses may believe this to be true 'it has always been done this way' (*tenacity*), because the clinical nurse manager told them so (*authority*) or because it is reasonable to assume that if a person gets information they will be less anxious (*a priori*). You could also have identified Kerlinger's preferred positivist way of obtaining knowledge; nurses provide patients with information preoperatively because this practice was proven through the collection of empirical data or through studying the results of well-validated empirical research into preoperative preparation (see, e.g., Boore 1978).

Like all physical scientists, Kerlinger felt comfortable building hierarchies of knowledge. In Kerlinger's scheme, the scientific empiricist method is supreme (see Figure 2.3) and intuitive knowledge occupies a lowly position. For a practice discipline like nursing, this is an inappropriate way of viewing the development of knowledge. Such hierarchies

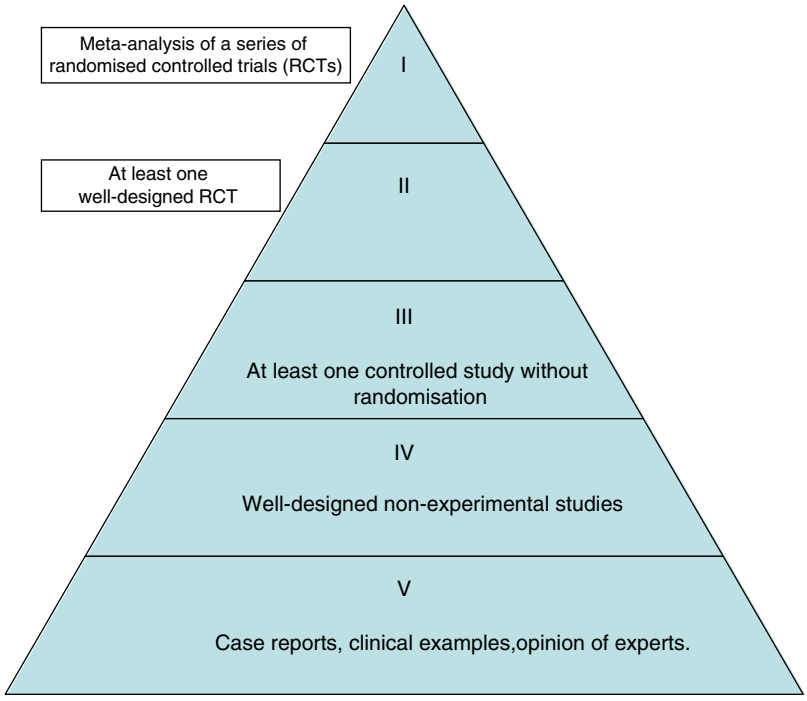

Figure 2.4 Hierarchy of evidence (Muir Gray 1997).

are seen in textbooks on evidence-based practice. For example, in 1997 Muir Gray identified what he called the hierarchy of evidence (Muir Gray 1997). This is illustrated in Figure 2.4.

You will notice that the top four levels are really about counting and that this has its roots in empiricism. It is not unusual to hear the mantra that randomised controlled trials are the gold standard, the most highly prized source of knowledge. This is a false assumption as it depends on what knowledge you are pursuing. If we wanted to know the possible causes of diabetes, then yes the randomised controlled trial may well be the gold standard (empiricism). However, if we wanted to know the emotional effect a diagnosis of diabetes has on patients and their families, then the gold standard may be a phenomenological study (historicism).

According to this hierarchy, word of mouth is not regarded as good evidence. This is not the case in all professions. In the legal profession, such evidence is highly valued and word of mouth is sufficient to put a person in jail for a long time, or, in some countries, be executed. By contrast, such sources are denigrated in most textbooks and articles about evidence in nursing. It might be more useful to propose a new hierarchy, as in Figure 2.5 (McKenna 2010).

As with the previous hierarchy, this one also has inherent problems. How can you decide whether a patient's preference comes above or below the experience of nurses? It depends on the circumstances; hierarchies belong to the world of positivist quantification and the quality of knowledge required to care should not be tied to the quality of a research design (see Reflective Exercise 2.13).

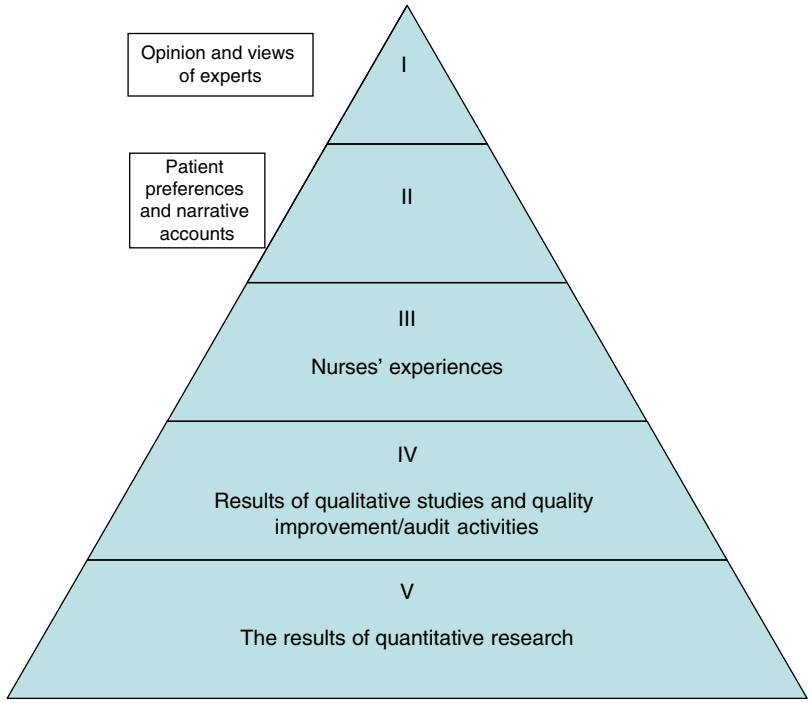

Figure 2.5 A proposed new hierarchy of evidence.

Reflective Exercise 2.13

Frameworks for knowing

We have noted Carper's patterns of knowing and Kerlinger's categories of knowledge.

Consider how each might help inform our study and practice of nursing. Do you think there may be something in one scheme that is missing in the other? If so, how might the schemes be brought together?

Developing nursing knowledge

So far we have looked at types of knowing, we have seen the differences between 'know how', 'know that' and 'know why' knowledge and considered amongst others Carper's four ways of knowing and Kerlinger's ways of knowing. We have also seen that in different circumstances different types of knowing might be considered more valid and important than others. Thus propositional, 'know that' knowledge might be considered more valid than 'know how' intuitive practical knowledge. This final section of the chapter considers how nurses might develop knowledge for their practice through reasoning and research (Figure 2.6).

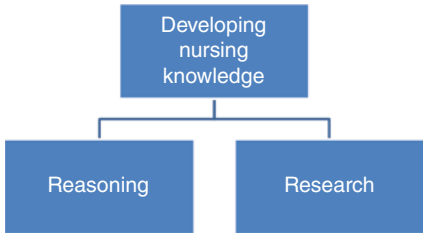

Figure 2.6 Developing nursing knowledge.

Developing nursing knowledge through reasoning

Inductive reasoning

Every day practising nurses deal with patient phenomena. By taking note of patterns and commonality in those phenomena that are of special interest to nursing, it is possible to build up a body of knowledge. This is referred to as inductive reasoning and reflects moving from the specific situation to the general. The early empiricists favoured this method when developing theory. Qualitative research approaches from the historicist school of philosophy also use induction to generate theory ('know that' knowledge) from practice ('know how' knowledge).

Deductive reasoning

In contrast to inductive reasoning, deductive reasoning involves moving from the general to the specific situation. You will note elsewhere in this chapter that René Descartes favoured it as a key component of rationalism. Deductive reasoning traditionally involves the use of three propositions (two premises and one conclusion). In deductive reasoning, a conclusion follows from one or more statements that are taken as true. Aristotle (384–322 BC) perfected this form of deductive argument, calling it a syllogism (Strokes 2004). The most famous example is shown in Key Concepts 2.5.

Key Concepts 2.5

Example of a deductive argument – a syllogism

All men are mortal	(first premise)	(axiom 1 or postulate 1)
Socrates is a man	(second premise)	(axiom 2 or postulate 2)
Therefore, Socrates is mortal	(conclusion)	(theorem)

Here the reasoning goes from the general (all men) to the specific (Socrates). You can see that if the premises remain the same but we changed the conclusion to read 'Socrates is not mortal' then the deductive reasoning would be faulty. Similarly, if one of the premises was reversed, the unchanged conclusion would be wrong and the reasoning would once again be faulty.

You could reverse the example and make it inductive reasoning. Here the reasoning goes from a specific situation or example (Confucius, Socrates, Hannibal) to the general (all men). So a series of discrete observations about phenomena are followed by a conclusion (see Key Concepts 2.6).

Key Concepts 2.6

Example of an inductive argument

Confucius is a man and is mortal	(first premise)
Socrates is a man and is mortal	(second premise)
Hannibal is a man and is mortal	(third premise)
Therefore, all men are mortal	(conclusion)

Deductive reasoning in nursing normally starts with an established theory, and this (or a proposition from it) is tested in the real world of practice to see if it can be disproved – remember our reference to Carl Popper's (1965) work on refutation.

Retroductive reasoning

Whether theories should be developed deductively or inductively is seen as a false argument by Jacox and Webster (1992). They state that some nurse theorists will use a more deductive or a more inductive approach than others but all theory construction includes both. To them, it is not an either/or issue. This amalgamation of induction and deduction is referred to as retroduction. An example of this type of research would be that of Boore (1978), referred to earlier. Boore used an experimental design to test the theory that providing information to preoperative patients would reduce their stress levels postoperatively. Since a specific theory was being tested and applied, the method used was deduction. However, the results of this study led to new practices in how patients are prepared for surgery and a 'practice theory' of preoperative preparation was developed. Here, Boore was also using induction where experiences within the research setting led to the development of a new, more clinically specific, theory.

Research as a basis for knowledge development

Research is defined as 'the attempt to derive generalisable new knowledge including studies that aim to generate hypotheses as well as studies that aim to test them' (National Research Ethics Service [NRES] 2006: 2). With its emphasis on generalisation, it is possible in this terminology to see plainly the influence of positivism. Nurses, in attempting to gain academic respect with other more long-established professions, adopted the positivist approach over other forms of enquiry when developing and testing theories (Suppe & Jacox 1985). Those nurses who did pioneer other methods of enquiry, relating to understanding rather than control, were seldom given the recognition accorded to the former. Nonetheless, the contribution of the positivistic research approach to nursing knowledge cannot be denied and it should not be rejected completely. Internationally there have been some very good research projects which, although having their basis in the experimental positivist tradition, have contributed substantially to nursing knowledge.

New methods of research do not just happen; they are the products of much philosophical thought and discussion. One broad approach was based on what Wilhelm Dilthey (1833–1911)

referred to as 'human science'. Readers will note from the following that it emanates from the *historicism* philosophy of science, which we discussed earlier.

Human science values subjective opinion, beliefs, personal knowledge, descriptions of experiences and feelings, much of which are not amenable to objective verification. Human science also recognises the effects that the researcher and the research participants/respondents have on what is being researched. Intuition, understanding, reflection, meanings and experiences are central components of the human science approach. Within human science, the participants' 'lived experiences' are the core of explanations and meanings about things, and are interpreted by them, not by outsiders. Humans are perceived as whole people, and breaking them down into components or parts is dehumanising. Conversations and interactions require interpretation, and uncovering patterns in these is an appropriate goal of human science.

Human science is often referred to as the *perceived view* as opposed to the *received view* of science. The differences can be seen in Table 2.3.

Chinn and Kramer (2004) accepted the importance of both views for the development of knowledge for nursing practice. In traditional science, an attempt is made to study the whole through looking at its parts, while in human science an attempt is made to study the whole as it appears. In traditional science, knowledge is developed to describe, to explain and to predict; in human science, knowledge is developed to understand. In traditional science, theory is developed through defining, analysing and synthesising concepts and propositions; in human science, theory is developed through description and interpretation. Traditional science is directed towards uncovering cause-and-effect relationships and generalisations, human science is directed towards creating knowledge from common meanings, patterns and themes in descriptions. However, both seek empirical honesty through methodological rigour (Smith 1994: 51).

In contrast, Susan Gadow (1990) did not think human science goes far enough in explaining how best to develop nursing knowledge. She believed the researcher should leave the personal alone and experience alone because there is no way to summarise (reduce) a life, a culture or any human situation. Qualitative research is no better than quantitative here in that it treats experience as data. She appeared to argue that quantitative researchers may be more honest because they are 'up front' in calling the subject the object of their study (cited in Smith 1994).

Nonetheless, it is heartening that nurses are beginning to accept and use methods of enquiry other than the empiricist approach to develop and test knowledge. This should have a powerful effect on identifying a body of knowledge that has particular relevance to patient care. In this way, 'know that' and 'know why' knowledge can enrich the 'know how' knowledge and vice versa.

Table 2.3 Human science: the received view versus the perceived view.

Received view	Perceived view
Objective	Subjective
Deduction	Induction
One truth	Multiple truths
Validation and replication	Trends and patterns
Justification	Discovery
Test theories	Evaluate theories
Prediction and control	Description and understanding
Particulars	Patterns
Reductionism	Holism
Generalisation	Individualism
Empirical positivism	Historicism

Conclusion

This chapter has shown that there are many ways of knowing in nursing. It has highlighted the main philosophies of science underpinning how and why people develop knowledge. The armchair rationalist approach to knowledge development popularised by Descartes was influential in its day but by the mid-18th century empiricists set down the rules that were to influence health care research from then on. Empiricism is still alive and well in nurses' use of randomised controlled trials, experiments and quasi-experiments. More recently, many nurse researchers have embraced phenomenology, an approach emanating from the tradition of historicism. Even more recently, we have seen an upsurge in nurses using a mixed-methods approach that combines the traditions of historicism with that of empiricism.

The importance of 'know how', 'know that' and 'know why' knowledge was discussed and while the strengths of each have been highlighted, the need for nurses to know *why* is crucial for a practice discipline. However, Carper's work reminds us that there are other ways of knowing and her views are reflected in the differences between the received view and the perceived view. There is a wealth of literature to suggest that nurses use several ways of knowing and that many of these do not fit neatly within the empirical framework. These patterns of knowing are being incorporated into contemporary theorising, leading to new theoretical perspectives.

In conclusion, all types of knowing and knowledge development are valuable. Placing one in a higher position than another is not helpful; it depends on what knowledge is being sought and what questions are being addressed.

Revision Points

- Knowing is defined as individual human processes of experiencing and comprehending the self and the world that can be brought to some level of conscious awareness. Knowledge is defined as the knowing that we can share or communicate to others.
- There are three key phases in the philosophy of knowledge: rationalism, empiricism and historicism. All of these have influenced the development of nursing knowledge:
- Nurses use many different types of knowledge in their practice and three categories were identified:
  - 'Know how', 'know that' and 'know why' knowledge.
  - Carper's ways of knowing.
  - Kerlinger's categories of knowledge.
- In developing knowledge for practice, nurses can use two strategies: reasoning and research.

Don't forget to visit to the companion website for this book:
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3

Theory from practice and practice from theory

Outline of content

The relationship between theory and practice is explored in depth. The idea that practice is based upon or guided by theory and the extent to which practice influences the development of theory are considered. Building upon definitions of theory in the first chapter, different forms of theory are considered. In so far as theory is linked to science, the discussion is extended into the relationship between science and practice.

Learning outcomes

At the end of this chapter you should be able to:

1. Review definitions of theory and nursing theory
2. Discuss how theories may be classified in terms of both their sophistication and their abstraction
3. Discuss Dickoff and James' (1968) four levels of theory and provide an example of each
4. Discuss the differences between practice theory, mid-range theory, grand theory and meta-theory, giving examples of each
5. Appraise the argument that nursing cannot have theories
6. Discuss at least three possible explanations for the theory-practice gap
7. Evaluate the contribution of science to nursing and society

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Introduction

In Chapter 1, we proposed that theory is a statement about a piece of knowledge, and in Chapter 2, we looked at different categories and types of knowledge that nurses might use in their practice. In this chapter we turn our attention back to theory, looking at the relationship between theory and practice. We will explore:

- the early developments of theory in nursing;
- what levels of theory might be appropriate for nursing;
- the relationship between theory and practice, in particular the theory–practice gap;
- the science–practice gap (as theory is associated with science and the early nurse theorists wanted to develop nursing 'science') and consider some of the strengths and limitations of science for nursing and the wider society.

First steps – reflecting on theory

In Chapter 1 we aimed to convince you of the importance of theory for nursing. Given that purpose, the case for having theory in nursing was presented in the form of a logical argument. Hopefully, we persuaded you and you are reading on as a consequence. In this chapter, we move to a different level of discourse. There are still logical arguments in respect of theory, but here, to a far greater extent, we are asking you to be more introspective and to reflect upon certain theoretical and practical issues.

In the following quotation, Thomas Merton (1969: 53), in his book *My Argument with the Gestapo*, is alluding to assumptions we may make about things:

> Some things are too clear to be understood, and what you think is your understanding of them is only a kind of charm, a kind of incantation in your mind concerning that thing. This is not understanding, it is something you remember... We always have to go back to the beginning and make over all the definitions for ourselves again.

However, when we reflect upon these things, they are not always as transparent and as irrefutable as they first appeared. We have just taken them for granted. In Chapter 1 we defined theory as 'statements that link (by propositions) ideas (concepts) about the world as experienced through our senses, thus creating knowledge'.

However, within this notion are assumptions about the composite terms: ideas, concepts, propositions, knowledge. Therefore, when we say theory is to do with concepts and the propositions that link them, in a process of extending knowledge about the world, we are making assumptions about a number of things. We make suppositions about what concepts and propositions are. We make assertions about knowledge, but what we mean by knowledge and knowing may be problematic, as we have discovered in Chapter 2.

This is relevant to you personally. You *do*, as Merton says, need to go back (or at least go into a reflective mode), so that you can make over (review, refine, confirm) your understanding of issues that are vital to your understanding of theory and its relation to your practice. However, the success of this project depends on the vital notes *you* also make, whether these are actual physical *written* notes, or mental notes that provide you with the grounding to proceed with the issues subsequently addressed.

We claim that the relationship between theory and practice is vitally important in nursing. But within this apparently straightforward statement there lurks a number of potential pitfalls. Not only about what theory actually is and what we mean when we say 'practice', but also about the terms that lie hidden within theory and practice: knowledge, knowing, concepts, propositions, skill, praxis, wisdom, and so on. This is why we are identifying the essentially reflective nature of this chapter at its beginning. It is a call to reflect back to previous positions in respect of theory, knowledge and practice, not only as presented in Chapters 1 and 2 but also what you may have learned about theory previously. It is also a call to reflect inwards about your own assumptions and understandings. However, it may be useful to undertake the activity in Reflective Exercise 3.1 first.

Reflective Exercise 3.1

Retrospective

Before you proceed, it may be useful to briefly review what we have covered in respect of theory and its relevance to nursing. Then, using your internet connection or one in your university/college, go to the Wikipedia website (you can find it very easily via your search page). Using the search box in Wikipedia, look up the terms 'theory' and 'nursing theory'. (Remember that Wikipedia is an open source internet encyclopaedia that readers can contribute to themselves, so the quality is only as good as the contributors, whose expertise may vary widely.)

Review the statements on the nature of theory in Chapter 1 and compare how theory is defined in Chapter 1 with what is said about theory (and nursing theory) in Wikipedia. Write out your reflections (in no more than 400 words), and, if possible, discuss with your peers/fellow students and/or teacher.

The questions begged

Our chapter title ('Theory from practice or practice from theory?') begs some fundamental questions:

- Does theory go beyond describing, explaining or predicting our practice?
- If so, does it inform, advise, guide or even direct or prescribe our practice?
- Does practice itself provide the most appropriate source of theory for nursing?
- If theory *does* emerge from practice, what do we do with it after it is mined from the practice situation?
- Can we assume a reflexive and cyclical relationship between theory and practice, wherein practice is the source of theory, and theory in turn informs practice?
- If practice is in some way faulty, what does this mean for the theory derived *from* it? And, in any case, might it be argued that theory derived from practice in one set of circumstances may not apply well to practice under different circumstances?
- Apart from theory derived from nursing practice, does theory from other sources (including non-practice sources of theory), or sources that are not theoretical at all, inform nursing practice?

We might go on with such questions, and undoubtedly enter into detailed debate arising from them. Common to all such situations, the questions lead to yet more questions. As we found with our discussion of the opening quotation from Thomas Merton (1969), when we attend to something, we find progress hindered because of lack of clarity in respect of things we had taken for granted. All of the questions in the preceding list depend upon (among other things) how we define 'practice' and how we define 'theory' (see Reflective Exercise 3.2).

Reflective Exercise 3.2

Defining 'practice'

In this and previous chapters we have started to define theory. In this chapter we are looking at the relationship between theory and practice. As you will have several practice placements on your course, make a note of your understandings of what 'practice' means.

Developing nursing theory

It is important to understand how the historical and cultural contexts shaped the development of nursing theory. As you saw in Chapter 1, much of the significant early theorising in nursing arose in the United States in the late 1950s and early 1960s. Nurses in the US wanted to clearly identify what the differences were, if any, between nursing and medicine and to do this they had to try to begin to define nursing. Thus some important and influential definitions of nursing were published at that time, which included Henderson's landmark definition in 1966 (see Reflective Exercise 3.3).

Reflective Exercise 3.3

Defining nursing

Look up Virginia Henderson's (Henderson 1966) definition of nursing. Do you think this definition still has relevance for nursing today?

Additionally, nurses at that time wished to try and develop nursing as a profession. The major professions, such as law and medicine, commanded a great deal of respect, authority and autonomy with a characteristic of a profession being that it had a unique body of knowledge. However, it was clear that nursing did not appear to have that but used knowledge from other disciplines, in particular medicine. To achieve professional status and to clearly demarcate nursing from medicine, nursing needed to try to develop itself as a discipline and to do so it had to develop a knowledge base unique to nursing. However, nurses had to agree on a number of key things, such as what might constitute the unique focus of the discipline of nursing. Should nursing develop its own theories of nursing or should it just 'borrow' theories from other disciplines and apply them to nursing? From Chapter 1 you will recall that what emerged from this period in the US was what were referred to as 'nursing models', sometimes called 'grand' theories, and the authors of these became very well known (see Reflective Exercise 3.4).

Reflective Exercise 3.4

Examples of nursing models/theories

The works by Orem (1995), Roy (1980) and Roper et al. (2000) are examples of what might be called nursing models or theories. If any of these are not familiar to you, do an internet search to find out about the theory and in particular how the theorist defined nursing.

Key Concepts 3.1

Just to remind you, there is debate as to whether there is a difference between models and theories. Some make a distinction between models and theories and some say that they are, in fact, all theories and that there are just different types of theory. This will be discussed further in this and later chapters.

Theories – the building blocks of models and 'grand' theories

These early nurse theorists tended to use theories from other disciplines. So for example Orem (1995) drew on Maslow's (1954) hierarchy of needs (Maslow was a psychologist) in thinking about the person having self care deficits. Roy (1980) used systems theory in thinking about the person as a system having to adapt. In doing so, she studied the work of Harry Helson on how the retina of the eye adapts to its surroundings. They melded these theories with their own ideas and experiences of nursing to develop their own nursing theories. As we shall see, there are issues about using theories (we might term them *imported* theories) that do not emanate from nursing practice, and indeed may have little support among practising nurses in their day-to-day work. There is always some risk that where attempts are made to adopt such imported unmodified theory in its totality, it will be less amenable to the problems and issues of nursing practice and consequently less accepted by practising nurses. This is understandable; such theories were initially constructed for another purpose. Indeed, even attempts not simply to *adopt* the theory, but merely to *adapt* it to nursing are not always successful: at the end of the day bicycles adapted for air travel have always been found wanting! As already been stated in Chapter 1, there is the added danger that by using borrowed theories, nurses will contribute more to the discipline it was borrowed from than to nursing itself.

The development of nursing models and theories were attempts to try and define nursing and thus, by implication, identify the skills, attributes and knowledge nurses might need. It was also hoped that they would act as a framework for delivering nursing care, and you may still see examples of them being used in practice today. Crucially, for the purposes of this chapter, it was hoped that from these early 'nursing models' *nursing* theories would develop that could be tested by *nursing* research to develop *nursing* knowledge and *nursing* science (see Reflective Exercise 3.5).

Reflective Exercise 3.5

Models and theories

Try typing in 'Orem's theory generation and testing' into an internet search engine. Look to see if any of the theories that emerged from Orem's self-care model have been tested for use in practice.

Levels of theory

Along with recognising the need to formally identify types of knowledge used by nurses, there was also much debate about what kinds of theories might be useful for nurses and nursing. However, as we will outline in Chapter 5, how theories might be named and categorised is quite a confusing area of the literature. In this chapter, we will look at the categorisation of theory in two main ways (Figure 3.1):

- levels of *sophistication* of the theory
- levels of *abstraction* of the theory

Levels of theory – sophistication

To illustrate theory in terms of levels of sophistication, we will draw on a landmark paper, written in 1968 by two philosophers, James Dickoff and Patricia James. As we discussed earlier, a key issue in the 1960s was whether nursing could develop 'nursing' knowledge and what kind of theory was best suited to and most appropriate for a practice discipline such as nursing. The paper by Dickoff and James (they also wrote another paper in the same year with Ernestine Wiedenbach who was a nurse) was influential because they said that as nursing was a *practice* discipline, it therefore needed particular types of theory. Consequently they identified four levels of theory for nursing:

- Factor-isolating theory, which *describes* and names concepts.
- Factor-relating theory, which relates concepts to one another and *explains*.

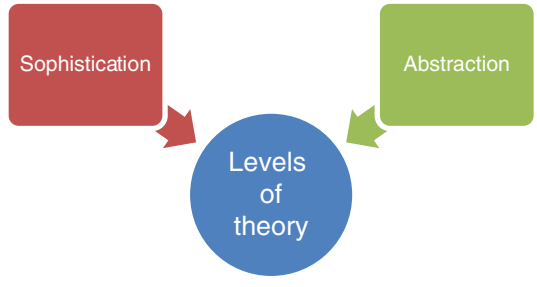

Figure 3.1 Categorisations of theory.

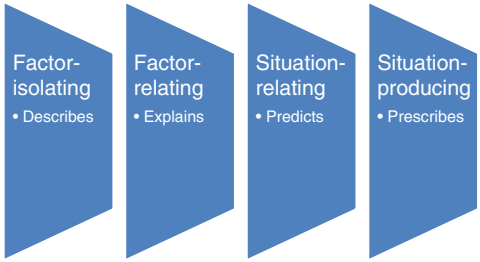

Figure 3.2 Levels of theory (Dickoff & James 1968).

- Situation-relating theory, which is the interrelationship among concepts or propositions and can *predict*.
- Situation-producing theory which *prescribes* actions to reach certain outcomes;

They also proposed two crucial arguments:

1. In ascending order each of these levels builds on previous levels, so factor-isolating theory is a precursor of factor-relating theory and so on (Figure 3.2).
2. A practice discipline like nursing requires *situation-producing theory* so that nurses could, with a degree of certainty, prescribe interventions that lead to desired outcomes for patients.

Thus we must adequately *describe* the concepts within a situation before we can *explain* how these are linked by propositions. Then, in turn, we can only suggest cause–effect or *predictive* relationships when we have such explanations available. Finally, we cannot actually take the risk of advocating or *prescribing* actions or interventions until we have firm grounds for claiming predictive relationships. Thus, prescriptive theory is the most sophisticated level of theory that emerges from the development of the three preceding levels. For a practical discipline like nursing, prescriptive theory is the best that can be had. Nonetheless, compared with established disciplines like medicine, law and divinity, this kind of theory in nursing is relatively new. This means that we do not have a large number of prescriptive theories. However, we have an increasing number of descriptive and explanatory theories and, in due course, these will be developed to become predictive and prescriptive theories (Figure 3.3).

In Figure 3.3, it can be seen that at the two lower levels, theory simply demonstrates that something is so, and *why* it is so in terms of propositions that link the defining concepts. At the two higher levels, one particular way in which concepts are linked (the cause–effect form of linkage or relationship) is the essential factor.

Predictive and prescriptive theory

Sometimes, the difference between predictive and prescriptive theory can be unclear. Indeed, sometimes authors seem to say nothing more than that strong predictions will inform practice and in this context are prescriptive theories. On such an argument, prescriptive theory is really no different from predictive theory (other than that we are stating that only well tested

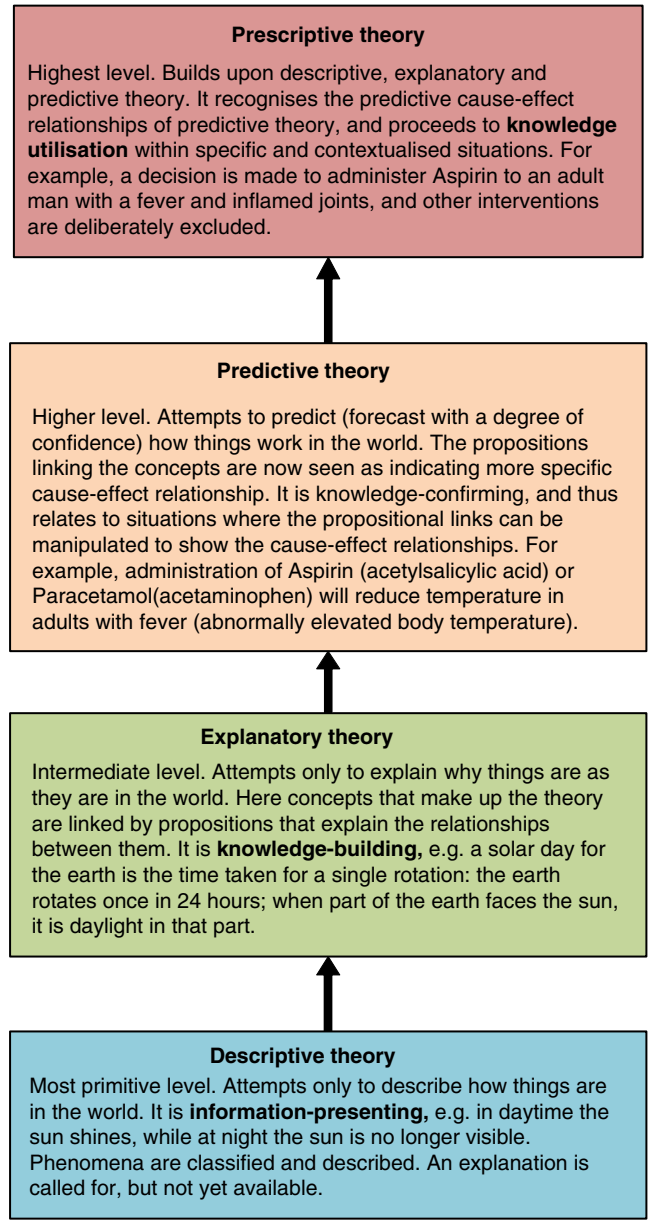

Figure 3.3 The utility of theory in nursing.

or 'strong' predictive theory should inform our actions). In one sense, this is exactly what prescriptive theory is. Rather than saying (as does predictive theory) the following:

if such an action is taken in these circumstances, *then this will be the outcome*...

the prescriptive theory is saying something like:

in order that this outcome will be achieved you must *do the following*...

However, to be accepted as having such prescriptive power, prescriptive theory must have gone beyond us merely establishing the cause–effect relationship. We must have considered the evidence for the cause–effect relationship. We must have considered the 'expected utility' of one or some actions as opposed to others. And we will have taken account of the context. In the example within the 'prescriptive theory' box in Figure 3.3, only the decision (give the patient aspirin) is presented. But behind this, there are a number of other things that have taken place, e.g.:

- The strong evidence that aspirin *does* reduces temperature is confirmed.
- There is recognition that paracetamol would also reduce temperature, but that in some circumstances it may be more toxic.
- The fact that while both aspirin and paracetamol will relieve pain *equally* well (as strong empirical evidence has shown, there is no significant difference), aspirin also has anti-inflammatory properties and this person has joint inflammation as well.
- Although aspirin may be contraindicated in some cases (young children, people with bleeding disorders), there is no evidence to exclude its use with this particular person – the theory is taking account of context and the individual case.
- The evidence clearly shows that immersion in chilled water will also reduce temperature (but in this case would be distressing to and uncomfortable for the person).
- There is clear evidence that other methods to reduce temperature, such as tepid sponging or using electric fans, are not effective.

Behind a prescriptive theory, as indicated earlier, there is a large body of supporting evidence (obtained through research and a systematic review of research findings), and a strong foundation of decision-making that has taken account of *context* and *expected utility*. Importantly, the theory is stated in *prescriptive terms*. In real-world situations, it is presented within treatment protocols or care guidelines and this is the link to evidence-based practice and the hierarchy of evidence that we discussed in Chapter 2. To be so placed, it must, by definition, be tested theory, and very well tested indeed. Theory-testing is a matter we address later in this book. For now we note that a cause–effect theory that is still not well tested can still be termed a predictive theory. However, where there is a prescriptive theory, there is an assumption that one of the essential attributes is that it has already been well tested. Therefore, such theories are not just predicting, they also aim to operate on the world and do things in it; they are thus termed 'situation-producing theories' (Dickoff & James 1968; McKenna 1997; Slevin 2003b).

Application to practice

Clinical nurses will analyse practice situations so that their practice is more effective. They do try to think about (or *describe*) the nature of nursing situations, they further attempt to make sense of (or *explain*) what is happening in these situations, and on this basis try to forecast (or *predict*) what would be the outcome of actions they undertake. Based on such predictions they may even stipulate (or *prescribe*) nursing actions. In doing so, clinicians are to some extent mirroring the more substantial theory construction of their nurse scientist and nurse theorist colleagues. However, the ways in which clinical nurses theorise from moment to moment throughout their day, making predictions and prescribing actions, particularly where there is no other theoretical guidance available, is different from formal construction of theory. This does not mean it is unimportant or insignificant. When we think of theory as being of the different types outlined earlier, we see that – whether on a smaller scale during clinicians' practice, or in more formal theory-construction situations – they are in fact of increasing degrees of sophistication, as indicated in Figure 3.3 (see Reflective Exercise 3.6).

Reflective Exercise 3.6

Does theory have a use?

We have referred to how, in theorising, nurses are describing, explaining, predicting and perhaps even prescribing. In an important seminal paper, the authors Dickoff and James (1968) described these different theoretical positions (we might see them as theory types) as follows:

- factor-isolating theory, which *describes*;
- factor-relating theory, which *explains*;
- situation-relating theory, which *predicts*;
- situation-producing theory, which *prescribes*.

Furthermore, they see these as progressively more sophisticated theoretical positions. It is not possible to prescribe unless you can predict. It is not possible to predict unless you can explain. Before you explain, you must first describe. Taking it from the opposite direction, unless the basic ideas or building blocks of a theory (remember in Chapter 1 we called them concepts) are sound, it will be difficult to explain relationships between them and proceed from this to prediction of causal relationships and prescribing actions.

Undertake a brief literature review on the idea of a situation-producing theory and the influence of Dickoff and James's seminal work. Write a brief report of your review. You may find it useful to share and discuss this with your peers/fellow students.

Levels of theory: abstraction (Figure 3.4)

The paper by Dickoff and James was very important in suggesting what level of theory nurses might need to develop based on the assumption that nursing is a practice discipline. These levels were expressed in the form of their sophistication, with one building on the other. We have seen before that theories consist of concepts that are linked together as propositions or statements, which are then linked together to form a theory. Some of these statements might be very focused with a clear identification of the ideas within them. However, some theory statements might be quite unclear, abstract and have a very wide focus rather than a narrow one. The understanding of this led to different ways of classifying theories

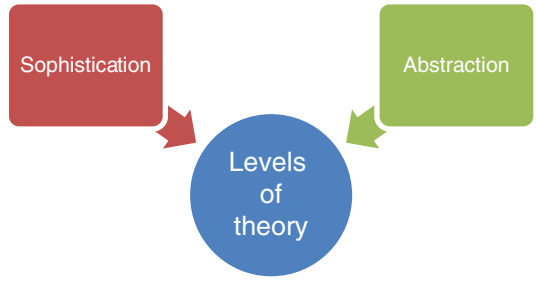

Figure 3.4 Levels of theory.

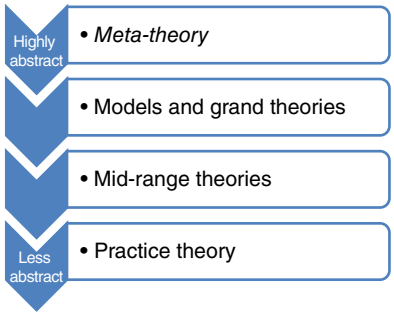

Figure 3.5 Levels of theory-abstraction.

within nursing based on how *abstract* the theory is. Within this way of thinking about theory there are four main categories (Figure 3.5):

Meta-theory

This is *about* theory, rather than being itself a *form* of theory and is at the most abstract level (above grand theory) (McEwen & Wills 2007). Nurses may also think about theory and its importance to nursing and nursing practice, which might be seen as *theories of or about theories*. A theory of theories suggests that we take some position on the nature of theories, their purpose and how we might make practical use of them.

Such theorising about theory is sometimes termed 'meta-theory', a term that usually means a critical appraisal or evaluation of theory. Thus, we might say that the outcome of such a critique would be some understanding (as suggested earlier, we might term this a theory) about theory. This is itself a highly complex critical activity (McKenna 1997; McEwen & Wills 2007). Clearly, if we are to promote theory, and if it is to be used to inform our practice, it must be evaluated. We return to this topic in some detail later in the book. In Chapter 1 and 2 you learned that two of the best-known nursing meta-theorists were the Egyptian Afaf Meleis (Meleis 2012) and the American Jacqueline Fawcett (Fawcett 2004). They have written some very important texts in which they provide an overview of the development of nursing theory and also provide detailed critical analysis and evaluation of some of the best-known models and theories.

Nurses who think critically about theory in nursing tend to be those working in academic or research positions, rather than in clinical practice. But clinical nurses may also, on occasion, reflect upon whether theory is relevant to their practice, and, if so, what types of theory might be best suited to that purpose and this is done from a position of considerable experience and wisdom. Nurses can make astute judgments about the appropriateness of a theory for informing their practice. In so doing, they are often drawing from years of experience and from a deep understanding of the health care context.

Grand theories

These are also referred to by some authors as conceptual models. They often cover issues at a level of abstraction not easily amenable to research testing. Thus, theories about nursing (as a profession) are not intended to be reducible to testable hypotheses. They are intended to provide world views, to help us map out our discipline's areas of activity, give general

future direction, and so on. Such theory is too abstract to be restated and/or tested in empirical terms. However, while the theory as a whole may be untestable, one or more of its concepts or propositions could be tested. For example, Roper, Tierney and Logan's (grand) theory is very broad and abstract (Roper et al. 2000). However, two of the 12 activities of daily living are 'maintaining a safe environment' and 'mobilising'. You could imagine a situation where researchers tested the relationship between these two concepts to uncover new knowledge of use to clinical nursing. Here the researcher is not testing the grand theory; rather they are testing concepts and propositions from the theory. The same principle can apply to other grand theories (see Reflective Exercise 3.7).

Reflective Exercise 3.7

Researching parts of grand theories

As with the description in the preceding paragraph, take other concepts from Roper et al.'s theory and outline relationships between them that could be researched. Also do this with another grand theory such as those of Orem, Roy or Peplau.

When we think of nursing theory, we tend to think of 'models of nursing' and, as you can see, these are referred to as 'grand theories' (Figure 3.6). Meleis (2012), as a meta-theorist, saw that these early nursing grand theories may be categorised into four schools of thought:

- Needs theorists (Orem 1959; Abdellah 1960; Henderson 1966; Roper et al. 1983)
- Interaction theorists (Peplau 1952; Orlando 1961; Wiedenbach 1964; Travelbee 1966; King 1968; Paterson and Zderad 1976)
- Outcome theorists (Levine 1966; Rogers 1970; Roy 1970)
- Caring/becoming theorists (Watson 1979; Parse 1981).

Such grand theories offer a broad framework to guide nursing practice, research and education. Because they were so broad, they did not fit well into every aspect of nursing practice and were sometimes considered too complicated and jargonistic to be useful for practising nurses. This may have had a lot to do with their American origin, a country that has a different health care system and a different nurse education system from those in Europe. Crucially

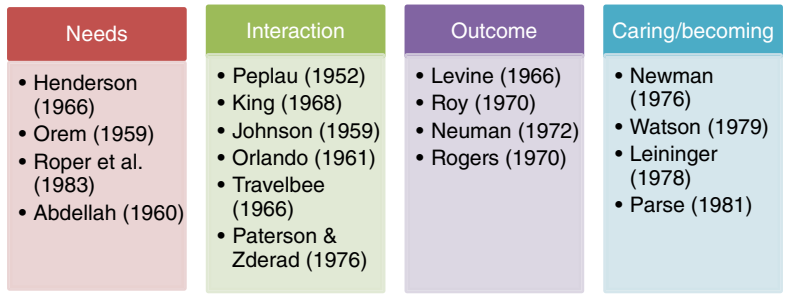

Figure 3.6 Classification and examples of 'grand' theories (Meleis 2012).

as well, they were considered too abstract to enable them to be tested by research to identify and develop more usable nursing theories from them.

Mid-range theories

These are theories that are still expressed in terms that are sufficiently linked to the specific setting so as to at least allow for testable hypotheses or research goals to be stated. Such theories are broad enough to retain a view of the discipline and its general progression, yet specific enough to identify the empirical work that could provide evidence for practice.

In the 1990s and in early years of the 21st century there appeared to be a move away from the 'grand theories' to 'mid-range' theories (Figure 3.7). As suggested earlier, grand theories are broad and abstract and do not easily lend themselves to application or testing. By contrast, mid-range theories are moderately abstract and inclusive but are composed of concepts and propositions that are measurable. At their best, mid-range theories balance the need for precision with the need to be sufficiently abstract (Merton 1968). They have fewer concepts and propositions within their structure, are presented in a more testable form, have a more limited scope and have a stronger relationship with research and practice.

Mid-range theory tends to focus on concepts of interest to nurses. As well as pain, these include empathy, grief, self-esteem, hope, comfort, dignity and quality of life. They help to close both the theory–practice and the research–practice gaps and provide knowledge that is more readily applicable in direct care situations.

As was seen from the Roper, Logan and Tierney example in the section on 'grand theories', some mid-range theories might have their basis in grand theories. For example, the mid-range theory of 'self-care deficit' grew out of Orem's (1980) grand theory of 'self-care'. This supports Smith's (1994) assertion that a major function of grand theories is to act as a source for mid-range theory. However, other mid-range theories emerge from practice. For example, Swanson's (1991) mid-range theory of 'caring in perinatal nursing' was inductively developed from studies in three perinatal settings. Similarly, Mishel (1990) developed a mid-range theory of 'uncertainty' among patients. Meleis, in conjunction with other authors, has developed a mid-range theory of transitions as applied to nursing. This developed from a concept analysis (Schumacher and Meleis 1994), the development of a model (Schumacher and Meleis 1994) through to a mid-range theory (Meleis et al. 2000).

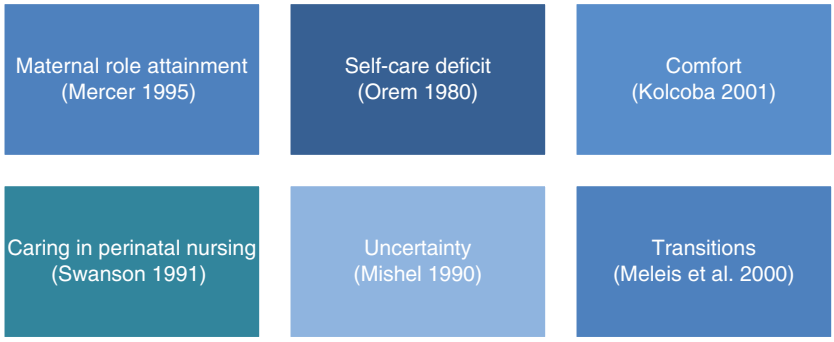

Figure 3.7 Examples of mid-range theories.

Practice theory

Practice theory is sometimes called micro-theory, and refers to theory that is expressed in concrete and researchable terms and is very specific to a knowledge issue. Practice theories are very specific in their clinical focus, are narrower in scope than mid-range theory and more concrete in their level of abstraction. Jacox (1974: 10) defined 'practice theory' as 'a theory that says – given this nursing goal (producing some desired change or effect in the patient's condition), these are the actions the nurse must take to meet the goal (produce the change)'. In terms of sophistication, practice theories relates to Dickoff and James's (1968) highest level of theory – situation-producing theory.

There has been much recent interest in focusing on nurses' practice to realise that nurses, as well as using different types of knowledge in their practice, are also theorising and using different types of theory (Reed 2006; Rolfe 2006). You will recall from Chapter 1 that nurses in their practice are constantly theorising and they draw on their knowledge of practice to make clinical decisions as to what might be the best course of action to help the patient. As well as 'formal' theories, it is important to recognise the informal theories that nurses use every day. This recognition that practitioners constantly theorise and think about their practice is an important component in quality improvement (1000 Lives Plus 2011). A framework for this is the 'plan, do, study, and act' model based on the work of Langley et al. (1996). In order to make improvements in practice, practitioners have to think about their own practice, recognise what might need changing and how they might bring about such changes. An important component of this activity is the ability to theorise.

Using theories in practice: an example

Let's consider an example from practice to illustrate these levels of theory. A nurse working on a gynaecological ward cares for women who suffer early miscarriages (loss of the foetus in the early stages of pregnancy). On the ward, the nursing care is framed by the work of Orem (1995) and her grand theory of self-care. Orem's ideas have been called a 'model' or a grand theory, in that the ideas are quite abstract and cannot be tested by research. Orem was one of the early nurse theorists writing in the early 1970s. She felt that individuals had, to varying degrees, the capacity to look after themselves – to self-care. Sometimes, because of illness, they could do not do this, in which case the nurses' role was to compensate for the person's self-care deficits until they could be independent and once again self-care. The nurse working on the gynaecological ward within this grand theory focuses on getting the woman safely through the operative procedure, until she can be self-caring again, and then works with her to plan a safe discharge home.

However, a grand theory such as Orem's would not be specific enough to guide the nurse in caring for women after miscarriage. Therefore, in addition to the grand theory, the nurse might be guided by a mid-range theory such as that of Swanson (1991). This theory is much more focused on the psychological needs of women experiencing miscarriage in that its primary focus is on the women's emotions. The theory guides the nurse specifically to focus on caring for the women's emotional needs in listening to and attending to the woman and offering interventions such as counselling. Swanson's mid-range theory has a narrower focus than Orem's grand theory and can therefore be tested by research.

It might be argued that Swanson's theory, although it places much welcome emphasis on the need for emotional care, makes an assumption that all women need that kind of emotional care. However that might be inappropriate, as individual women are likely to react very differently to their miscarriage. Additionally, the focus on emotions might neglect other aspects of

care such as the physical pre- and postoperative care required. Thus experienced gynaecological nurses may also draw on their own practice theory developed through years of experience in caring for women after miscarriage. This might involve the tacit knowledge referred to in Chapter 2. The nurse might recognise through experience that not all women feel the same after miscarriage and so carefully assesses the woman as an individual to judge the best way to approach her. So, in addition to using Orem's grand theory and Swanson's mid-range theory, the nurse will also draw on practice theory similar to 'theories in use' (Argyris and Schön 1974) to care for the woman. Thus the nurse might recognise the emotional needs of that particular woman and her partner, judge what is likely to be the best intervention and also recognise the importance of helping the woman efficiently and safely though the operative procedure.

The nurse is theorising and drawing on theories. Some of these theories would be at different levels of abstraction and sophistication, as we have discussed earlier. However, the aim was to produce nursing knowledge and nursing theory that informed practice. So for the scenario described, the aim would be the development of prescriptive theory, which would identify the optimum nursing intervention for women experiencing miscarriages.

Summary – categorising theory

So far in this chapter we have looked at levels of theory and have identified two broad ways of thinking about levels of theory: sophistication and abstraction (see Key Concepts 3.2).

Key Concepts 3.2

Categorising theory

In this chapter we have categorised theories:

1. In terms of their *sophistication* where we drew on the work of Dickoff and James (1968) and identified four levels: factor-isolating, factor-producing, situation-relating and situation-producing
2. In terms of their *level of abstraction*, where again we identified four types: meta-theory, grand theory, mid-range theory and practice theory)

However, others speak of just two theory types – grand theory and mid-range theory (Fawcett 2005a). According to Fawcett (2005a), mid-range theories are specific enough to allow empirical indicators to be drawn from them. These empirical indicators (later renamed empirical research methods) are, by definition, concrete and specific, which allow data to be collected and tested to validate the mid-range theory. Fawcett does not see these indicators as theories, but they fill that space containing what others define as practice theory or micro-theory.

You may find all this a little confusing: after all, we speak of theory as being of different levels of sophistication (descriptive, explanatory, predictive, prescriptive) and also of different levels of abstraction (practice, mid-range theory, grand theory, meta-theory). But Fawcett (2005a), as illustrated in Figure 3.8, perhaps presented an easier way of thinking about theory:

- Grand theory provides broad direction to the discipline.
- Mid-range theory provides testable hypotheses for operational practice.

For another alternative, see Reflective Exercise 3.8.

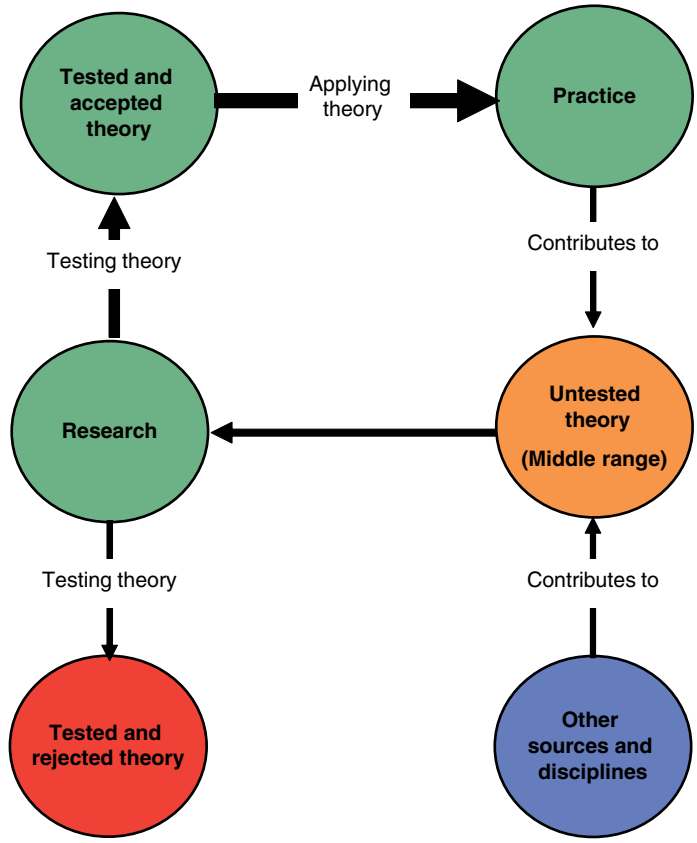

Figure 3.8 Propositional theory: from conception to application.

Reflective Exercise 3.8

Nursing cannot have theories!

In an interesting editorial, Edwards and Liaschenko (2003) presented the following argument (not as their own position, but as one advanced by others):

(a) Nursing requires practical knowledge.
(b) Practical knowledge is distinct from propositional knowledge.
(c) Theories are set out in propositions.
(d) Therefore, there cannot be a theory of nursing.

We found in previous chapters that theory is indeed about propositional knowledge: theory was defined as concepts linked by propositions. But is the argument outlined above convincing? Are practical and propositional types of knowledge different, and if so, is propositional (theoretical) knowledge to be excluded from nursing? Using literature on nursing theory, seek out three points in favour of and three against the latter position.

The relationship between theory and practice

In Chapter 1, we attempted to present a case for theory not just being important in nursing, but being indispensable. In this chapter so far, we have reviewed what theory is and identified different levels of theory. In carrying this argument forward, there is some value in reflecting upon the relationship between theory and practice, the idea of a theory–practice gap, and the linked issue of the relationship between science and practice. Practice and theory may be related in various ways. Figure 3.9 illustrates some possible configurations, and in the remainder of this chapter, the relationship is explored further.

We can note that the idea is as follows: the theory that will be most useful and appropriate is that which emerges from the situation being studied (as opposed to theory imported from other situations). In effect, data are not being collected from the situation to test a previously posited theory – the usual approach in research. Instead, by analysing the data, it is claimed that theory will emerge from it.

However, in Figure 3.9, practice is shown to be informed by theory that is practice-grounded or by theory from other sources. Importantly, it is also illustrated that practice may be informed from other non-theory sources.

It would be easy to assume from Figure 3.9 that such other 'non-theory' sources play a minor role in this matter. We speak here of knowledge derived from sources such as the arts – literature, painting, poetry – or ethics, all of which differs from the propositional knowledge characteristic of theory.

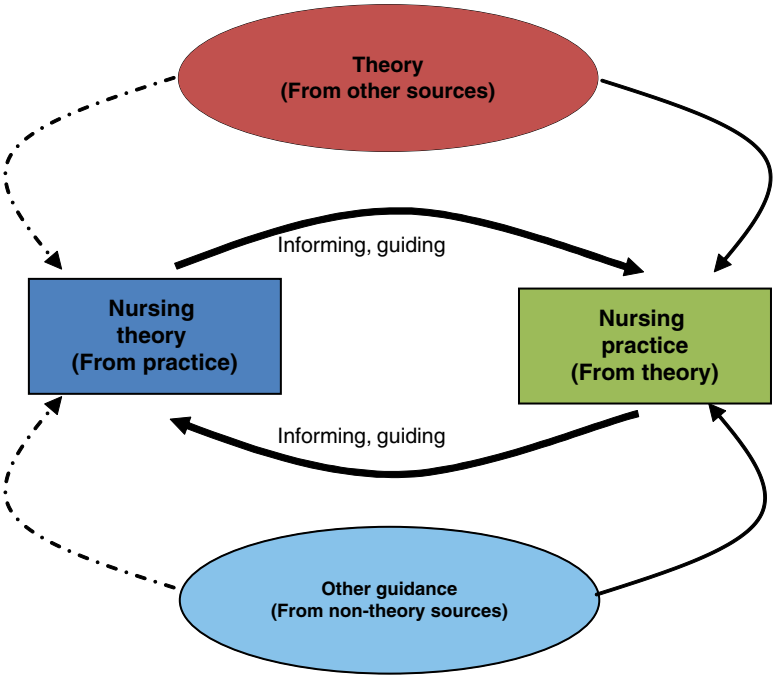

Figure 3.9 The theory–practice relationship.

The theory–practice gap

The idea of *praxis*, discussed in Chapter 1, allows for no separation and indeed no distinction between theory and practice. The argument was that practice is by definition informed by some theory, that indeed *praxis* is a form of practice we might term 'living theory': good practice is good theory in action. However, some do see practice and theory as separate and discrete entities and some view the two concepts as not only separate but also discordant ideas. Even in those instances where it is argued that theory and practice are in fact complementary, it is recognised that there is a challenge to be faced in bringing theory and practice together.

This separation – between theory and practice – is a matter frequently debated in nursing and other professional contexts (Rolfe 1996; Slevin 2003b). So much so, that the term theory–practice gap has become almost shorthand for referring to the whole debate surrounding theory and the difficulties people have experienced in bringing theory into practice. For some, this is not a matter for concern: the two terms are not only separate, but desirably so. This, it may be recalled, is a view sometimes expressed by those who see nursing as practical and not involving theory. It is also a view held by those who see theory as largely conjecture and not a valid aspect of science, arguing instead that practice must be based upon the best scientific empirical evidence. However, for others, theory is viewed as essential. It is the basis of science, and theory tested through research is seen to be the basis of best practice. Here, any separation of practice from theory is seen as problematic.

Explaining the theory–practice gap

As noted in Chapter 1, there are a number of explanations about why the gap occurs and why theory may not be used in practice. We noted, for example:

- a failure on the part of educators to adequately convince practising nurses of the value of theory and/or to adequately prepare them for using such theory;
- ineffective change management infrastructures and strategies for introducing innovations, including theory;
- an agreement and resignation among clinical nurses, that they should concentrate on practical issues and leave intellectual pursuits to others;
- recognition by practitioners that theory being promoted from above is sometimes inappropriate and ineffective – as adopted (unchanged) theory borrowed from other sources, or as adapted (changed or refined) theory.

This raises an additional and perhaps more serious reason for the gap: given that theory as propositional knowledge and practice knowledge are entirely different forms of knowing, there will always be a gap. It is as inappropriate to try mixing them together as it is to try mixing oil and water. Of course, as we suggested earlier, this is not to say that the two forms cannot and do not complement each other. Indeed, it was suggested in Chapter 2, and is now emphasised once again: we need to know *what* to do, *why* we do it and *how* to do it, and one without the other will not do.

The important issue in all of this is as follows. As far as theory does to some extent enhance practice, and as far as the practice situation is a testing field for theory, wherein it can be both tried and refined, any gap between the two is potentially problematic. While we can accept that practical knowledge (or know-how) is different from theoretical (or know that) forms of knowledge, we must also accept that the latter has a part to play in guiding our rational

actions. Finally, in explaining the theory–practice gap, there may be issues in respect of how science is linked to the real or practical world, particularly where theory is seen as a part of science. A possible gap between science and practice will be considered now.

Science–practice gaps

Science and reality

An interesting extension of the theory–practice gap theme is as follows: the activity of producing propositional knowledge (i.e. scientific knowledge) is sometimes also viewed as having no necessary link with the real world. Therefore, insofar as theory is a part of this scientific enterprise, it, too, is held to be dissociated from reality. Such thinking rests on the assumption that theory is essentially an element of science. The image of science as divorced from the real world or reality conjures up the fictional images of the unworldly scientist, the person who lives in a world of ideas rather than in reality. While such caricatures may not exist, there is an element of truth to the suggestion that scientists may become separated from the real world, to the extent that they cease to take an interest in anything outside the laboratory. The unworldly researcher, the 'mad scientist', the absent-minded professor, and the unreal and dreamy world of academia within its ivory towers are all well-known images. It is possible that such images might sometimes lead some nurses to discount science, and theory, as being of little relevance to the real world.

Noumenon and phenomenon

Of course, this depends on what we mean by 'the real world'. In a narrow or technical sense, reality, as a psychological or philosophical concept, brings into question the actual existence and nature of an object as opposed to the appearance (to us) of the phenomenon. As illustrated in Figure 3.10, how an object appears to us may approximate reality to some extent, but it never actually equates to it. The thing that exists out there (the noumenon) is different from how we experience it through our senses (the phenomenon).

Idealism and realism

These ideas, when taken to their extreme, can be found in the orientations within philosophy known as idealism and realism. The term idealism has been used to describe the position that reality does not exist outside of ideas. Taken to its extreme, it is some elaborate mental construction and there is in fact no physical world out there at all. In other words, we and our total world are thoughts and ideas in the mind of some being (the nature of which may be God or some other cosmic being). Remember René Descartes' views in Chapter 2. The alternative view, entitled realism, argues that there is indeed a real physical world out there. According to this argument, the fact that different individuals perceive the same thing confirms that it must exist. The counter-argument of the idealists is that even the people who are doing the perceiving are part of the ideational construction!

Such rather abstract deliberations may be of little interest to you at this stage in your studies. However, you should nevertheless take seriously the need to be sceptical about the information presented to you. While it may be unreasonable (or at least unprofitable) to question seriously the existence of the world we are observing, we should nevertheless be guarded in assuming that what we are observing is reality exactly as it is. It is something of a paradox that, on the one hand, science (and scientists as researchers and theorists) is devalued

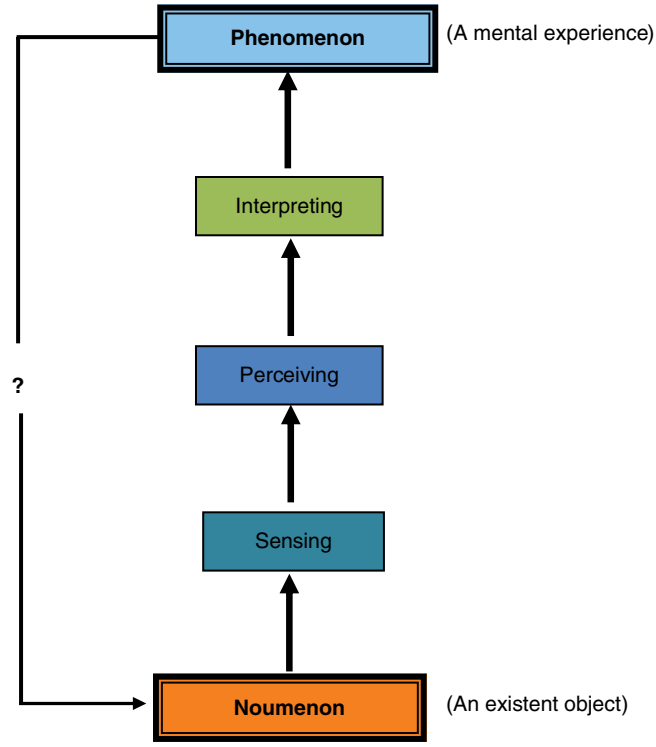

Figure 3.10 The thing observed.

because its proponents are not in touch with the real world, when in fact that so-called 'real world' is itself open to question. This situation is even more astonishing when we realise that we need this very same science to help us view the world critically and objectively.

Science (and theory) divorced from concerns about the use of science and technology

If science is seen as having nothing to do with everyday life or what happens in the real world (i.e. it is concerned with knowledge construction, not its practical application), we are creating yet more distance between theory and practice. In the past, scientists took the position that they were in the business of discovering knowledge, of establishing what was true in respect of things or phenomena observed in the world. What people did with this knowledge, so the argument ran, had nothing to do with science. For example, splitting the atom was a great scientific achievement; the fact that it led to the creation of better bombs and many deaths may be considered as not the fault of scientists.

In effect, scientists recognised only a moral or ethical responsibility in respect of the authenticity of their work, not any consequences emerging from it. That is, they accepted responsibility to adhere only to certain principles of research ethics. In this respect, the dominant moral obligation recognised was that of absolute truthfulness in conducting research

and reporting findings. Other ethical principles recognised in science today (e.g. as derived from the biomedical ethics of Beauchamp and Childress 2001) relate to ethical principles such as beneficence (doing good), non-maleficence (doing no harm), autonomy (respecting the right to choose or give informed consent) and justice (equality and fairness – other than that aspect of justice pertaining to truthfulness). These were often largely ignored, even in respect of issues such as seeking full informed consent from subjects being studied. Indeed, in some instances, the well-being of subjects being researched (humans as well as animals) was sometimes ignored or compromised (see Reflective Exercise 3.9).

Reflective Exercise 3.9

Science in the clinic

In the sections on 'Idealism and realism' and 'Science (and theory) divorced from concerns about the use of science and technology', we considered how science may not be fully attuned to the real or practical world within which we live, and also how science may not recognise a moral obligation in respect of this world. It was even suggested that science might blatantly further its own interest at the expense of others.

We do need research to provide the knowledge required to advance medicine and combat disease. This, so it is argued, makes it necessary to trial treatments and drugs, on animals and eventually on people. There are risks that, in such activities, there may be inadequate attention given to the welfare of those involved. This is increasingly recognised within the National Health Service and research institutions, particularly where responsibilities in respect of 'research governance' are addressed.

Look up the terms 'research governance' and 'clinical trial'. Consider how these areas may impact upon nurses' responsibilities in respect of the safety and care of their patients. You may elect to make some notes, but you are only being asked to reflect on these issues.

Science (and theory) failing – or saving – the world

The limited concern of science for moral issues really changed with the advent of nuclear physics, particularly at the end of World War II, when this extended into the development of nuclear armaments. Scientists increasingly acknowledged that they had a responsibility to be mindful of the consequences of their work. Indeed, some of the scientists involved in the Manhattan Project at Los Alamos in the USA never recovered from their intense distress and guilt at the devastation wreaked when the two atomic bombs they had invented were dropped on Hiroshima and Nagasaki.

Therefore, it might be suggested that from the end of World War II in the mid-20th century, science acquired a conscience. The emergence of an ethics of science certainly goes back earlier than the 1950s, but from that period it reached a new level of importance. Not only did science acknowledge its impact upon the world (and upon humanity) but it also (to greater or lesser extent) embraced a moral obligation to attend to that possibility. Of course, it must be recognised that there are variations not only in terms of 'degrees' of moral obligation but also in terms of the nature of that obligation.

To some extent, the modern scientific community has become polarised into two camps. On one side, a largely green and populist grouping is concerned with ensuring that science does not harm our environment and that its 'discoveries' are geared towards ecological protection and the benefit of society in general. On the other side, a largely opportunist and capitalist grouping is concerned with acquiring profit for the few (sometimes even to the extent that others are harmed). Thus some science is seen as supporting for-profit industry and technology that increases hothouse gases, and deliberately facilitates technology that underpins unethical practices such as the sale of high-tar tobacco products in the developing world. Conversely, other science is seen as supporting such beneficial technologies as the development of largely harmless wind turbine energy and facilitating the development of safe technology, including the development of pharmaceuticals by ethically acceptable research.

One danger in the emergence of a moral conscience and the establishment of ethical positions is that one might end up taking 'the moral high ground', not only claiming but also believing that one knows best. If the belief that 'science' knows best in a moral sense comes together with an equally strong belief that science is the only real source of knowledge and, furthermore, that it is capable of uncovering knowledge to solve most, if not all, of our problems, the claims being made are not only extreme but dangerous. This is because, allied to the belief that science knows best – indeed, that only science really *knows* at all – is an almost blind faith in its capabilities and an equally blind rejection of alternatives (as presented in religion, law or other forms of non-scientific thought) (see Reflective Exercise 3.10). This may be viewed as a naïve and misguided position at best or as an arrogant and deceptive position at worst.

Reflective Exercise 3.10

From science to Utopia

There is a view that science can solve all the problems of humankind – that, as we advance our sciences and our technologies, we will eradicate disease and need, construct ideal living environments, and create a perfect and harmonious world for living.

However, such faith in science may be naïve. The term *scientism* is used to describe this. Scientism is the view that the natural sciences are the only valid sources of factual knowledge about the world (Williams 1983). There is an almost blind faith in what is viewed as hard science. Science will solve all our problems, leading us into a new and better world.

For now, draw upon your own experience to date in clinical settings. Do you feel that there is too much faith being placed in the technologies of science? Is this more characteristic of some groups than others? In particular, compare medical and nursing staff – do they differ in their alignment to the scientific orientation, and if so, why?

Science (and theory) disappointing the world

It is important to remember that, particularly from the middle to latter part of the 20th century, doubts in respect of science extended beyond moral concerns. Within science the movement known as positivism (discussed in Chapter 2) had exerted an influence well beyond the bounds of the laboratory and the academy. The fundamental 'positivist' position

saw science as a quest for real or genuine true knowledge. This could only be achieved by observing – i.e. through sensing and experiencing – how things were and how things worked in the world. In effect, the only genuine knowledge was that procured through empirical (experiential) means, by the objective identification and measurement of phenomena.

The positivists' claims for absolute truth were persuasive. They fitted well with significant scientific discoveries that *did* greatly benefit humanity. Furthermore, the devaluing of other forms of knowledge in comparison to this persuasive position was also in turn compelling. Society, having previously placed its faith in religion and law, now saw science as the route to a new Utopia. Science would eradicate poverty and disease; it would allow us to develop new technologies that would make life a veritable heaven upon earth. Consider the labour-saving devices that we have in our homes or that we carry on our person.

Unfortunately, while science led to the invention of penicillin (a life-saving antibiotic) and electricity, it also led to the invention of thalidomide (a highly toxic medicine for unborn infants) and the aforementioned nuclear weapons. Science, it was discovered, could not lead to absolute truth or the total harnessing of nature to our advantage, and indeed its products might sometimes harm us. It is not that the advantages brought by science (and its fellow-traveller, technology) were being discounted. These advantages were and are vitally important to the well-being of people and indeed all living things and the environment in which they dwell. The impact of past inventions such as antibiotics and electricity is at least matched by advancing modern-day technologies such as the internet (and its application in such endeavours as distance education and telemedicine). But what is different now is the increasing realisation that the product of science and technology may be harmful, and possibly even destructive, on a global scale.

It might be suggested on the basis of the latter arguments that the relationship between science and practice is a complex one. Science, we have seen, does lead to technological advances that have a direct impact upon practice. Intercontinental air travel, modern antibiotics, high-technology food processing, laser technology and automobile travel have all had profound practical implications for how we live today. But the relationship is complicated and not without its negative aspects. In a sense we are deceived into the false security of a brave and bright new world. But this is an illusion. The costs of modern super-antibiotics are the ravages of super bugs and methicillin-resistant *Staphylococcus aureus* (MRSA) infection. The costs of increasingly available air travel are massive increases in hothouse gases and global warming. And the cost of much technology that relieves us of burdens of activity (such as physical toil) includes the consequences of sedentary living: obesity, hypertension, cardiac disease and cancers.

It is important to recognise that by the latter half of the 20th century, a more reasoned and realistic outlook on the limits of science had emerged. As discussed in Chapter 2, this still broadly positivistic perspective, known as *post-positivism*, adopted the more balanced view that scientific evidence can only be viewed as the best available knowledge until and if or when it is refuted. This perspective in a sense reinforced the link between theory (making conjectures) and practice (seeking refutations through actions based on testing those theories – i.e. research). Such outlooks are definitive of the post-positivistic orientation.

Science and nursing theory

With the benefit of hindsight, it was apparent that some of the early nurse theorists writing in the 1950s, 1960s and 1970s were very much influenced by the perspective on science outlined in the preceding sections. The early goal was to develop nursing theories that could be tested or refuted by research. However, this goal was not fully achieved

and there were concerns that grand nursing theories were not the best way to achieve this; hence the call to focus on mid-range theories that could be tested. Additionally, critiques of propositional knowledge by influential writers such as Donald Schön in his book *The Reflective Practitioner* (Schön 1983) were also of importance. He argued that such propositional knowledge (which he called technical-rational knowledge) has limitations in professional practice. In the swampy lowlands of practice (Schön 1983), practitioners reflect in and on action and use espoused theories and theories in action depending on the situation before them.

Reflection in and on action also has limitations. What may be required is a movement from a position of *reflection* on what is (or was in the past) knowable, to a more *reflexive* orientation to dynamic changing processes. As the argument runs here, such is the dynamic and changing nature of the world that our past knowledge and previous experiences are of limited value in addressing new and previously unencountered phenomena and the problems they present. We must therefore develop reflexive approaches – wherein the nature of what we encounter challenges us to respond appropriately.

The questions begged – some answers

We have concerned ourselves in this chapter with how practice and theory are related and posed a number of questions at the beginning of the chapter. The fundamental questions (by definition binary in nature), which are even contained within our chapter title, are as follows:

- Does our practice derive from theory?
- Does our theory derive from our practice?

The questions are not simple to answer and we can return to our opening quotation from Thomas Merton (1969). Once we start to explore the issues, we become aware of inconsistencies and lack of clarity. This chapter has demonstrated that the simple questions raised are complex and multifaceted, and if it has made you more sceptical and critical about superficial statements on the relationship between theory and practice, it has achieved a lot and, in reality, so have you. Furthermore, later in the book, and particularly in Chapter 6, we do take up this issue again (e.g. in Chapter 6 we extend the argument by considering the relationships among research, theory and practice).

Fortunately, from this chapter we can add some comments about the relationship between theory and practice, as follows:

1. We must recognise the close complementary relationship between theory and practice, including the knowledge of practical doing that we term know-how. We must know *what* is the best thing to do in practice situations (through knowledge derived from tested theory), and we must know *how* to do it (through the development of practical know-how).
2. We recognise different levels of theory in terms of sophistication and abstraction.
3. There are different sources of theoretical knowledge and these can be seen as emerging from other disciplines through being adopted or adapted to the nursing purpose; or emerging from the nursing field itself as theory derived from practice; or indeed from all these sources (e.g. where the practice context helps us to adapt non-nursing theory to the nursing context).

4. Knowledge used in practice must be thoroughly tested and presented as the best information or evidence available, as in evidence-based practice. Theory, even where it is constructed from such reliable evidence, must also be tested for its fitness for purpose.
5. We recognise the distinction between theory and theorising, and also the case for recognising that we all theorise (attempt to make sense of our environment), as a fundamental characteristic of being human.
6. Given that nurses themselves theorise about their practice, we recognise that there is no such thing as practice without theory. We therefore recognise the need to ensure that this valuable, context-bound theory is also nurtured and, where possible, explicated and tested.
7. Insofar as nurses do themselves theorise, and are also presented with theory that may inform their practice, there is a need to develop within nursing practice a sceptical and critical approach to theory, particularly where it has not or cannot be adequately tested.
8. We have demonstrated that theory is derived from science and in turn contributes to science. To the extent that theory is indeed sometimes recognised as part of science (the conjectural, creative part that relates to and indeed guides the doing or research part), there is a need to view critically what has been and what can be achieved by science and theory.
9. There is the particular need to recognise the risks that have emerged from science, some of a global nature, and the ways in which these risks impact upon our practice.
10. There is a need to look to the future that is unfurling, and how we might respond indicates the importance of embracing nursing theories that were perhaps rejected previously, for it is these that are designed to look towards our horizons and the new ways forward.

Conclusion

The relationship between theory and practice has been explored in detail. The definitional statements of theory were extended into classifying theory in terms of increasing sophistication (as in descriptive, explanatory, predictive and prescriptive theory) and increasingly abstract properties (as in meta-theory, grand theory, mid-range theory and practice theory). The relationship was further explored in terms of how theory may inform practice and how, in turn, practice may inform theory and contribute to theory construction. This discussion was carried forward into the issue of the relationship between science and practice, given that theory is most often recognised as a part of science.

Revision Points

- Theory was defined as statements that link (by propositions) ideas (concepts) about the world, thus creating knowledge.
- It was argued that theory development and use are vital for nursing practice. However, there is an argument that as nursing requires practical knowledge it cannot develop theories, which, by their nature, rely on propositions.
- Two possible ways of categorising theory were identified: on the basis of the sophistication or abstraction of the theory.

- In terms of sophistication, Dickoff and James's (1968) four levels of theory were provided as an example: factor-isolating, factor-relating, situation-relating and situation-producing theories.
- In terms of abstraction, four levels of theory were identified: practice, middle-range, grand and meta-theory.
- Despite the importance of theory for nursing, there is a theory–practice gap and there are many possible causes for this gap.
- As theory is linked to science, the positive and negative contributions of science to nursing and society were explored.

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4

Nursing theories and new nursing roles

Outline of content

The impact of worldwide advances in health care systems upon the roles of health care professionals has been dramatic. In particular, the introduction of new and innovative advanced nursing practice roles to meet these new challenges is described. Particular attention is paid to the use of theory to inform nursing practice in circumstances where methods of care delivery are changing and new advanced nursing practice roles are developing.

Learning outcomes

At the end of this chapter you should be able to:

1. Define what is meant by 'role'
2. Outline the background to the development of new advanced practice roles in nursing
3. Identify at least five implications for nursing associated with the development of these new roles
4. Discuss the contribution of role theory in analysing new nursing roles
5. Critically evaluate the influence of the biomedical model on new nursing roles
6. Critically evaluate the contribution of existing nursing theories for new roles in nursing

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Introduction

Over recent years changes in health technology, professional knowledge, skills, patient needs and expectations have made health care a dynamic area in which to work. The ageing population, the increase in chronic diseases, the growth of day surgery, the expansion of primary care and the continued reduction in the length of hospital stay have all contributed to changing patterns of need and demand (Williamson et al. 2012). These changes are occurring in health care systems throughout the world and are having an impact on the type of care provided and the format of its provision. In particular, such changes have necessitated the development of new professional roles and practices (Lowe et al. 2012). A particularly important factor was the shortage in the supply of medical doctors in health care, which led to a consideration of three main strategies to resolve the problem: to train and employ more doctors; to train and employ doctor's assistants; or to encourage nurses to take on more medical roles. The latter was the cheapest and quickest option, and in the early 21st century more and more duties that were once the sole responsibility of physicians were being undertaken by nurses. This strategy was an important stimulus in the development of advanced practice nursing roles, which is considered an important issue for contemporary nursing. The International Council of Nurses (Lowe et al. 2012) has identified the need for global networking and support to address some of the issues raised. There is a recognition that more work needs to be done to ensure there is some consistency in how these roles are defined and a shared understanding as to how individuals should be prepared for these roles. The introduction of these new roles has been the topic of much debate in the literature (Department of Health 2010; Lowe et al. 2012). It is clear that new nursing roles exist and will continue to be developed and we need to examine whether existing nursing theories have any relevance to these new roles or whether other theories might be more relevant (see Reflective Exercise 4.1).

In this chapter we will:

- discuss some of the background to the development of these advanced practice roles in nursing with a consideration of some implications of these new roles.
- consider role theory and the biomedical model to discuss whether these might have some relevance to new nursing roles;
- examine whether existing nursing theories might still be useful in shaping practice within these new roles.

Reflective Exercise 4.1

New nursing roles

Take some time to consider why the government would want nurses to take on some of the duties that were previously the remit of doctors and why they would want unqualified assistants to take on some of the duties that were previously the responsibility of nurses. Is it be something to do with improving the quality of care or is it related to reducing costs?

Defining role

The concept of role is difficult to define and analyse due to its multi-dimensional nature. Perhaps the most common definition is that a role refers to the set of prescriptions defining what the behaviour should be in a specific job, such as nursing, or in a particular social position, such as being a mother. Along with a role comes *expectations* of how the person should behave, and this is an important component of defining the role.

Key Concepts 4.1

Defining role

Role: the set of prescriptions defining what the behaviour should be in a specific job (e.g. nursing) or in a particular social position (e.g. being a mother)

Background to the development of new roles in nursing

Internationally, most countries provide some kind of foundation training in nursing, at the end of which the person is deemed to have achieved the status as a nurse. In the UK, as an example, the newly qualified individual is allowed to register as a nurse and additionally will have attained either a degree or a diploma award. The structure of nursing careers in the UK can be represented as a 'practice cross' (Figure 4.1), in which the newly qualified nurse is considered to be a novice who can progress to become a more expert practitioner. On initial registration, they are also considered as a generalist rather than a specialist nurse, but may progress to take on more specialist roles.

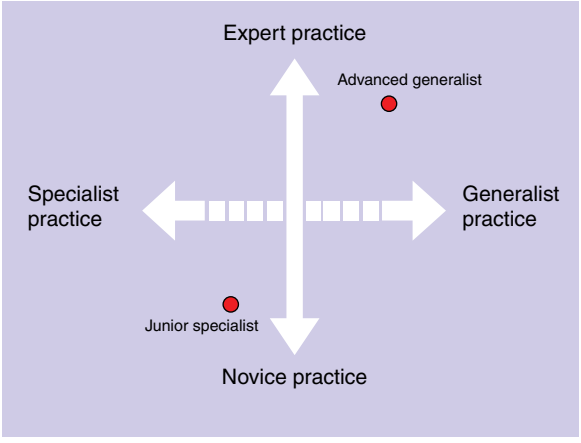

Figure 4.1 The 'practice cross'. Source: The Scottish Government 2008, Figure 2.1, p. 14. Reproduced with permission from NHS Education for Scotland.

In tracing the development of specialist roles, Barton et al. (2012a) noted that clinical nurse specialists were first introduced in the US, where the traditional nursing role, although extended, did not threaten the relationship between nursing and medicine. In the next development, the nurse practitioner role, nurses expanded their role into the domains of medical practice, including diagnosis. (The differences between *role expansion* and *extension* will be touched on later in the chapter.) This led to much discussion as to whether nurse practitioners were 'maxi nurses' or 'mini doctors'. In the US these roles developed and progressed, until eventually it was recognised that there was a need for some standardisation of practice and the educational requirements required. A similar pattern to that in the US emerged in the UK (Barton et al. 2012a). Specifically, the work of Barbara Stilwell as a nurse practitioner in primary care in the 1980s, was seen as a landmark in the development of advanced nursing roles. Barton et al. (2012a) argued that the development of advanced nursing roles in the 1990s in the UK (as in the US) was characterised by a lack of a clear clinical career structure, disputes over the purpose and remit of such practitioners and a lack of consensus as to an agreed level of educational preparation. This led to a plethora of titles and different types of preparation (with, in some cases, no preparation at all) and was influenced by the short-term needs of the health service. In the UK, the National Health Service demand for these new roles continues to grow but the development has been dogged by inconsistency in role titles and preparation, alongside concerns about competence and governance (Barton et al. 2012b). Very broadly, within the UK context there appear to be differences between primary care and secondary/tertiary care in the development of new nursing roles, as follows:

- In *secondary and tertiary care*, which includes hospital settings, the focus is on clearly defined specialist nurse roles which are related to a specific disease or condition such as diabetes. An example of this would be the clinical nurse specialist in diabetes.
- In *primary care*, the advanced practice nursing role is more generalist, in that the nurse practitioner in primary care might work with patient groups who are less differentiated in terms of their diagnosis (RCN 2009).

Here are some examples of advanced roles (see also Reflective Exercise 4.2):

- Clinical nurse specialists, such as tissue viability nurses or continence nurses, working in a very clearly defined area of practice.
- Public health nurses, who work in specialist roles in the community, and nurse practitioners who can diagnose, prescribe interventions (including drugs) and manage units with minimal medical intervention.
- Consultant nurses.

The situation was confusing and the lack of consistency meant there was no agreement as to the preparation of these practitioners, how their role would be evaluated and whether their

Reflective Exercise 4.2

Specialist roles in practice

Think back to your previous clinical placements. Were there any specialist nurses working in that area? If so, what kind of activities did they do as part of their role?

role could be transferred to other areas (Department of Health 2010). Local policies also created inconsistencies in role development and led to a clash between personal and professional values. There was also regional variation in the number and type of specialist nurses, particularly in more remote and rural areas. Finally, a wide range of courses and programmes to support specialist practice were developed, with regional differences in funding the training required, resulting in inequitable access to courses.

Against this background, there was much discussion about modernising nursing careers, strategic workforce planning (the need for a flexible, well educated, competent workforce) and a recognition of the lack of clarity in relation to advanced practice roles. In the UK, the work of the Scottish Government (2008) was very influential through its development of the Advanced Practice Toolkit and the 'practice cross' (Figure 4.1). Work was also done to clarify and differentiate *specialist* and *advanced* practice (Figure 4.2; see also Key Concepts 4.2) (Scottish Government 2008: 18):

- Specialist practice is considered as a specific, contextually focused role, such as a tissue viability nurse.
- Advanced practice is a level of practice rather than a role and is not exclusively characterised by the clinical domain, but includes those working in research, education or managerial/leadership who are able to make high-level decisions.

Key Concepts 4.2

Differences between specialist and advanced practice

Specialist practice: specific, contextually focused role type

Advanced practice: a level of practice rather than a role

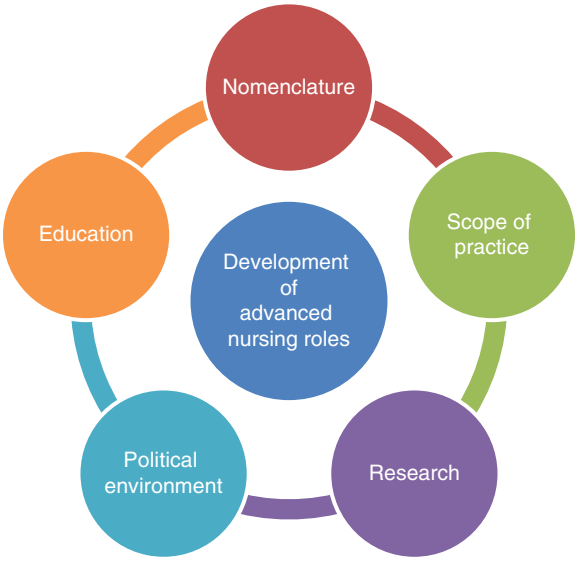

Figure 4.2 Development of advanced nursing roles (Pulcini et al. 2010).

The Advanced Practice Toolkit (Scottish Government 2008) also identified that advanced practice should be founded on four pillars: clinical, research, education and management/ leadership. These four pillars, it was suggested, should underpin the work of advanced practice nurses regardless of their particular role.

Some implications of the new nursing roles

The development of these advanced practice roles in nursing, as we have seen, has not been unproblematic and was characterised by inconsistency in role development, in titles and in how individuals might be prepared for these roles. We have taken the UK as an example to illustrate these issues, but these concerns were not confined to the UK. In an international survey conducted in 2008, Pulcini et al. (2010) (Figure 4.2) identified and explored five main issues pertinent to the development of advanced practice nursing roles internationally:

- Nomenclature
- Scope of practice and prescriptive authority
- Education for these roles
- Political environment
- Research into role outcome.

Nomenclature and scope of practice

In terms of nomenclature we have hinted at the variety of titles used in the UK. Internationally, Pulcini et al. (2010) identified 13 different titles attached to what might be considered as an advanced practice role. With different titles comes a different expectation of role behaviour, which is potentially confusing and problematic. This is linked to the second key issue that Pulcini et al identified, that of scope of practice and prescriptive authority. The scope of practice was broad and included many activities, including diagnosis, assessment and, in some cases, prescribing. This has implications for accountability and governance, because the scope of these new roles and the standards of practice that apply to them are often unclear. Semple and Cable (2003) maintained that accountability involves taking personal responsibility for actions and that no individual can be accountable for another. If things go wrong, practitioners may be at risk of complaints and disciplinary or legal action as a result of the ground-breaking innovative nature of their work and the lack of clear guidance on accountability.

The issues concerning the accountability and responsibility accepted by innovative role post-holders have included discussion on the use of theories, protocols and guidelines. If the role is truly innovative, then the rigid adherence to older theories could stifle creativity. The same applies to the potentially protective function of evidence-based protocols, with some viewing them as too restrictive. In the UK, theories, guidelines and protocols do not have the force of statutory regulation; hence there is a debate as to whether there is a need for a new part to the UK Nursing and Midwifery Council register for advanced practice nurses. According to Barton et al. (2012b) the current position (although this may change) is that there is no need for a new part to the register. This is not the case in all countries where nurse practitioners have separate standards and licensing distinct from those required for initial entry to the register.

Education, political environment and research

The third issue identified by Pulcini et al. (2010) was the education required for these new roles. They noted that, of the 31 countries they surveyed, 71 per cent had formal education programmes to prepare practitioners for their advanced practice roles (Pulcini et al. 2010: 35).

They also noted the importance of the health care context and the political drivers that allowed the emergence of practitioners in advanced practice. As we discussed earlier, in the US this was in response to health care needs and a shortage of physicians in some areas of primary care. What Pulcini et al. (2010) found in their survey were high numbers of advanced nurse practitioners working in secondary and tertiary care, reflecting a strong trend towards specialist practice. Finally, they pointed to the continuing need to research patient outcomes when after receiving care from advanced practitioners. They did acknowledge that research findings in this area suggest good outcomes and levels of patient satisfaction for those receiving care from advanced practice nurses.

Using theory to understand new roles in nursing

In Chapter 3, we focused on the importance of theory and the different levels of theory in terms of both sophistication and abstraction that may be appropriate for nursing. In this section, we look again at the contribution of theory to understanding the development and impact of these new roles in nursing (see Reflective Exercise 4.3). Any discussion surrounding the development of advanced nursing practice has to consider, for example, the boundaries between medical and nursing practice and the roles of both doctors and nurses, especially when nurses expand their roles into what might be deemed traditional medical territory. Therefore, to understand the contribution of theory to advanced practice nursing, we will consider role theory, the impact and influence of the biomedical model and, finally, whether nursing theories have a contribution to make to these new nursing roles.

Reflective Exercise 4.3

Reviewing levels and types of theory

If you need to, refer back to chapter 3 to review the different levels and types of theory that were identified.

Role theory

It is important to understand role theory in the context of new role developments in nursing. Two terms have been used to describe this phenomenon: role expansion and role extension. The former means that nurses retain their occupational focus but work within an expanded role. For example, if a nursing role focused on health promotion, then widening their role in

health promotion signifies role expansion. By contrast, role extension occurs when nurses extend their remit almost 'amoeba-like' into that of another discipline. Hence nurses taking on a prescribing remit or minor surgery would be role extension (see Reflective Exercise 4.4). This lends itself to role confusion, role overlap and role conflict. These occur at the boundary where doctors are shedding duties that were once entirely within their remit and nurses are moving in to take on these duties. If both parties do not come to the realisation at the same time, then role conflict and confusion can occur. At such times, care quality and patient safety can be compromised (McKenna 2004).

Reflective Exercise 4.4

Extended and expanded nursing roles

Look up the differences between extended and expanded nursing roles. From your own experience of practice, give some examples of each. Consider whether this is a good thing or a bad thing for the nursing profession.

Using a sociological perspective on role

Theories regarding role can be found in the social sciences, particularly in sociology and psychology. Drawing on theories within sociology, it is possible to see different ways of thinking about role and these are framed within two broad categories of thinking about society. The first is structural functionalism and here the successful accomplishment of roles is seen as crucial for the stability of the social system. As an example, one key theorist, Talcott Parsons, proposed the idea of the 'sick role' (Parsons 1952). In contrast to the biomedical model, which sees illness as a 'biomedical, mechanical breakdown', Parsons saw illness as a 'deviation' from social norms, and one that needed to be authorised by medicine (see Reflective Exercise 4.5). In an illness situation, therefore, both the doctor and the patient are assigned roles, and with these roles comes rights and obligations. In the sick role, these rights and obligations help to structure expectations as to how both parties, patient and doctor, should perform their roles.

Reflective Exercise 4.5

'The sick role'

Consider some of your older family relatives – when they go into hospital or see their GP, do they take on the sick role and let the doctor take charge, or do they take the lead role in the relationship?

Find out about the rights and obligations that both the patient and the doctor have in Parsons' idea of the sick role. What might be the limitations of this theory in contemporary health care?

Another broad perspective is that of 'agency', in which individuals as social actors have autonomy and agency to shape the world around them. Within this perspective, individuals play a role in presenting themselves within the social world (Goffman 1959). Goffman used the metaphor of a theatre in which individuals play their role according to the situation or context in which they find themselves. So when looking after patients, a nurse will adopt a particular role and behave in particular ways to meet the expectations that others may have of the role of the nurse. Goffman considered this as 'front-stage' behaviour – the behaviour that meets the expectation of others within that particular context. However, Goffman also talked of 'back-stage' behaviour. Here, out of the sight of patients, nurses may behave in different ways that may or may not appear to be compatible with front-stage behaviours.

Reflective Exercise 4.6

Front-stage and back-stage behaviour

Using Goffman's (1959) ideas, think of a clinical practice area as being similar to a theatre. Front-stage areas are those where the nurse comes into contact with patients, while back-stage areas are those out of sight of patients and their relatives. Have you noticed any difference in the nurses' behaviour? Do you agree or disagree with Goffman's ideas on front-stage and back-stage behaviour?

For the purposes of this chapter there are theories that can be used to explain the concept of role. These are not nursing theories but can be applied to nursing to try and understand important issues regarding roles and how they may impact on nursing. The development of advanced nurse practitioners meant there was a change in roles of both the individuals involved and the nursing role generally. In changing their role, the pioneering nurse practitioners were acquiring knowledge and skills and expanding their practice into medical territory. Within these sociological perspectives, using such theories helps us to understand the part that role plays in complex social systems such as health care. With a particular role comes expectations of behaviour and practices. Therefore, it is very disturbing when individuals or occupational groups such as nursing do not conform to these expectations. Role theory represents a collection of concepts and a variety of propositions in the form of hypothetical predictions of how people will perform in a given job, or under what circumstances certain types of behaviour can be expected. Key to this are the expectations of how people should behave when they are in a particular social position (Hindin 2007; see also Reflective Exercise 4.7). Concepts within role theory include:

- role norms
- role set
- role stress
- role confusion
- role overlap
- role conflict.

Reflective Exercise 4.7

The nursing student role

What do you consider your role to be in practice settings? What expectation do others have of you in practice? What expectations do you have of the qualified nurses in practice?

Role norms and role sets

A structural functionalist perspective remains influential in thinking about roles. 'Role norms' are the ideas in the mind of members of a group that specify what they ought to do and what they are expected to do under given circumstances (Hamans 1966). There are also role expectations held by members of the 'role set' that surround an individual and that exert pressures on them and their performance in a given situation (Kahne t al. 1966). The 'role set' refers to the role relationships held by virtue of occupying a particular social status (Merton 1966). For instance, a 'role set' for a nurse would typically comprise nursing colleagues, other health professional colleagues, patients and representatives from their employing organisation (Figure 4.3; see also Reflective Exercise 4.8).

Reflective Exercise 4.8

Role sets

Figure 4.3 represents a very basic role set. Think about what other roles could be added to this set.

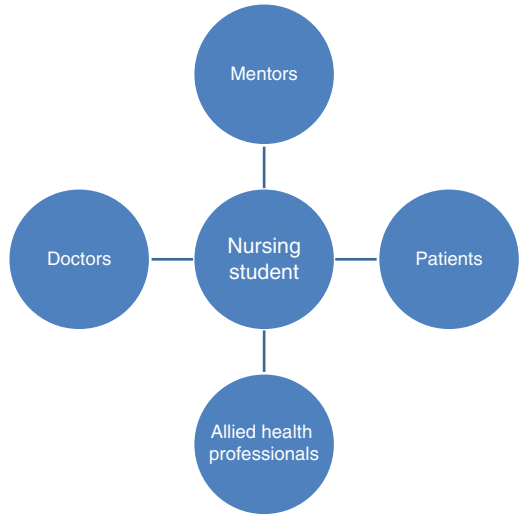

Figure 4.3 Role sets.

The consideration of role is of particular relevance to those involved in new roles in nursing. After all, the context in which they work is changing and therefore the perceptions and expectations of their role (both from themselves, other professionals and patients) are also changing.

Role stress and strain

In a literature review, Lambert and Lambert (2001) identified 'role stress and role strain' in nursing as related to the work environment. An environment in which there are high job demands, little support from peers and lack of essential resources makes it very difficult for individuals to fulfil role expectations, hence leading to role strain. There is some evidence that the introduction of new roles into nursing has resulted in examples of role stress and strain for the nurses involved.

Daly and Carnwell (2003) noted that nursing practice was getting more diverse and the boundaries of inter- and intra-professional practices and competencies were becoming increasingly blurred. Therefore, with the confusion surrounding role development and professional isolation, there is the potential for 'role stress' among those who hold new roles in nursing. Innovative roles can lead to isolation, 'burnout' and role dissonance (see Reflective Exercise 4.9), especially when there is minimal support within the organisation (Scholes et al. 1999; Lowe et al. 2012). The support of managers is seen as a critical factor for the successful transition to new roles.

Reflective Exercise 4.9

Burnout and nursing

Look up the term 'burnout' as applied to nursing. In particular, investigate what are the factors that might cause burnout and what might be the possible effects on nurses themselves.

The innovative nature of some roles can also mean that accessibility to colleagues in similar roles is difficult. This suggests that there are limited opportunities to discuss professional and practice issues or to identify possible mentors. Furthermore, colleagues may fail to understand the post-holders' skills and contribution (Davies 2001; McMurray 2010). McKenna et al. (2005) found that linking with colleagues who shared similar jobs and theoretical perspectives was important for personal and professional identity, as well as providing a resource for support and debriefing. Additionally, if different advanced practitioners use different theories to inform their practice, this could encourage isolation and mean that best practice was not shared.

Role conflict

Role conflict is defined as divergence between the role expectations among different members of the role set (Bower et al. 2004). Bower et al. studied the introduction of a new primary health care role and concluded that the specification of the post-holder in the new role and the expectations among existing staff increased the potential for role conflict. In Northern Ireland, McKenna et al. (2003) investigated professional and lay views in relation to generic and specialist roles in the community and noted that there was concern that specialisation

(while welcome) would lead to role conflict, role overlap and role confusion. Bridges et al. (2003) used an action research approach to explore the impact of one new role (inter-professional care coordinators) in a large London trust. They noted that the tensions arising with this new role were associated with the lack of fit of the role within the hospital's traditional hierarchy. This lack of fit within existing structures was also found in an evaluation of an oncology nurse specialist role in Northern Ireland (McKenna et al. 2004). In the latter case, the nurse's theoretical orientation on compassion and care conflicted with the physician's emphasis on technology and cure. Pearson (2003) argued that role confusion and conflict have become endemic in nursing for a number of reasons. He concluded that although the contribution of nursing is difficult to define in an evolving profession, the re-thinking of role boundaries has never been as important as it is now.

Summary

A sociological perspective, in particular a structural-functionalist approach, emphasises that new roles bring new behaviours which can often challenge people's expectations of how an individual should behave. The consequences of this can be role conflict and role stress. An agency approach emphasises the autonomy of the individual to shape and create new roles and hence new expectations of their behaviour. Both of these approaches can be helpful in increasing understanding of the impact these new roles might have on nursing practice (see Reflective Exercise 4.10). They can also help to prepare nurses for their new roles, especially if they are aware of these possible consequences.

Reflective Exercise 4.10

The use of non-nursing theories to shed light

Thus far we have considered what is meant by the term 'role'. We have also recognised that it has certain dynamic attributes. You have been introduced to role theory, which, like all theories, is composed of a number of concepts linked by statements called propositions. Some of these concepts include role expansion, role extension, role norms, role set, role stress, role confusion, role overlap and role conflict.

You can see that a theory from the social sciences (role theory) can help to describe, explain and possibly predict behaviour that is of importance in understanding nursing. We suggest that you consult the literature and identify another non-nursing theory that impacts on how nurses work. For example, you might focus on learning theory, the theory of planned action or communication theory. Write a page about it, including its main concepts and how these relate to each other. You could usefully discuss this with your fellow students.

The influence of the biomedical model on nursing roles

Previously we have looked at some sociological role theories to help us to appreciate how theories from another discipline such as sociology can lead to increased understanding of the nursing role within health care systems. In this section, we look at a model from

medicine: the biomedical model which may be used by nurses in these new advanced practice roles. Put simply, the biomedical model is composed of concepts such as assessment, diagnosis, prescription and treatment. It is the theoretical framework used by most doctors in their everyday practice. The development of advanced and specialist roles has had implications for the education and training of nurses for these roles. Some roles necessitate nurses learning advanced assessment, diagnostic and prescribing skills, which traditionally have been the exclusive remit of medical practice. Therefore, the educational provision for these nurses has had to incorporate the knowledge and skills needed to carry out these functions.

A brief history of the biomedical model

The biomedical model has a long history and it is no surprise that it has influenced the development of some nursing theories and nursing roles while impeding others. Florence Nightingale (1859) was of the opinion that medicine and nursing roles should be clearly differentiated from each other. Prior to the establishment of her nurse training school at St Thomas's Hospital in London, nurses were lower-order Sairey Gamp-like figures. By contrast, physicians came from the respectable middle and upper middle classes and, invariably, their social and educational backgrounds were very different from those of the nurses who were their subordinates. Therefore, in Nightingale's 19th century, doctors and nurses were separated by their gender, social class, language and education, a differentiation that was to remain for most of the 20th century.

The scientific basis for the biomedical model can be traced back to Hippocrates, Aristotle and Galen. From Chapter 2, readers will recall that in the early 17th century Descartes fostered the notion of the body as a machine. Disease was viewed as the consequence of breakdown and the physician's task was to repair the machine. Most physicians base their treatment philosophy on this fundamental tenet of reductionism. This implies that all behavioural phenomena must be conceptualised in terms of physiochemical principles (Engel 1977). Over the years this basic precept has been accepted not only by many health care professionals but also by the public.

The biomedical model process

Within the biomedical model, the preliminary assessment is of great importance to physicians. The initial examination will ultimately lead to the recognition of signs and symptoms. Kim (1989) believed that the proponents of the biomedical model have a vested interest in searching for abnormal clinical features to confirm the presence of illness. These signs and symptoms are categorised into patterns, which in turn form the basis for diagnostic labelling. Chapman (1985) maintained that such labelling has a dehumanising effect because the client is envisaged as little more than a disease entity.

For the biomedical model, knowing the disease inevitably determines the treatment strategy. However, the goals of therapy might not be client-centred, and the individual may adopt the sick role (Parsons 1952) and the client role with the obligation to cooperate. This compliance is an important element in the treatment process. Traditionally, nurses were also expected to comply and cooperate with the physician's orders. Therefore, while the therapeutic plan may present the façade of an egalitarian team approach, the doctor as the healer was viewed as superior to all other health professionals.

Benefits of the biomedical model

The biomedical model does have major advantages for the treatment of illness. Advances in medically oriented cures have freed many clients from the effects of disturbing symptomatology and contributed to their early discharge. Mitchell (1986) believed that because of its universality, prospective clients are familiar with it and, as a result, the public find it comforting to be cared for within a framework they can recognise. It is important that nurses in new roles are aware of these factors and realise the contribution of the biomedical model. Nonetheless, nursing's disenchantment with the pervasiveness of the biomedical model has been one of the main reasons for the development of theories in nursing. Now that nurses are bringing their unique perspective to the job, the biomedical model no longer suffices.

Limitations of the biomedical model

Due to the intense scrutiny by nurse theorists and others from different disciplines, the limitations of the biomedical model for nursing soon became apparent. In the traditional hierarchy within health care, nurses were subservient within a handmaiden role (McMurray 2010). This servile position was seen by many to be due to a tenacious reliance on the biomedical model (Meave 1994). According to Peplau (1987: 18)

> Well into the 1940s, many textbooks for nurses, often written by physicians, clergy, or psychologists reminded nurses that theory was too much for them, that nurses did not need to think but rather merely to follow rules, be obedient, be compassionate, do their duty, and carry out medical orders.

Stockwell (1985) also commented that as an observer of signs and symptoms, the nurse was the eyes and ears of the doctor, and as a practitioner he or she was the hands and feet of the doctor, carrying out the prescribed treatment. Having such a single role focus did not allow for independent action and there was a danger that it led nurses to ignore aspects of the client that did not fit neatly within the boundaries of the biomedical model. Constrained within this model, nurses were ill-equipped to care for the patient as a whole person or the family as a whole unit. Nursing's adherence to physicians' orders fostered a fascination with cure, with care often being placed in a secondary position. It is no surprise that when faced with illness, members of the public value the emphasis on cure. However, cure without care is an empty phenomenon and many chronic and terminal illnesses require an emphasis on care and palliation rather than cure.

The biomedical model and new roles in nursing

Given the limitations of the biomedical model, concern has been expressed over the development of new nursing roles in areas that were previously the remit of medicine. One of the ways in which roles were developed was on a medical substitution basis where nurses performed roles and tasks that were previously associated with medicine (Scholes et al. 1999; Scholes and Vaughan 2002). Ewens (2003) stated that this development is attractive to a profession like nursing, which has been dogged by insecurity, low status and gender inequality. However, there is a danger of nurse specialists following a *medicalised* descriptor of their role. This is due, in part, to the failure of the nursing profession to define not only specialist nursing, but also generalist nursing practice. The generalist versus the specialist debate has

been ongoing in the nursing literature (McKenna et al. 2003). The potential deskilling of the 'generalist' nurse has also been highlighted as a concern for those debating the role of the specialist nurse and nurse practitioner (Williamson et al. 2012). Interestingly, specialist nurses may want to keep specialist knowledge to themselves and generalist nurses may be happy to leave complex issues of patient care to their specialist colleagues.

Jack et al. (2004) did find this potential deskilling of clinical nurses to be voiced by student nurses. The cause for this was the generalist being said to 'pass the buck' to the specialist and the specialist being said to 'adopt a sense of superiority' over the generalist. It is also possible that the more talented and qualified nurses are those who are 'creamed off' to the specialist roles and that this could be to the detriment of the remaining staff, possibly resulting in a deterioration of standards and outcomes.

It is a given that due to new technologies, knowledge and skills, all professions progress to new practices, leaving behind what may be perceived as mundane tasks and duties. After all, to remain professionally static is to go backwards. Accepting this, nurses have to be careful with regard to what they shed from their professional portfolio. If they unthinkingly take on more medical work they could become little more than technicians and, in the process, transfer to unqualified assistants those practices that patients and their families value most highly. If nurses were to become 'mini-doctors', would they have a greater affiliation to the biomedical model or would they bring with them the best aspects of nursing theories? We will discuss this in the next section.

The relevance of existing nursing theory to new nursing roles

You will recall from Chapter 3 that in terms of abstraction there are three main levels of theory, with meta-theory sometimes referred to as a fourth level. Nonetheless in this section we will focus on the three levels that in part reflect Merton's (1966) categorisations of grand theory, mid-range theory and practice theory (see Reflective Exercise 4.11).

Reflective Exercise 4.11

Grand, mid-range and practice theory

Go back to Chapter 3 and refresh your memory as to the differences in these three types of theory.

It will be argued that grand theory has limited value for those nurses who have taken on new roles. In contrast, the less abstract and more easily operationalised mid-range and practice theories have become crucially important for such nurses.

Relevance of existing 'grand' nursing theories

McKenna (1997) estimated that there were over 50 nursing theories, most of which were formulated many decades ago. The obvious point to consider is whether these old theories are still relevant to the new roles that nurses are undertaking or whether there is a need for

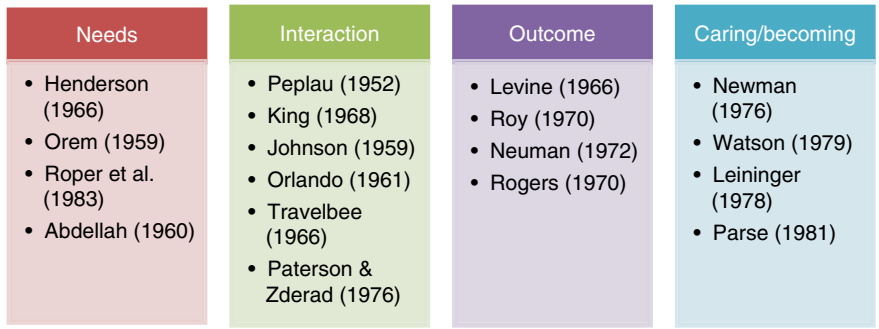

Figure 4.4 Classification and examples of nursing 'grand' theories (Meleis 2012).

their adaptation or their amalgamation with the biomedical model. We did identify some examples of grand theories in Chapter 3, and Figure 4.4 is a reminder of how Meleis (2012) classified these models.

Historical overview of the development of nursing theories

As we saw from Chapter 1, Hildegard Peplau (1952) has been given credit for formulating the first contemporary theory in nursing in her development of the 'theory of interpersonal relations'. After leaving Columbia University, she developed her theory inductively through reflecting on a long career in psychiatric nursing. She also developed it deductively through the influence of the psychiatrist Henry Stack Sullivan's (1953) interpersonal relations theory. Peplau's work influenced later theorists who used interaction and 'interpersonal relationships' as a basis for their work, such as Johnson (1959) and Hall (1959). More will be uncovered about these theories in a later chapter.

The 1960s saw the publication of theories by Abdellah et al. (1960), Orlando (1961), Wiedenbach (1964), Levine (1966), Travelbee (1966) and King (1968). Of these, Abdellah, Orlando and Travelbee were undoubtedly influenced by Peplau. We would argue that many of the new roles undertaken by nurses require expertise in interpersonal relationships. After all, specialist nurses are the lead practitioners for a range of services, such as diabetes clinics, health promotion clinics and clinics for adults with depression.

In the mid-1960s, Henderson, Wiedenbach and Orlando, previously students at Columbia University in New York, worked as lecturers in the Yale School of Nursing. Here theorists began to study how nurses practised and the effect this had on patients. Myra Levine, while also working at Yale, put forward her conservational theory of nursing (Levine 1966). It was also at Yale that the philosophers Dickoff and James (1968) wrote their seminal work on a 'theory of theories', referred to in Chapter 3. Their work led nurses to realise that they, as practising nurses, could make a major contribution to the formulation and use of theory.

The rapid growth in the number of nursing theories witnessed in the 1960s continued into the 1970s, with the work of Roy (1970), Rogers (1970), Neuman & Young (1972), Riehl (1974), Adam (1975), Patterson and Zderad (1976), Leininger (1978), Watson (1979) and Newman (1979). Unfortunately, many of the theorists simply presented their theory to the nursing masses and made no effort to critique, analyise or evaluate their work. Theorists were lauded across the US nursing fraternity, and dissent against the new theories was discouraged.

While the 1980s witnessed an acceptance of the significance of theories for nursing in Europe, in North America at least there seems to be a slowing down of the number of theories being developed. There, only three new grand nursing theories were published in the 1980s, by Parse (1981), Fitzpatrick (1982) and Erickson et al. (1983). Interestingly, Parse and Fitzpatrick constructed their theories not from first principles but from Martha Rogers' earlier theory (1970). This 'borrowing' of theory from other nurse theorists represented a new and interesting departure for the development of nursing knowledge.

While there was a slowing down in the development of new theories in the US, there was a surge in theory development in the UK. Although Nightingale's teachings are held up to be the first attempts at nurse theorising (Nightingale 1859), the UK did not boast a pedigree of theory development. It was not until the 1980s and 1990s that some British nurses followed their American counterparts and began to formulate grand theories, including work by Roper et al. (1983), McFarlane (1982), Stockwell (1985), Wright (1986), Clark (1986), Minshull et al. (1986), Green (1988), Bogdanovic (1989), Friend (1990), Yoo (1991) and Slevin (1995).

Limitations of 'grand' theories

Most of the grand theories in nursing have been tried but not tested. Their broad scope and nebulousness left many nurses disenchanted with them. While their philosophical underpinnings of self-care, interpersonal relationships, adaptation and interaction are still important for nurses, their inability to be operationalised has been a frustrating element and their use as frameworks to develop and lead practice has diminished in late 20th and early 21st centuries.

Looking at grand theories through a 21st-century lens, it can be argued that these theories were designed for a different era and a different type of nurse. Just as nurse teachers often castigate nursing students for using out-of-date literature, we too should question whether using nursing theories developed 40 or 50 years ago is appropriate when nursing has moved on philosophically and practically. It could be argued that we need new theories to reflect the multiple new roles that nurses are undertaking. Although nursing has extended its remit into medicine, the biomedical model will not serve nurses well in the brave new world that is specialist and advanced practice.

Relevance of existing 'mid-range' nursing theories

We discussed mid-range theories in Chapter 3, and Merton (1968) maintained that mid-range theories were particularly important for practice disciplines. This is of great relevance in the development of new roles. Specialist and advanced nurses require theories that are research-based and can be operationalised in the delivery and enhancement of patient care. Although only recently receiving increasing attention in the UK, over 20 years ago there was a call for the development of mid-range theories concerning the management of pain and the promotion of sleep (Jacox 1974). The time is right for the development and employment of mid-range theories by nurses in new roles.

As we saw in Chapter 3, there are many mid-range theories with the potential to be readily applied to practice. Some emerged from the 'grand' theories, such as Orem's mid-range theory of self-care deficit, and some emerged inductively from practice. The example we gave was Swanson's (1991) mid-range theory to be used in perinatal nursing and we gave miscarriage as an example.

There are other mid-range theories on menstrual care, family care-giving, relapse among ex-smokers, uncertainty in illness, peri-menopausal process, self-transcendence, personal risk-taking and illness trajectory. The beauty of mid-range theories means that they can be applied readily to practice. From the previous discussion it has been stressed that nurses in new roles are often professionally isolated (McKenna et al. 2005). Mid-range theories can provide them with the theoretical and professional security that autonomy and accountability in new roles require. Nonetheless, it is important to be aware of the threat they pose to communication and collaboration between generalist and specialist nurses and across different specialities.

The place of theory in advanced practice education

Initially some advanced practice and specialist roles were developed and granted to post-holders because they possessed a great deal of experience obtained through long immersion in practice settings. Subsequently, there were calls for advanced practitioners to be educated to at least Master's level, and to be taught specific skills and knowledge suited to their new role. The expectation was that advanced practitioners should have appropriate levels of 'know how' knowledge, which is complemented by 'know that' knowledge provided in Master's programmes. An important question is what kind of 'know that' knowledge should be taught in these programmes. As we identified in earlier chapters, knowledge used for nursing practice is complex and eclectic. Gerrish et al. (2011) argued that advanced practice nurses place great emphasis on using evidence-based guidelines in their practice. This reflects the current health care context that values evidence-based practice with a particular emphasis on 'know that' knowledge. Gerrish et al. (2011) further argued that nurses in advanced roles are 'knowledge brokers', in that part of their role is to identify, appraise, synthesise and disseminate knowledge to other clinical nurses in the team. Part of this knowledge-brokering role for advanced practice nurses could be to develop, use and test nursing mid-range and practice theories, which will contribute to the further development of the nursing knowledge base for nursing practice (see Reflective Exercise 4.12).

Reflective Exercise 4.12

From grand theory to mid-range theory to practice interface

It is suggested that grand theory is the higher-level framework from which mid-range theory derives. It is further suggested that mid-range theories are typically specific enough to allow concrete issues or questions to be raised and then tested and applied within practice theory. This suggests that, in turn, practice theory is derived from mid-range theory.

Do a brief literature review of the three forms of theory, concentrating mainly on the relationships among them. It is often difficult to explain such relationships in words. On this occasion, make notes during your review, but use these to produce a figure or diagram showing the relationships among the three forms.

Relevance of existing practice theories

As early as 1964, Wald and Leonard (1964) were the first to argue for a 'practice theory' to guide nursing actions. They maintained that theory should emanate from practice and be used and tested in practice and have incorporated within it causal hypotheses. In other words, with practice theory a nurse should be able to say, 'If I do this then the following will happen.' Therefore, practice theory prescribes the clinical interventions of the practising nurse. An example of a practice theory is Scheel's (2005) theory of interactional nursing.

The view of practice theory being a directive for practice is important for nurses in new roles. For instance, specialist nurses running a pain clinic know that they can reduce the patient's experience of pain by undertaking specific actions, while nurses specialising in care of the elderly know that pressure area damage can be reduced by turning every two hours. Similarly, specialist preoperative nurses know that postoperative anxiety can be reduced by providing the patient with information before surgery. Because this may not happen every time with every patient, this is not a law; however, since it should have the desired effect with most patients, it represents practice theory. By using practice theory, nurses are going further than simply describing, explaining or predicting a phenomenon; they are prescribing actions that will, all being equal, have positive effects. Therefore, more so than mid-range theory, practice theory provides the specialist or advanced practitioner with a repertoire of practices whereby the outcome is almost predictable. Wooldridge (1992) maintained that:

- Practice theory should be stated in such a way that the assumed cause–effect relationship between the mean(s) and the goals can be empirically tested.
- Practice theory should focus on causal agencies that are manipulable by the practitioner, on effects that are deemed relevant to evaluating the achievement of practice goals, and on those contingent conditions that are applicable to practice situations.
- Practice theories developed by a given profession should focus on the means for which that profession can assume autonomous prescriptive authority, both through direct manipulation of practice and the structuring of practice guidelines.

Using the biomedical model as a framework to guide nursing practice in these new roles will not be sufficient. It may be useful to revisit some of the existing nursing theories, in particular mid-range theories, to test their relevance for contemporary nursing practice in new roles. Similarly, the practice theories used by advanced practice nurses should be identified, articulated and tested to add to the body of nursing knowledge.

Conclusion

The number of new roles in nursing is increasing worldwide, and in some cases these roles were previously part of the remit of other health professionals. These new roles are having a major impact on nurses and nursing. To understand the issues it is important first to understand role theory, which will illustrate the dangers of role strain, role confusion and role conflict.

Within these new roles, nurses still require theories to guide their practice, but there has been little discussion to help specialist nurse practitioners, advanced nurse practitioners or nurse consultants with theory selection and use. Because many of the interventions undertaken by nurses in new roles were previously done by physicians, it is unclear whether all

aspects of the biomedical model should be embraced. Also, nursing theories that were formulated many decades ago may not be appropriate and these include most of the grand theories of the late 20th century. It is argued that mid-range theories and practice theories are the most useful and these should be adopted as guides for prescribing nursing interventions.

Revision Points

- Changes in health care, demographics and technology have led to the development of new advanced practice roles in nursing.
- These developments have raised important issues, including scope of practice, governance and the education and preparation of nurses for advanced practice roles.
- As the health care setting is dynamic and changing, three main sets of theoretical perspectives were examined as to their utility for these new roles: role theory, the biomedical model and existing nursing theories.
- It was concluded that mid-range and practice theory offered the greatest potential for these new roles.

Useful web links

www.aanpe.org/ANPTheLiteratureLists/Literature2000Onwards/tabid/1388/language/en-US/Default.aspx

Don't forget to visit to the companion website for this book:
www.wileyfundamentalseries.com/nursingmodels
where you can find self-assessment tests to check your progress.

5

Nursing theories or nursing models

Outline of content

In the previous chapter we described how new nursing roles and nursing theories have evolved and the importance of mid-range and practice theories for guiding practice within these new roles. In this chapter we will further explain construction of the theory, talk about the often controversial relationship between theories and models, and show how models can lead to the development of theory. In the following section, we will build on what was described and discussed in previous chapters. We will finish by outlining in detail the advantages and disadvantages of nursing theories.

Learning outcomes

At the end of this chapter you should be able to:

1. Explain reasons for the development of nursing theory
2. Define nursing 'theory' and 'model'
3. Explain the basic parts of the theory
4. Differentiate between nursing theory and nursing model
5. Discuss theory classification
6. Explain the main paradigms used in theoretical nursing
7. Describe the elements of the metaparadigm
8. Outline the main criticisms and benefits of nursing theories

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Introduction

In Chapters 1 and 3 we explained that there are numerous definitions of nursing theories. You will have seen that the terms grand theory and model are used interchangeably. You saw that one of the most important features of a grand theory/model seems to be its abstract nature (Fawcett 2005a; Meleis 2012); mid-range theories are, by contrast, more narrow in scope and more defined and refined. Theories are always in the process of development and the differences between the terms theory and model are at best tentative, semantic and unclear. We have stated on numerous occasions that nurses employ theories in their everyday work, using different types of theories to help describe, explain, predict and, as Dickoff and James (1968) pointed out, prescribe nursing care. It is also important to bear in mind that different authors have different views on the level of abstraction of their own and others' theories. One way of classifying nursing theories is according to their level of abstraction (McKenna 1997; Meleis 2012); another is by reference to the range of the theory (Marriner Tomey 1998). But first let us explain reasons for nursing theory development.

Reasons for historical nursing theory evolution

In Chapter 1 it was noted that all the early 20th-century nursing theories emanated from the USA, with theories starting to emerge from the UK some 20 years later (see Reflective Exercise 5.1). The exception was that of Florence Nightingale. You saw in Chapter 3 how in the late 1950s other American nursing theories were developed, essentially to distinguish nursing from other health professions and to define nurses as professionals and their essential obligations to patient care.

In the 1950s, nurse education programmes were increasingly being delivered, not in schools of nursing on isolated hospital sites but in universities. It comes as no surprise, then, that the various curricula had to show that nursing had its own knowledge base and scientific approaches for studying nursing. Otherwise all the lectures would be based on a variant of the biomedical model and of social and psychological theories. You will recall that the basic structure of the biomedical model was discussed in Chapter 4. Therefore, the reasons why theorising took place in 1950s America were:

- the desire to develop a scientific basis for nursing practice;
- the quest for professional recognition;
- the advent of university education for nurses;
- the increase in the number of master's and doctoral-prepared nurses;
- women's contribution to the Second World War effort, leading to an increase in the debate around the female role in work and education;
- the wish to make clear the boundaries of nursing and nurses' work.

In Chapter 4 you were introduced to the names of theorists who developed their theories in America in the 1960s and 1970s. Interestingly, many were reluctant to claim theoretical status for their work. It would seem that such reluctance was no longer common in the 1980s and 1990s. For example, in 1970 Orem published her first book *Nursing: Concepts of Practice*, with subsequent editions in 1980, 1985, 1991 and 1995. She worked alone and with

Reflective Exercise 5.1

Reasons for the evolution of theories

In Chapter 4 you saw a long list of theories that were developed in the US and a shorter list of those developed in the UK. Form a small group with your fellow students and consider whether the reasons for their emergence were the same in each country and why the times and places were important.

Also consider the reasons why there was a slowing down in the development of nursing theories in the US in the 1980s and in the UK in the 1990s.

colleagues on the continued conceptual development of the self-care deficit nursing theory. The fifth edition is organised into two parts: nursing as a unique field of knowledge, and nursing as practical science. In the 1980s some theorists also tried to revise their earlier work in line with some of the criticisms of meta-theorists (Pajnkihar 2003). Orem developed her theory with the help of theory analysis and evaluation and according to the changes and needs in practice.

So-called 'caring theories' first appeared in the 1980s. Perhaps the most famous was that of Jean Watson. In 1998, Tracey et al. wrote that Watson's framework was still being taught in numerous baccalaureate nursing curricula in the USA and that these concepts were also widely used in nursing programmes in many countries, including the UK. Morris (1996) noted that Watson's human care theory was used as the basis for doctoral nursing programmes in the USA and Canada. The incorporation of this theory model into nursing curricula added a new dimension to nursing as a whole (Pajnkihar 2003). As the recognition of the importance of caring in nursing has grown, researchers in middle and eastern Europe have explored the value of nursing theories. In Poland, for instance, Zarzycka et al. (2013) noted the importance of caring theories. There is also great interest in caring theories in some southern European countries and Russia, where research projects on the value of Watson's theory for education and practice have been undertaken but not yet published.

In the 1980s it was generally accepted among most theorists that a qualitative research methodology with a historicist paradigm (see Chapter 2) was the basic methodology for nursing. Therefore, many nursing theorists started to revise their work, thus increasing the number of mid-range theories (Pajnkihar 2003). As a result, in the 1990s, numerous research studies were carried out in a drive to test nursing theories (Hickman 1995) and many mid-range theories emerged from this work (Pajnkihar 2003).

The stimuli for the development of theories in the UK in the 1980s, just as nurse theorising was slowing down in the USA, are interesting. These may have followed from the perception that American theories were not suitable for practice in the UK. As with the US, the introduction in the UK of university education for nurses in the late 1970s forced many lecturers and students to look at how knowledge unique to their discipline might be developed and taught. A similar trend can be seen in other European countries and in Australia, where nursing programmes were being delivered in universities. In addition, as had happened previously with their American counterparts, UK nurses began to examine the biomedical model and found it an inappropriate framework to guide nursing care. The biomedical model was also questioned in some other European countries but later than in the USA and the UK.

Model

In Chapter 4 you saw that the term model, in the eyes of most meta-theorists (apart from Jacqueline Fawcett), is synonymous with grand theory. However, the term model continues to be referred to in the literature and in practice. You will hear practising nurses talking about Orem's model or Roper, Logan and Tierney's model. They would seldom refer to these conceptualisations as theories. Therefore, in this short section we will discuss what is meant by models. You can decide for yourself if you think that model or theory is the best way to describe the work of the various theorists.

The term 'nursing model' has been defined as (Chinn & Kramer 2004: 264)

> a symbolic representation of empirical experience in words, pictorial or graphic diagrams, mathematical notations, or physical material [and] a form of knowledge within the empirical pattern.

Some of the simplest definitions of a model describe it as a representation of reality (McFarlane 1986) or a simplified way of organising a complex phenomenon (Stockwell 1985). Other authors have elaborated on both these descriptions. Fawcett (2006) stated that a model comprises a set of concepts and the assumptions that integrate them into a meaningful configuration. Thus models are tools that enable users to understand more complex phenomena in a simple way.

Models are highly abstract and represent a world view that helps nurses to understand easily the many such world views that are encountered every day (Theofanidis & Fountouki 2008). McKenna (1994) suggested that a model is a mental or diagrammatic representation of care that is systematically constructed and assists practitioners in organising their thinking about what they do. In addition, transferring their thinking into practice benefits the patient and the profession. Models can therefore be seen as conceptual tools or devices that can be used by an individual to understand complex situations and put them in perspective.

Models take various forms. Some are presented in a one-dimensional format as verbal statements or philosophical beliefs about phenomena. One-dimensional models tend to be at a high level of abstraction. They cannot be taken apart or explicitly observed, but they can be thought about and mentally manipulated. Two-dimensional models include diagrams, drawings, graphs or pictures, such as those that show how parts fit together into a whole. Think of a diagram of a plant in a gardening book – this is a perfect illustration of a two-dimensional model. Most models tend to begin as a one-dimensional conceptualisation and later develop into a two-dimensional format.

Three-dimensional models are what Craig (1980) referred to as physical models. These are scale models or structural replicas of things. In this form they may be intimately examined and manipulated. Examples of three-dimensional models are an architect's model of a building or a model of a car.

All three classes of model provide enormous amounts of information to those who use them. They tend to give a structured view of the particular circumstances under consideration. In this way users are able to understand the represented concepts and the relationship of those concepts (propositions) to each other.

One-, two- and three-dimensional models try to represent reality, from a high level of abstraction to the concrete, giving a structured view of how the parts fit together as a whole (see Reflective Exercise 5.2).

Reflective Exercise 5.2

The three model dimensions

Think of an object and conceptualise it, using all three dimensions described. For instance, you could take the example of a bodily organ. If you were to describe what it is and what it does, this would be a one-dimensional model. Now, if you were to draw a rough diagram of the organ, this would be a two-dimensional model. This model is likely to provide you with more information than the one-dimensional version. If you were next to obtain a plastic teaching replica of the organ in your school of nursing, one that can be taken apart and its internal structures manipulated, this would be a three-dimensional model, providing even more information about the structure of the organ than the previous two models. You could do the same exercise with kitchen appliances, methods of transport and so on.

Now carry out the exercise and write a short note about the different dimensions and whether they provided you with increasing knowledge about the object.

We can define models as describing nursing phenomena and assumptions in very abstract and logical ways. They can then be presented and organised into whole pictures using nursing language, words, mental pictures, diagrams, drawings or logical structures to help understand what was observed in practice. In this way, models help in organising and understanding situations in practice and in thinking about their reality. Models are very abstract tools in research for developing a theory. They are used in all disciplines and also in everyday life, e.g. toys and instructions on how to put together a new bookshelf. The oldest model in nursing is the biomedical model, which you saw in Chapter 4 and which still influences nursing education and practice.

Theory

In Chapter 1 we explained that there are numerous definitions of nursing theories. The theories describe, explain or predict how nursing may concisely but holistically and individually support and help patients, families or society at large, and support practice, education and research (see Reflective Exercise 5.3).

Reflective Exercise 5.3

Defining theory

Refer back to Chapter 1 to review the different definitions of nursing theory that were identified.

It is not necessary to reiterate the various descriptions of theory here, but the following section will show there that is still some confusion as to whether the work of a theorist is a

model or a grand theory or a paradigm. Readers should select the view they feel comfortable with and be aware that not everyone will agree with them. McKenna (1997) suggested that nurses selected the term model rather than theory because of their lack of confidence as a profession. At the time, they had only just entered the hallowed surroundings of the university, so how could they suddenly come up with all these theories. To call them models and steps towards theory building was more acceptable (see Reflective Exercise 5.4).

Reflective Exercise 5.4

Model or theory – you decide

In Chapter 1 you were introduced to theory and its working elements of concepts, propositions and assumptions. In this chapter, the term model has been described. Think of those theorists whose work you are most familar with and decide whether you think 'model' or 'theory' is the best descriptor.

Discuss your thinking with a fellow student or colleague – remember, they may not ageee with you but that does not mean you are wrong.

Theory or model?

Peplau published her theory of *Interpersonal Relations in Nursing* in 1952. You will learn more about her work in the next chapter. With no obvious explanation, she called it a 'partial theory for the practice of nursing'. A second edition of the book appeared in 1988 with little change. The aim of the theory, as Peplau (1952: xiii) said, was 'helping nurses to understand the relationship of nurse personalities to these functions'. Later, the metatheorist Marriner Tomey (1998) classified Peplau's work as a mid-range theory, whereas Belcher and Fish (1995) described it as a theory! In contrast, Reed (1996) classifies it as a practice theory (Pajnkihar 2003). More recently and shortly before her death, Peplau (1995a) did explicitly refer to her work as a theory.

Analyses of Orem's theory are replete with controversy. Meleis (1997: 398) asserted that it is a descriptive theory. According to Feathers (1989), Orem had developed a complete descriptive theory, adding some elements of explanatory theory. More recently, Marriner Tomey (1998) and Pajnkihar (2003) both saw Orem's work as a grand theory. Watson (1988: 1) argued that her caring theory is 'not hard scientific theory' but is still a theory – a descriptive theory. Some explanation from her as to why she thought this would have been helpful but it was not forthcoming. Tracey et al. (1998) confusingly stated that it could be called a conceptual model, a framework and a theory. Morris (1996) maintained that Watson's work is a conceptual model and Marriner Tomey (1998) classified it as a philosophy!

Some authors accept that models are the most appropriate precursors of theory (Chinn & Kramer 2004; Fawcett 2005a). This position centres on their belief in the rigid criteria necessary for theory recognition, and the inability of many models to meet them. In essence, their position is that models are believed to lead to the identification of concepts and assumptions and that, when tested by research, they will ultimately lead to the formation of theory.

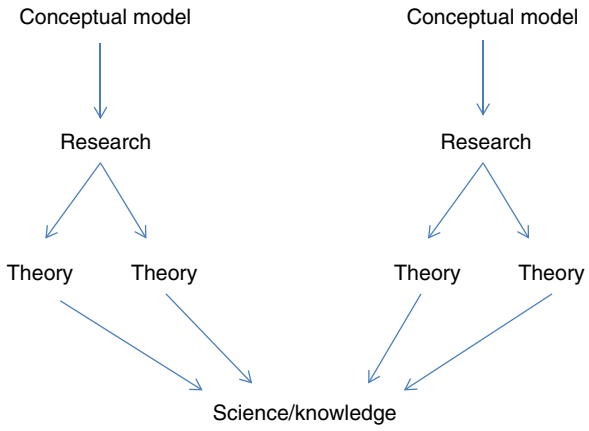

Figure 5.1 The theory–model controversy: position A.

The theory–model debate may best be understood by looking at the views of the chief protagonists. Jacqueline Fawcett was a firm believer in differentiating models from theories. In the opposite corner is Afaf Meleis, who has a determined view that all these conceptualisations are theories. Both are respected meta-theorists; let's examine their arguments.

According to Jacqueline Fawcett (2005a), models are more abstract than their theoretical counterparts. They present a generalised broad and abstract view of phenomena. To underpin her strong views Fawcett wrote several editions of two distinct books, one on nursing theories and the other on conceptual modes. She maintained that theories are more specific and precise, containing more clearly defined concepts with a narrower focus. So, as we have seen in earlier chapters, the difference is one of abstraction, explication and application. Let's refer to this argument as 'position A' (Figure 5.1).

This differentiation would appear to clear up the confusion, but Meleis (2007) argued that it matters little what we call these 'things'. She believed that much time has been wasted debating the differences between models, theories and paradigms. Rather, she maintains that time would be better spent evaluating the effects of these conceptualisations on patient care.

Meleis based her argument on her desire to concentrate on content and not on labels. She asserted that theory exists at different stages of development, from the most primitive to the most sophisticated form, and therefore even the simplest conceptualisation is a theory. Her stance would be that models are theories, but at a more abstract level than the theories developed through research. The most primitive may be referred to as grand (or broad) theories, while the most sophisticated are referred to as mid-range or practice theories. We will refer to this view as 'position B' (Figure 5.2).

However, for the purpose of this book you will have detected that the term we will use throughout will be theory (position B). The basis for this decision lies with Meleis's call for professionals to concentrate on substance (content) rather than structure (terminology). When theories or models are mentioned in the remainder of this book, we will be referring to grand theories, unless otherwise specified (see Key Concepts 5.1 and Reflective Exercise 5.5).

It is important that both theories and models present phenomena in systematic ways, that both help to organise the work of nurses in practice as well as in education, and both develop the body of nursing knowledge and science.

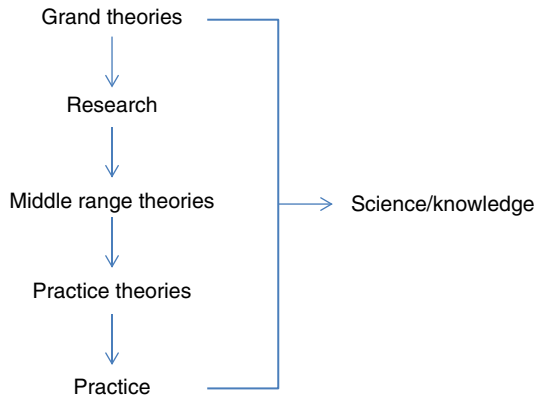

Figure 5.2 The theory–model controversy: position B.

Key Concepts 5.1

Theory and model

Theory exists at different stages of development and a conceptual model is a stage of development on the way to becoming a theory.

Reflective Exercise 5.5

Position A or position B?

Both positions can be supported by referring to various bodies of literature. We would urge you to view both approaches as worthy of consideration. However, for the purposes of this exercise, consider which position you are attracted to. Think of those theorists whose work you are most familar with and decide whether you think models or theories are the best descriptors. Write down the pros and cons of each and your justification for selecting your favoured position.

Discuss your thinking with a fellow student or colleague – remember, they may not ageee with you but that does not mean you are wrong. Check if they have identified the same or different advantages and disadvantages.

The classification of theories

Since the mid-1970s there have been various attempts to categorise the large number of grand theories into a number of common types. Aggleton and Chalmers (2000) believed that this trend would help nurses to make some preliminary decisions about the choice of theory

that was most appropriate for a particular clinical setting. This grouping of theories by some specific trait also leads to an understanding of the various schools of thought that underpin each theory. Systems of cataloguing theories often arise when the editors of a book try to arrange them into some orderly scheme.

The following section gives some examples of theory classification. Different authors classified theories according to the level of use that can be made of them in describing, explaining, predicting or (according to Dickoff & James, 1967) prescribing (McKenna 1997; Meleis 2012). Within the classification this means that descriptive theory is the least developed theory because it has no explanation, prediction or prescription power (Pajnkihar 2003).

For example, Meleis (2007) organised theories into those that 'describe what we do'; 'those that describe how we do it'; and 'those that describe the why of practice'. More recently, Wright and Gros (2012) refered to Meleis (2007) four schools of thought that provided an orientation of nursing theories: needs, interaction outcome and caring/becoming. In contrast, Stevens Barnum (1998) used the following classifications: intervention, conservation, substitution, sustenance and enhancement. Alligood and Marriner Tomey (2006) sorted theories into humanistic, interpersonal, systems and energy fields. Fawcett (2012b) talks about empirical, aesthetic, ethical theories, sociopolitical or emancipatory theories, and theories of personal knowledge. She differentiated theories according to organisational and individual factors that influenced evidence-based nursing practice.

Marrs and Lowry (2006) proposed an expanded hierarchy of nursing knowledge in which theories are classified. They sort components of nursing knowledge by level of abstraction: metaparadigm as the most abstract component, then philosophies, conceptual models, grand theories, mid-range theories, practice theories and empirical indicators as the most concrete.

Colley (2003) classified nursing theories based on the philosophical underpinnings of the theories (need, interaction, outcome and humanistic theories) and according to Polit et al. (2001) on the generalizability of their principles (meta-theory, grand theory, mid-range theory, practice theory) and to function (descriptive, explanatory, predictive, prescriptive).

Key Concepts 5.2

Classification of theories

Theories can be classified according to the level of use or function, their generalisability, level of development, philosophical underpinnings and their paradigmatic roots.

Classification of theories according to their paradigm roots

As you can see from the preceding section, theories are classified in many different ways. One of the most popular is a categorisation according to their paradigmatic roots. These are the systems, interactional, developmental and behavioural paradigms. You will recall from Chapter 1 that a paradigm represents a broad worldview.

Systems paradigms

These theories are largely based on the 'general systems' paradigm put forward by Von Bertlanaffy (1951). Put simply, a system is a collection of parts that function as a whole entity for a particular purpose. Therefore, the parts within a particular system are interrelated. These interrelationships may form 'subsystems' within the parent system. Similarly, the system itself may form part of an overall 'suprasystem'. If the system has permeable boundaries, it is called an 'open system'. If not, it is referred to as a closed system. In system theories, the patient is often referred to as an 'open system' (see Reflective Exercise 5.6). The work of Roy (1970), Neuman (1982), Johnson (1959), Parse (1981) and Fitzpatrick & Whall 1983) may be grouped under the systems paradigm.

Reflective Exercise 5.6

Systems

A system is made up of subsystems. Think of the human body as a system, with subsystems including the respiratory system, cardiac system, and so on. But systems exist in a larger suprasystem (e.g. family, class grouping). The 'human body' system interacts with other systems and has permeable boundaries because there are inputs into the system (e.g. knowledge, food, water) and outputs (e.g. waste, speech, perspiration). Therefore it is an open system.

Think of a hospital ward as a system. What subsystems could exist in that system? What suprasystem is the ward part of and what are the inputs and outputs to the system? What are the permeable boundaries that exist between this system and other similar systems?

Identify two other things that may be conceptualised as a system.

Interactional paradigms

Interactional theories have their origin in the symbolic interactionist paradigm (Blumer 1969). This paradigm emphasises the relationships between people and the roles they play in society. Nursing activities are perceived as interactional processes between practitioners and patients. Among the better-known interactional theories are those of Riehl (1974), Orlando (1961), Patterson and Zderad (1976), Levine (1966) and King (1968).

Take the example of a nurse assessing a patient. Here an interaction is taking place in which there is a transaction of information. The interaction and its results may be decided by the various roles played by the nurse and the patient. The nurse also reacts to the patient's interaction and vice versa, and both may alter their own interactional processes as a result of reactions from each other. This shows how the interactional theories can be applied to practice situations (see Reflective Exercise 5.7).

Developmental paradigms

The developmental paradigm originated from the work of Freud (1949) and Sullivan (1953). The central themes are growth, development, maturation and change. It is argued that human beings are constantly developing, whether this be physiologically, socially, psychologically or

Reflective Exercise 5.7

Interactional paradigms

Interaction theorists focus their attention on the relationship between the patient and the nurse and these theories can be applied to practice situations.

Think about a particular patient with whom you have worked. Think of the interaction that took place. Was it two-way or just one-way? How did you react to the patient's interaction and how did the patient react to your interaction? Was it an equal interaction or was one of you taking the lead?

spiritually. Development is seen as an ongoing process in which the person must pass through various stages. The nurse's role is to encourage positive development and to discourage the formation of barriers to natural development. The works of Peplau (1952), Travelbee (1964) and Newman (1979) are often perceived as having their foundations in developmental theory. Some of these theories will be discussed in greater detail in the next chapter.

Within a developmental paradigm, nurses are often encouraging growth and development, much as a gardener would do with plants. The patient may have had a stroke and have to live with a new disability or be a mother who has given birth to a handicapped child. Initially, care will be required for these patients to learn new attitudes, knowledge and skills in order to mature in the new situation in which they find themselves. Hopefully, their care will reach a point where they will no longer require the support and presence of the nurse or midwife because they will have changed to a higher level of growth within the limits of the disabilities.

Behavioural paradigms

These theories owe much to the theoretical formulations of Maslow (1954). Because of this, they are often referred to as 'human needs theories' (Webb 1986). Behavioural theories assume that individuals normally exist and survive by meeting their own needs. Included in this category is the work of Henderson (1955), Roper et al. (1980), Orem (1958), Minshull et al. (1986) and Wiedenbach (1964) (see Reflective Exercise 5.8).

Because there are no rigid criteria available to place theories into these paradigmatic classifications, it will not surprise you that there are disagreements among authors as to which grouping a particular theory belongs in. For instance, Orem's work has been seen as having its basis in the systems paradigm by Suppe and Jacox (1985), in the interactional paradigm by Greaves (1984), in the developmental paradigm by McFarlane (1986), and in the behavioural paradigm by Chapman (1985). Despite these disagreements, this method of classification has been considered a valid one for categorising nursing theories.

Current trends in nursing theories

Im and Chang (2012) described current trends in nursing theories and categorised theories into six major themes: focus on specifics, coexistence of various types of theories, close link to research, international collaborative works, integration into practice and selective evolution.

Reflective Exercise 5.8

Behavioural paradigms

You will recall from a previous chapters that Roper, Logan and Tierney's theory focuses on 12 activities of daily living (ADLs) and Orem's work focuses on self-care. In each case the nurse's role is to identify the patient's needs. In the former case, the needs are those where the patient is dependent for some of their ADLs; in the latter, the needs result from the fact that the patient cannot self-care.

In the UK, the most popular nursing theories in use in clinical settings are those of Roper et al. and Orem. Discuss with fellow students why human needs theories are so popular.

An easily understood article on human needs is that of Minshull et al. (1986). Read it and decide whether you see validity in this approach to theorising.

Theofanidis and Fountouki (2008) agreed that if a theory is adopted too rigidly, the care becomes vague. Even if theories are weak, there is still value in them because they may stimulate discussion and debate about the best nursing practice. Despite all that has been written, Schmenner et al. (2009) claimed that we cannot just criticise existing notions of theory and models without offering feasible alternatives. Nurses must appreciate different types of theories and critique them, and in this way contribute to the continued development of nursing (Colley 2003). It is possible that new interdisciplinary theories are needed to improve patient care (Bond et al. 2011).

What is important for the future development of theories is reflection on practice needs and to take into account situations in health care systems where interdisciplinary knowledge is needed. The point is not to develop new theories for their own ends, but to analyse, evaluate, test and apply current theories in practice to evaluate their usefulness. More attention is needed to develop clear criteria for theory analysis and evaluation. A strong connection between practice, research and theories has to be established.

The nursing metaparadigm

Regardless of how theories are categorised, there is a consensus of opinion that each metaparadigm must specify certain central concepts. These 'essential elements' have been referred to as the 'metaparadigm' of nursing (Fawcett 2005a). The metaparadigm is the overall paradigm or world view of a discipline. The metaparadigm in nursing is composed of four essential elements: person, nursing, health and environment (see Key Concepts 5.3).

Key Concepts 5.3

Metaparadigms: abstract components to cover practice phenomena, which usually include four essential elements – person, nursing, health and environment.

For Hardy (1978: 89), a metaparadigm is the 'broadest consensus within a discipline' or 'a gestalt or total view within a discipline'. Hardy also calls it the 'prevailing paradigm', presenting 'a general orientation or total worldview that holds the commitment and consensus of the scientists in a particular discipline'.

Fawcett pointed out that every discipline singles out certain named phenomena (broad concepts) with which it will deal uniquely and such phenomena combine to form the metaparadigm for that discipline. The metaparadigm acts as a vital unit or framework within which the more specific structures develop. Most professions have a single metaparadigm from which numerous theories emerge; contemporary nursing appears to have reached this level of theoretical sophistication.

During the 1970s and 1980s, authors wrote extensively about the importance of the essential elements of nursing science. The argument was put forward that if a nursing theory did not include assumptions about 'nursing', 'health', 'person' and 'environment', it could not be considered to be a theory (see Reflective Exercise 5.9).

Reflective Exercise 5.9

The metaparadigm

Get three or four of your colleagues together and spend 15 minutes considering how each of you describes 'nursing', 'health', 'person' and 'environment'. Write one sentence on each and try to refrain from using quotations from well-known theorists. Once you've all done this, compare what you have all written and then as a group attempt to categorise the views in the systems, interactional, developmental or behavioural paradigms.

However, the complete four-element metaparadigm has its dissenters. For example, Stevens Barnum (1998) excluded 'environment', and Kim (1983) excluded 'health'. Some authors believe that 'nursing' should be omitted as a concept, maintaining that its inclusion is a redundancy in terms and that instead the term 'caring' should be included (Leininger, cited in Huch 1995). Plummer and Molzahn (2009) found, from a review of the theories of Peplau, Rogers, Leininger, King and Parse, that health could be replaced by quality of life as a metaparadigm element. Schim et al. (2007) explored community and public health nursing in urban settings and suggested the inclusion of social justice as a fifth element of the nursing metaparadigm.

Kao et al. (2006) explored the western nursing four-element metaparadigm through a Chinese lens. Shattell (2006) commented that this provided nurses with theoretical knowledge of other ways of viewing the nursing metaparadigm by giving a refreshing look at an 'alternative' way of seeing the world.

As the metaparadigm represents the foundation stones for various theories, one would expect each theory to outline its beliefs and assumptions regarding the 'person', to present an identification of the person's 'environment', to define what 'nursing' is (and/or midwifery) and to discuss the theorist's views on 'health'.

Although each grand nursing theory conceptualises the four essential elements of the metaparadigm, they tend to view them from different perspectives. Therefore, how nursing, health, person, and environment are described and defined varies greatly from theorist to

theorist. So while theorists consider the same metaparadigmatic elements, they may emphasise different aspects and see them in different relations to one another. Such a rich diversity of assumptions concerning the same factors can only enrich the nursing profession (see Reflective Exercise 5.10).

Reflective Exercise 5.10

Metaparadigms in different professions

Each profession has its own metaparadigm, which encapsulates the central elements of that discipline. For architecture, they could be structure, design, aestheticism and materials. For the legal profession a metaparadigm might include, law, crime and justice.

Think about the professions of teaching and religion. For each one, identify what you believed the mataparadigm elements would be. You may want to compare these with what other students or colleagues thought.

How different theorists viewed the metaparadigm

In the following we extract the metaparadigm concepts from the works of Henderson (1966), Orem (1991, 1995), Watson (1988) and Peplau (1952).

Person

- Henderson (1966, 1991) believed that body and mind are inseparable, and viewed the patient as a person who needs help with basic life activities and with achieving health and independence, or to die peacefully.
- Orem (1991: 181) described a person or human being as 'a unity that can be viewed as functioning biologically, symbolically, and socially'.
- Watson (1988: 45) viewed the person as 'a being in the world' who is the locus of human existence. A person exists as a living and growing gestalt and possesses the three dimensions of being – mind, body and soul – which exist in harmony in good health, where the essence of the person is the soul, which is 'spirit, or a higher sense of self'.
- Peplau (1952: 82) defined humans as organisms that live in an unstable equilibrium (i.e. physiological, psychological and social fluidity). She asserted that all individuals have physical, psychological and social needs, and that in an unstable environment, they constantly meet new situations and new problems.

Nursing

- Henderson (1966) described nursing as a profession that helps people, sick or well, in the performance of the 14 basic life activities that contribute to health or its recovery (or to a peaceful death) that they would perform unaided if they had the necessary strength, will or knowledge.

- Orem (1995) described nursing as a specialised human service to society. She characterised nursing as action and assistance with the goal of helping people to meet their own demands for self-care on a therapeutic and continuous basis.
- Watson (1988: 73) asserted that caring is essential to nursing and is 'a moral ideal that includes concepts such as a phenomenal field, an actual caring occasion, and transpersonal caring', which are central to her theory. She saw nursing as both a science and an art. Watson (1988: 54) defined nursing as 'a human science of persons and human health-illness experiences that are mediated by professional, personal, scientific, aesthetic, and ethical human care transactions'. Watson (1988: 17) further explained that in this view of nursing as a human science, nursing can combine and integrate science with beauty, art, ethics and aesthetics of the human-to-human care process.
- Peplau (1952) defined nursing as a significant, therapeutic, interpersonal process. It functions cooperatively with other processes that make health possible for people and communities. 'Nursing is an educative instrument, a maturing force, that aims to promote forward movement of personality in the direction of creative, constructive, productive, personal, and community living'.

Health

- Henderson (1966, 1991) did not specifically define her own concept of health, but she sees it as the ability of people to function independently by reference to the 14 basic life activities. Therefore, health relates to independence.
- Orem (1995: 96) suggested that the 'term health has considerable general utility in describing the state of wholeness or integrity of human beings'. Orem (1995: 101) explained that well-being is used in the sense of an individual's 'perceived condition of existence'. The nursing domain concerning health involves the promotion and maintenance of health and protection against specific diseases and injuries.
- Watson (1988: 48) referred to health as 'unity and harmony within the mind, body, and soul'. To her, health is associated with 'the degree of congruence between the self as perceived and the self as experienced'. A person becomes ill when there is conscious or unconscious disharmony between these. 'Illness is not necessarily disease.'
- Peplau (1952: 12) maintained that health 'is a word symbol that implies forward movement of personality and other ongoing human processes in the direction of creative, constructive, productive, personal, and community living'. She saw health as a process whereby an individual has a quality of life that enables the contribution to personal and community living.

Environment

- Henderson (1966, 1991) did not explicitly define the environment, but through her explanation of what a patient is, it is evident that she was concerned with the influences affecting the life and health of patients, especially the family and cultural influences.
- For Orem (1991: 38), the person and the environment are in constant interaction and the nurse must consider the human environment, analysing and understanding the various 'physical, chemical, biological, and social features'.
- Watson (1988: 75) did not explicitly define environment, but the environment is specifically used in her 10 carative factors, in particular, the promotion of a 'supportive, protective, and/

or corrective mental, physical, societal, and spiritual environment'. Nurses must recognise the influence of internal and external environments on the health and illness of individuals and also the need to support and protect individuals.

- Peplau (1952: 14) defined the environment as forces existing 'outside the organism and in the context of the culture'.

Students often have problems differentiating between concepts of metaparadigms and basic concepts of theory and their interactions (see Reflective Exercise 5.11). Basic concepts of the theory are always synchronised and well connected with concepts of metaparadigms. For example, the central concepts of Watson's theory are human care, transpersonal care relationships, the self, the phenomenal field, events, actual caring occasions and carative factors.

Reflective Exercise 5.11

Differentiation between concepts of metaparadigms and basic concepts of theory

Go to the library or online and read up on Swanson's (1991) theory of caring. She explicated her beliefs about the four metaparadigm elements of concern to the discipline of nursing (nursing, person/client, health and environment) and defined the main concept of the theory: caring and five concepts of the caring process.

Consider whether nursing, health, environment and person capture the essence of nursing. Would you change any of these or add anything?

Limitations of nursing theories

We touched a little bit on the disadvantages of nursing theories in Chapter 1, and throughout the chapters we have alluded to their advantages. However, the following sections offer a comprehensive overview of the limitations and benefits of theories (see Tables 5.1 and 5.2). It will not surprise you that nursing theories have a number of well-publicised limitations and an equally large number of less well-publicised benefits. However, all theories can have benefits if they are analysed, evaluated and tested before being applied. Selecting a theory for practice and for education needs careful consideration as to what is needed, what can be gained or strengthened, and what characteristics have particular nursing and patient outcomes, as well as the level of knowledge development needed by nurses. There is no theory that can be right for all environments or fit into all nursing fields, or simply be the perfect one. If the wrong theory is selected, we cannot blame the theory for being wrong.

Grand theories have been well criticised and their disadvantages have not been ignored. The two major denunciations are the belief that most theories are abstract and therefore are merely untestable conceptual models (Fawcett 1995). Research carried out in Slovenia found nurses clearly wishing to use nursing theories but finding that there were too many of them and they were too hard to understand (Pajnkihar 2003). McCrae (2012) believed that some fail to bridge the gap between theory and practice due to misunderstanding and misuse. He believed that

Table 5.1 Perceived benefits of theories for practice.

- Assist student learning
- Help to structure patient assessment
- Permit meaningful communication between nurses
- Improve problem-solving
- Increase patient's satisfaction
- Identify the goals of practice
- Substantially improve quality of care
- Clarify nurses' realm of accountability
- Focus observations on important phenomena
- Guide and justify actions
- Clarify thinking among nurses about practice
- Provide others with a rationale for nurses' work
- Direct research into clinical needs
- Help to establish more holistic, compassionate, person-centred and individualised care

Table 5.2 Perceived limitations of theories for practice.

- Do not prepare nurses for the reality of practice
- Offer little guidance for action
- Too abstract, academic, idealistic and irrelevant
- Are not responsible for any change in practice
- Lead to premature closure on ideas
- Their application is a criticism of current practice
- Provide only tentative ideas about practice
- Unable to cope with multiple clinical foci
- Not empirically tested or evaluated in practice
- In some cases, they demand more staff than are available

there are various reasons for this: nursing eludes definition; theories are not compatible with evidence-based practice; there is a lack of prescription for practice; there are limits to professional demarcation and autonomy; they are irrelevant to modern health care; and too much documentation and specific jargon prevent nurses from giving individual care. Theories are also not part of everyday practice, are often too generalised and complicate practice (Colley 2003).

Webb (1986) differentiates between low- and high-level criticisms, the former being more easily overcome than the latter.

Low-level criticisms

Documentation

The emphasis on increased paperwork when using theories has alienated many practising nurses. For most nurses, the implementation of theories is seen as a paper exercise. According to Miller (1985), Roy's theory requires 16 pages of A4 to apply it properly! Wimpenny (2002: 350) explored the meaning of 'models of nursing' by practising nurses and one nurse's comment was, 'When I see models, I see documentation.'

The suitability of American theories

As most nursing theories have their origin in the US, it has been debated as to whether these theories are transferable to practice elsewhere. Wright (1986) suggested that there is nothing wrong with professionals from different nations swapping ideas, but that the application of one group's practices to another may not always be appropriate. If European nurses continually look to America for conceptual guidance, a manipulative process will have to be employed to assure the validity of US theories within European health services. Nursing theories from the US have their roots in a different culture, a different health care structure and a different training scheme. American nursing theories accepted uncritically and without previous analysis and testing into Slovenian nursing education and practice created difficulties for nurses (Pajnkihar 2003, 2011; Pajnkihar & Butterworth 2005). Culturally, different knowledge bases or beliefs and expectations can make some theories unworkable. For example, Orem's theory was typically developed for the American insurance-based health care system, while the health care system in many parts of Europe provided public health care for its citizens. On the other hand, McCrae (2012) questioned whether British models can be successfully introduced to the USA.

Jargon

Most of the available theories are characterised by elaborate and abstruse language. This has been referred to as 'abstract jargon' (Wright 1985) and 'semantic confusion' (Hardy 1986). This contributes much to the unmanageability of theories in practice. There is also the danger that the use of this 'jargonese' will lead to widespread confusion not only among practising nurses but also among the public and multidisciplinary colleagues. Cavanagh (1991: 127) explained that 'nurses are obliged to grapple with a new and often bewildering vocabulary before they can examine the model's utility in practice', and that some models may be 'too esoteric for nursing today'. One of the criticisms of nursing theory is that they are too generalised, overcomplicate practice and have very complex terminology, which means that nurses end up spending too much time trying to understand the new concepts and, as a result, overlook their relevance to practice. Inconsistent and interchangeable use of terminology in nursing theory aggravates poor communication in nursing and across multidisciplinary teams (Colley 2003).

A good theory should be stated in the simplest terms possible. Theorists therefore have a responsibility to put forward their theory in as simple a form as possible. Unfortunately most nursing theories have paid little attention to this concept of simplicity. For example, although Rogers (1970) is quoted as emphasising the need to avoid jargon, she sees the environment as 'a four dimensional negatrophic energy field identified by pattern and organisation, and encompassing all that is outside any given human field'. Similarly, 'adaptation' in Roy's (1971) theory means something totally different from 'adaptation' in Levine's (1966) theory. A 'stressor' is viewed as a negative stimulus by Roy (1971a), while it is defined as a positive force by Neuman (1982). As Bartle (1991) noted, theory is complex and effort is required to understand the specific language. If the reader needs to use a glossary or dictionary to understand typical terms included in the theory, the theory lacks semantic clarity, creating difficulties in practice and education (Pajnkihar 2003). Theofanidis and Fountouki (2008) maintained that the complex terminology represents a true problem for non-native speakers of English and therefore it would be better to focus on the content rather than the context. That is why Webber (2010) recommends reaching a consensus of key words and meanings associated with theory.

Although acknowledging the over-use of jargon in theories, Aggleton and Chalmers (2000) believed that singling it out as a major criticism was unduly cynical. Modern nursing is highly

complex and so theory must have complexity to be significant. As the concepts under study are abstract, precise theoretical language is inevitably complex. The problem is not reserved to theories within nursing: remember that Freud's theory introduced the terms ego, superego, id, Oedipus complex and Electra complex, while Jung's theory introduced extrovert and introvert!

Staffing issues

There is much discussion worldwide about nursing shortages. If a theory identifies goals that cannot be met due to lack of time, the hard-pressed nurses are likely to become extremely frustrated. This may also raise ethical issues. One wonders if it is morally right to uncover multiple needs in a patient when, because of staff shortages or short lengths of stay, only a few will be addressed. A nurse taking part in research investigating the acceptance of a nursing theory in practice said, 'Generally, theories are not well enough known. We do not have enough personnel and knowledge... We need theories to help us know the clients and to improve our work' (Pajnkihar 2003).

In addition to the lack of knowledge, there is the shortage of nurses, which often leads to the inadequate use of the biomedical model. Shorter duration of hospitalisation of clients is also regarded as important, because, as a consequence, a more intensive diagnostic therapeutic programme is required, which further compounds the neglect of new theories and adherence to the old and familiar (Pajnkihar 2003).

High-level criticisms

Conceptual substance

Many theories have been criticised for adopting a restricted view of nursing. Some authors believe that theorists have trodden a narrow path in their efforts to theorise. Elsewhere in this book we castigated the biomedical model for its emphasis on reductionism. However, the theories of Roper et al., Roy, Henderson, King, and Orem could also be ridiculed for being reductionist – after all they reduce the patient to a list of activities, needs or modes of adapting or to a set of self-care needs.

In Slovenia, eight different nursing theories are taught to nursing students. However, the overall curriculum is based on Henderson's theory of 14 activities of living, which has been criticised on the grounds that it is too narrow, does not encompass the client holistically, and leads practitioners mostly to physical care, washing and feeding. Only recently have some other nursing theories been introduced into practice, but Henderson's theory still dominates. A nurse taking part in a study explained that: 'Henderson is applied, as she brought some system into routine work, but, emphasising only the patient's physical needs, she proves too narrow' (Pajnkihar 2003).

This reflects a similar situation as that in the UK, where Roper et al.'s theory of Activities of Daily Living predominates. Readers may find it interesting to reflect that of all the nursing theories in existence, perhaps those of Henderson and Roper et al are the closest to the biomedical model.

There are also the contrasting accusations that, in an attempt to be all-inclusive, nursing theories provide inadequate guidance for practice. The belief that grand theories are general statements about care has led some nurses to think that a theory can be used in a wide range of settings. A blanket application of one theory may, according to Hardy (1986), be unwise and even dangerous.

However, Theofanidis and Fountouki (2008: 19) consider that 'models do not imply that everyone's world view is, or ought to be, the same; they merely help nurses to conceptualize the accumulative world views in a single, highly abstracted way and if a model was to provide all existing different world views, then the model would be a world size one.'

Ideal concepts versus practical reality

Most theories deal with practice as it ought to be, and not as it is. However, if we do not know what nursing or midwifery is, how can we work in the real world of practice? In considering this problem, Meleis (2007) felt that theorists were becoming more competent in articulating what theory is, rather than what is the substance of the practice itself. McCrae (2012: 224) believed that 'however cogent a theory is, it is soon redundant if it does not make sense to the practitioner'.

Nurses are often characterised as being anti-intellectual when it comes to research and theories. Although the apparent gap between what theorists believe and what goes on in the clinical setting is one reason for this, the imposition of theories by management encourages such reactions. The introduction by force of a theory that is supposed to be based on individual choice is an obvious contradiction. Watson (1988) explained that in formulating her theory she used knowledge from other disciplines and philosophies, as well as from eastern philosophy. For European nurses it may be difficult to understand nursing theories that have roots in a different culture, in eastern philosophy, a different health care structure or a different nurse education system. The need to be familiar with eastern philosophy and to have a liberal arts background may be asking too much (Pajnkihar 2003) (see Reflective Exercise 5.12).

Those who wish to introduce a theory into the clinical setting may be met by sceptical practising nurses who see theories merely as the results of academic exercises aimed at increasing the complexities of their already busy lives. In the UK, nursing theories have taken over the unpopular positions recently vacated by the 'nursing process' and 'primary nursing'.

Reflective Exercise 5.12

Limitations of theories – what do others think?

The main limitations of nursing theories have been outlined here. Can you think of any others that we have not identified? To help you to consider this, we would like you to take the views of patients, family members and other health care professionals into account. Write down what you believe they would think of all these nursing theories.

Benefits of nursing theories

Those who advocate the use of theories do so for a number of reasons. The two distinct benefits are the substitution of the biomedical model for delivering care and the understanding that theories lead to the development of nursing knowledge. These have already

been discussed. However, the literature highlights several other equally favourable advantages.

Alligood (2010a) pointed to the important benefits of theories from patients' and professionals' perspectives, considering them a systematic approach to care that is patient-oriented. According to Marrs and Lowry (2006: 49) 'nurses who use nursing theories provide an alternative base for nursing practice from a theoretical perspective'. There is no doubt that nursing as a profession and as a discipline needs a unique body of knowledge and that nursing theory provides an organised, systematic, empirical and logical view of the knowledge that nurses need for everyday practice, education and research in order to benefit their patients (Pajnkihar 2003).

A guide to practice

Colley (2003: 33) wrote: 'Ideally, nursing theory should provide the principles that underpin practice.' There is a consensus of opinion that the implementation of the nursing process without a theory to underpin it is an empty exercise akin to 'practising in the dark' (Aggleton & Chalmers 2000). Although British nurses have only recently been introduced to theories, they have been wrestling with the nursing process for some decades. It could be argued that they have put the 'cart before the horse'. By providing a systematic basis for assessment, planning, implementing and evaluating, theories offer a way to 'revitalise' the nursing process.

The nursing process is a problem-solving approach involving 'critical, logical and creative thinking', which is one of the bases of nursing practice (Leddy & Pepper 1998: 9). In many instances, the nursing process was also introduced in many European countries before an understanding of nursing theories. Therefore, nurses knew that they had to assess but did not always know what to assess; they knew they had to plan but did not always know what to plan; and they knew they had to intervene but did not always know what interventions to use. Nursing theories would have provided them with the missing details (McKenna 1997; Pajnkihar 2003).

In order to be implemented successfully and to have meaning for practitioners, the nursing process as a problem-solving exercise must be framed in a theory. Nursing theories also stress the importance of the wholeness and integrity of the person, thus further enhancing the practitioner's ability to provide individualised care. These theories are essential guides for practice, and as such they help to bring theory and the process of practice closer together. Theories are the best evidence for evidence-based nursing practice (Fawcett 2012b).

The usefulness of these frameworks has also been recognised in the areas of nursing education, administration and research (Nicholl 1992) (see Reflective Exercise 5.13). American nursing theories were first adapted for European countries and were used in nursing education rather than in practice. The same thing happened with the nursing process. Without nursing theory, which guides nurses in terms of what to observe and what kind of questions they need to ask, practice can prove to be problematic. When nursing education accepted theories, there was not enough knowledge in practice to deal with them. A nurse who took part in a research project observed: 'Practical work is not possible without theories, but many of them are hard to understand and the nurses' level of knowledge does not allow them to use the theories' (Pajnkihar 2003).

Reflective Exercise 5.13

Using Roper, Logan and Tierney's theory (RLT) for assessing patients' needs

Think back to your previous placements and choose one suitable patient you have looked after whose assessment notes you can access. Find a description of RLT model, read it and use this model to assess this patient's needs.

Did you find the RLT model understandable and useful in assessing the patient's needs? What were the pros and cons?

Education

Although the dichotomy between the classroom and the ward is well documented (Meleis 2007) and much was made of the theory–practice gap in earlier chapters, there is evidence to suggest that the structuring of an education programme around a theory is extremely beneficial for students (Aggleton & Chalmers 2000) and, as a result, theory and practice may eventually meet. Alligood (2011) stated that nursing theories provide important frameworks for nurse educators. To ensure a strong theory–practice relationship, we have to incorporate theory into the curricula. Educators must be familiar with strategies to ensure this and also know how to implement such strategies (Donohue-Porter et al. 2011).

However, if theories are only taught in the classroom and if students do not come across them in practice, theories will remain 'only academic theories'. They can be properly understood by students only if they can experience and see them in practice. It can be difficult for students to understand and see the usefulness of theories when they cannot see those theories they learned in the classroom playing a part in how care is delivered in practice. Nurses have become aware that practice based on theory shapes their professional work and that a discrepancy exists between education and practice. Accordingly, they have started to move away from the widely used biomedical model towards client-based care and to define their unique contribution in the health care system in specific nursing terms (Pajnkihar 2003).

Professionalisation

Johnson (1959: 212) stated that 'no profession can exist for long without making explicit its theoretical basis for practice'. Smith (1986) maintained that nursing can achieve full professional status comparable with other professions by basing its practice on theories. Theories were also seen as harbingers of autonomy, responsibility and leading to professional accountability (Meleis, 2007). Pajnkihar (2011) argues that without care there is no medical treatment, and without theory there is no nursing, no profession and no discipline. Bond et al. (2011: 404) stressed that 'a meaningful triadic relationship in theory, research and practice is essential for nursing to be recognised as a profession'. Nursing cannot claim to be a profession if its scientific knowledge is not developed and applied for clients' benefit. Theory helps to develop the discipline and profession of nursing. Colley (2003) also stated that 'it would benefit the profession as a whole if nurses would develop the skills required to

perform research and understand theory'. A typical interviewee's convictions about the usefulness of nursing theories are as follows (Pajnkihar 2003):

> Nursing theories are the basis of the profession. We need them if we want nursing care to be acknowledged publicly. Theories are our groundwork; we build on them. Without nursing theory and history, there is no profession. If we fail to see that, we fail to acknowledge our status and our profession.

To be acknowledged as a profession, nursing needs to define its theoretical body of knowledge, which should not only be present during training, but also find application in clinical practice.

Quality of care

In his research, McKenna (1994) found that the quality of care given by a practitioner using a theory is high, because practice is built on a systematic knowledge base. The quality of a service cannot be assessed unless there are standards against which an appraisal can be made. Quality of care evaluation in contemporary practice is becoming increasingly related to cost-effectiveness. If used appropriately, nursing theories can demonstrate cost-effectiveness through reducing dependency, encouraging self-care and the early detection of patients' problems. A nursing theory also allows staff a greater articulation of health goals, hence identifying more efficiently the resources and skills needed to achieve them.

Conclusions

Theories and models have numerous definitions and mean different things to different people; thus a model is often seen as interchangeable with a theory. Fawcett (2005a) saw models as more abstract than theories because they present a more generalized and abstract view of phenomena, but when they are tested by research, they could lead to the formation of theory. From Meleis's perspective, theories exist at different stages of development, and therefore models are also theories, but at different levels of construction and abstraction.

It is important to bear in mind that each theory also says something about the essential elements of metaparadigms. A metaparadigm in nursing is the global consensus that refers to the foundation elements of the profession and generally includes the 'person', 'nursing', 'health' and the 'environment'. It also explains the theorist's view, conceptualisation, perspectives and relationships among the four elements that cover the field of nursing (Pajnkihar 2003).

There are also numerous different classifications of nursing theories. However, it is more important to concentrate on the use of the theory and its testing in practice. Nursing does not exist without theories, but not all authors agree on this. Some see that theory has no relevance to practice and therefore to nursing. The limitations and benefits of theories have been questioned.

Compared with other professions, such as law, medicine and religion, the development of scientific knowledge in nursing is still in its early stages and has depended a great deal on knowledge from other disciplines. However, basing nursing education and practice on a borrowed model is not satisfactory. For nursing to advance it must generate nursing knowledge, help to progress nursing science and help practising nurses to carry out their primary caring function.

Revision Points

- We have different definitions for nursing theories and nursing models, and sometimes the terms are used interchangeably.
- A theory is a creative and scientific practice-based text that describes, explains and predicts specific nursing phenomena within the interrelated concepts, definitions and propositions.
- A conceptual model is a stage of development on the way to becoming a theory.
- Theories can be classified according to the level of use or function, their generalisability, level of development, philosophical underpinnings and their paradigmatic roots.
- Theories are classified into grand theory, mid-range theory and practice theory.
- Theories can have their basis in one or more paradigms: system, behavioural, development or interactional.
- The consensus is that metaparadigms include the concepts of person, health, environment and nursing.
- The main limitation of nursing theories is that there is a gap between theory and practice.
- Criticisms of nursing theories relate to the following: documentation, the suitability of American nursing theories to other countries, the jargon used by theorists, nurses in practice and their (lack of) theoretical knowledge, the conceptual substance of the theory and what kind of theory we are looking for: ideal or practical reality.
- The benefits of nursing theories are as follows: a replacement for the biomedical model, a guide for practice, education and research, development for the nursing profession, discipline and science of nursing. The greatest benefit is that theories help nurses to provide individual, humane and patient-oriented care. Nursing theories help with the use of nursing science and the art of nursing in everyday practice and have the potential to make nurses' work more satisfying and respected.

Additional reading

McCrae N. (2012) Whither nursing models? The value of nursing theory in the context of evidence-based practice and multidisciplinary health care. *Journal of Advanced Nursing*, **68**(1), 222–229.

Theofanidis D. & Fountouki A. (2008) Nursing theory a discussion on an ambiguous concept. *International Journal of Caring Sciences*, **1**(1), 15–20.

Webber P.B. (2010) Language consistency: a missing link in theory, research and reasoning? *Journal of Advanced Nursing*, **66**(1), 218–227.

Don't forget to visit to the companion website for this book:
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where you can find self-assessment tests to check your progress.

6

Interpersonal relationships: the essence of nursing models and theories

Outline of content

It is a given that interpersonal relationships permeate almost every aspect of nursing. Without such relationships one could argue that nursing would not exist. Even in intensive care units where most of the patients are unconscious, there is a relationship between the intensive care nurses and those they look after. This chapter will describe the uniqueness of the interpersonal relationships in nursing and distinguish them from those that exist in society generally. It will introduce the reader to the nursing theories that have interpersonal relationships at their core and will identify those things that help or hinder the formation of therapeutic interpersonal relationships.

Learning outcomes

At the end of this chapter you should be able to:

1. Understand and accept that living has interpersonal relationships as its core
2. Differentiate between therapeutic interpersonal relationships and therapeutic relationships generally
3. Recognise that interpersonal relationships in nursing are different from those between individuals generally
4. Understand how a number of nursing theories describe the building and developing of interpersonal relationships
5. Identify the facilitators of and barriers to the formation of therapeutic interpersonal relationships

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Introduction

The following quote by Albert Camus (1913–1960) illustrates the centrality of interpersonal relationships with others:

> Human relationships always help us to carry on because they always presuppose further developments, a future – and also because we live as if our only task was precisely to have relationships with other people.

Camus, an existentialist, suggested that this is why we exist as human beings. As a philosophy, existentialism holds that the experiences of the individual affect their existence and development. We spend our daily lives connecting with other people, whether this is with family, friends, neighbours, work colleagues, or simply other members of the community with whom we interact fleetingly. Therefore, being human is about having interpersonal contact with other human beings. Such contacts can engender the full range of human emotions and behaviour, such as laughter, tears, hope, anger and despair. To paraphrase Mahatma Ghandi, we would argue that interpersonal relationships affect our beliefs, which affect our thoughts, which affect our actions, which affect our values, which affect our destiny. People need other people. There is much written about the negative effects of being isolated for long periods of time. The Anxiety Support Network (2011) outlined the toxic effects of isolation. These include increased anxiety, depression if the isolation continues over the long term, low self-esteem, and perhaps, in extreme cases, suicide (see Reflective Exercise 6.1).

Reflective Exercise 6.1

Stranded and isolated

No man is an island – John Donne was right! Imagine what it would be like to be isolated for years on an island like Robinson Crusoe. What would you miss most? Would it be objects or people? If it is people, what would you miss most about them? Write down and reflect upon your answers.

Types of interpersonal relationships

There are different types of isolation. Nurses often encounter people who are isolated within their own communities. They, too, can experience the symptoms described in the preceding section. For instance, Jordan et al. (2012) carried out a study investigating the experiences of suicidal young men in Northern Ireland. They found that many of these young men referred to the sense of isolation they experienced and the difficulties they encountered that were associated with not being able to maintain meaningful social and interpersonal relationships. Sometimes this occurred even when the young men appeared to have had lots of family and friends. While people can derive satisfaction from interpersonal relationships, an absence of meaningful relationships can lead to loneliness, even within a network of social relationships.

Interpersonal relationships are only one dimension of human functioning. Hoff et al. (2009) maintained that a crisis such as any kind of illness will only reach a resolution if there are mediating factors. These were identified as intrapersonal, interpersonal and extrapersonal factors. Intrapersonal factors are internal to individuals and include their perception of the crisis, past experiences of the disease and the individuals' emotional and physical health. Interpersonal mediating factors include family networks, professional input and social support. Extrapersonal factors include timing and duration of the crisis, financial resources and competing family and work obligations. The emphasis within this chapter will be on interpersonal factors and how models and theories help us to understand these relationships.

It was the psychiatrist Jacob Moreno who first coined, in 1941, the term interpersonal relations. He is also noted for founding psychodrama. The phrase, interpersonal relations, was later defined more precisely by the American psychoanalyst, Harry Stack Sullivan (1953). He was born of Catholic Irish immigrants and raised in an anti-Catholic town in New York state. This was often felt to have led to his social isolation. Unlike Freud, Sullivan's form of psychoanalysis was based upon observation. Therefore, his methodology was more interactional than interpsyche. He observed that the key to understanding a person was to understand his or her web of relationships.

In 2013, the renowned psychiatrist Robert Spitzer made the following statement (Reisz, 2013: 22):

> The thing I took from that and that has never left me is that psychiatry is utterly based in and dependent on a relationship. It is not a secondary, luxury add-on. It is the core of the activity. What I feel anxious about in modern psychiatry is that we have become quite preoccupied with the technology and, certainly in our writings, downplay the importance of continuity of care and relationships.

Professionals who work in the field of mental health nursing often witness how poor and unstable interpersonal relationships lead to psychiatric problems. They also often note that the development of stable interpersonal relationships can bring people back to mental health. In the Northern Ireland suicide study referred to earlier, Cutcliffe et al. (2012) found that in many instances it was an interpersonal relationship that enabled the respondents to survive suicide. We would assert that most emotional problems stem from interpersonal relationship difficulties. But helping people to establish or re-establish interpersonal relationships is not just important for mental health professionals; it is a core element of the caring repertoires of all health professionals (see Key Concepts 6.1).

Key Concepts 6.1

Interpersonal relationships form the basic building blocks for good nursing.

In McCaughan & McSorley's (2007) research into patients with a diagnosis of cancer, she noted that good-quality care occurred in a very specific interpersonal atmosphere. Participants in her study gained a sense of relief by being able to talk about their feelings, thoughts and experiences within a therapeutic relationship. In such a relationship, they felt they were allowed the freedom to express themselves and, as a result, they had a feeling of security and a sense of emancipation. Interestingly, though, there was something qualitatively

different about the patients' relationship with the nurse, as opposed to their relationship with family and friends. In the latter relationships, feelings were expressed sparingly for fear of causing pain or distress, whereas in the former, feelings and fears were expressed freely. This supports Hildegard Peplau's assertion that the relationship between nurses and patients is not the same as the more common social relationships that other people have with each other. In 1992 she stated that:

> The nurse patient relationship is a particular kind of interaction. It is not a social relationship of friend to friend. It is not a clerk to customer relationship. Nor is it a master to servant relationship. Rather, the nurse is a professional, which means a person having a definable expertise. That expertise pertains to reliable interventions which have been research tested and therefore have predictable known outcomes. (p.14)

This differentiates interpersonal relationships generally from therapeutic interpersonal relationships. There is an element of treatment in the latter. If we accept Peplau's statement, we cannot ignore the fact that the caring process that underpins the craft of nursing has therapeutic interpersonal relationships as its core. Living our lives will always be about humans interacting with humans, and caring is about doing this in a mutually respectful partnership where there are clear therapeutic objectives. The essence of these partnerships is the developing and strengthening of therapeutic relationships. Support for this can be found in Janice Morse's (1995) research on caring. She identified five types of caring:

- caring as an affect;
- caring as a human trait;
- caring as a moral imperative;
- caring as a therapeutic intervention;
- caring as an interpersonal relationship.

She stressed that building and sustaining interpersonal relationship is pivotal to caring. More recently, in research by Press Ganey Associates Inc. (2012), it was found that the quality of care received by patients was related to the quality of the interpersonal relationships they had with nurses. Patients value interpersonal relationships very highly and that this is often what leads to high patient satisfaction (see Key Concepts 6.2).

Key Concepts 6.2

Building interpersonal relationships is pivotal to caring.

A note of caution, though – it would be wrong to think that all interpersonal relationships are a positive experience. Kidnappers, torturers, rapists and exponents of domestic violence have interpersonal relationships with their victims. Unlike therapeutic interpersonal relationships, these are negative and damaging. Theoretically, positive interpersonal relationships are composed of concepts such as trust, hope, understanding, empathy, respect and admiration, to name just a few. By contrast, negative interpersonal relationships are reflected in concepts such as such as distrust, anger, disrespect, disapproval and dislike. The role of

health professionals generally and nurses specifically is to encourage the formation of positive interpersonal relationships and eliminate or discourage the formation of those that are negative (see Reflective Exercise 6.2). There are several well-known nursing models and theories that act as guides to show how best to do this.

Reflective Exercise 6.2

What are interpersonal relationships?

Many people and organisations pride themselves on having good interpersonal relationships with those with whom they come into contact. Tour guides or hotel workers who look after you when you are on holiday see their role as being about forming positive interpersonal relationships, as do shop assistants, police officers, doctors and firefighters.

Using your learning and library resources, look up interpersonal relations. You may wish to consult the work of Harry Stack Sullivan, Clara Thompson, Karen Horney, Erich Fromm, Otto Allen Will, Jr, Erik H. Erikson or Frieda Fromm-Reichmann.

Once you have read some work on this topic, write a page on whether or not you believe the interpersonal relationships formed by nurses are different from those in the other occupations discussed.

Interpersonal theories of nursing

You will recall from Chapter 2 that Barbara Carper (1978) identified *personal knowing* as one of the four ways that nurses know. This is pertinent for this chapter. Personal knowing is subjective – it is about nurses knowing themselves and how they relate to others. In other words, you cannot develop a meaningful interpersonal relationship with another person if you do not know yourself. Here, personal knowing represents knowledge that focuses on self-consciousness, personal awareness and empathy. It requires self regard and active empathic participation on the part of the nurse (see Key Concepts 6.3).

Key Concepts 6.3

Personal knowing: an essential prerequisite to being able to develop interpersonal relationships with others.

Why is personal knowing so important in the context of this chapter? Well, if we accept that nursing is an interpersonal process then we must know our own strengths and weaknesses in order to be able to interact meaningfully with those requiring care. As has been stressed in a previous chapter, most nurses do not possess a case full of medications or an arsenal of surgical instruments: what we have is ourselves and we can use ourselves therapeutically to make a difference to patients. The requirement to know ourselves before we can know our patients is highlighted in a number of nursing theories.

There have been several articles in the nursing press alluding to the possibility that nurses were becoming uncaring, that they were graduating from university courses without the fundamental aspects of nursing care, that they were 'too posh to wash' (Scott 2004). If we agree that an essential element of nursing care is the development of interpersonal relations with patients, then what has happened? Is it possible that nursing shortages, the technologising of patient care, its rapidity or the emphasis on records and audit means that nurses are not in a position to readily build relationships with patients and their families? Recent research by Hasson et al. (2012) would lend some credence to this. In their study on the role of the nursing assistant, they found that because registered nurses were too busy at the nurses' station on administration tasks, most of the 'hands on' care was undertaken by students and assistants. The conclusion here is that if nurses cannot find time or space to develop meaningful interpersonal relationships with patients, they will indeed be perceived as uncaring and perhaps they cannot justifiably retain the title nurse. This supports the view that 'the nurse–patient relationship is the essence of caring' (Meleis 2012. p.93) (see Reflective Exercise 6.3).

Reflective Exercise 6.3

Returning to the metaparadigm

In Chapter 5 you were asked to undertake an exercise on the metaparadigm. You will recall that the metaparadigm of nursing is composed of four essential elements: nursing, health, person and environment. You were asked to consider adding essential elements that you felt were important.

Did you or any of your fellow students or colleagues add interpersonal relationships? Did you think it was already covered in the 'nursing' element ?

Research by McKenna (1997) noted that there were over 50 grand nursing theories. He studied each of these in some depth and found, to a greater or lesser extent, that all of them refer to interaction between nurses and patients. This is not surprising, of course, since a nursing theory that does not refer to such interactions would not be worthy of the title 'nursing theory' (see Key Concepts 6.4). Nonetheless, some theories place a greater emphasis on nurse–patient interaction than others. Afaf Meleis (2004, 2006, 2012) noted that there were three categories of nursing theories: needs theories, outcome theories and interaction theories.

Key Concepts 6.4

All nursing theories refer, to some extent, to human-to-human interactions and interpersonal relationships.

Theories in the first category focus on answering the question: what do nurses do? (see Key Concepts 6.5) These tend to come from the developmental paradigm (see Chapter 5) and centre on providing assistance with activities of living as outlined by Virginia Henderson (1966), or self-care needs as outlined by Dorothea Orem (1980). What nurses do is also

reflected in those theories, which centre on general human needs such as the work of Jean Minshull (Minshull et al. 1986) or Faye Abdellah (Abdellah et al. 1960). These theories are also closely tied to the biomedical model, because, if you examine them closely, you will see that physical needs and medical needs have a prominent position within them.

Key Concepts 6.5

Different nursing theories tend to address three key questions:

- What do nurses do?
- Why is nursing needed?
- How do nurses do whatever it is they do?

Theories in the second category focus on answering the question: why is nursing needed? These tend to concentrate on the outcomes of the caring process and include the work of Dorothy Johnson (1959), Martha Rogers (1970) and Callista Roy (1971a).

The third groups of theories are the ones that we are particularly interested in for this chapter. They seek to answer the question: how do nurses do whatever it is they do? These are referred to as interaction theories and have their root in the interactional paradigm (see Chapter 5). They were conceived in the 1950s and early 1960s and the most renowned ones are those of Hildegard Peplau (1952), Joyce Travelbee (1966), Ida Orlando (1961) and Imogene King (1968). These are grand theories rather than mid-range or practice theories. Table 6.1 indicates how each of these theorists defined nursing.

This group of theorists tended to view nursing as an interactional process that is concerned with the development of a therapeutic interpersonal relationship between patients and nurses. Table 6.1 highlights what these theorists saw as the focus of nursing.

Peplau (1988) defined nursing as a therapeutic interpersonal process, while Travelbee (1966) asserted that nursing is an interpersonal process between two human beings, one of whom needs assistance because of an illness, and the other who is able to give such assistance. Orlando (1961) emphasised that the nurse–patient relationship should be based on planned action. King's (1968) theory focused on nursing as a process of human interaction between the nurse and the patient, whereby each perceives the other in the situation and through communication they set goals and explore and agree on the means to achieve these goals. The goals of nursing as viewed by these theorists are illustrated in Table 6.1.

These theorists have their basis in a mixture of existential philosophy, symbolic interactionism and the developmental paradigm. They provide four lessons for nurses (after Meleis 2006, 2012):

1. Nursing is an interpersonal process occurring between a person in need of help and a person capable of giving help.
2. To be able to give help, nurses should clarify and understand their own values [Carper's (1978) personal knowing]: without this they will not be able to establish connections with patients and give care in a therapeutic way.
3. Nurse–patient relationships are formed to relieve distress as well as to enhance trust.
4. The patient is an equal partner in the care process and the perceptions of the patients are important in assessing illness and its meaning.

Table 6.1 How interpersonal theories define nursing and denote the focus, goals and interventions of nursing.

Theorist	Definition of nursing	Focus of nursing	Goals of nursing	Nursing interventions
Peplau (1952)	A therapeutic interpersonal goal-oriented process: a health-focused human relationship	Phases of nurse–patient relationship: orientation, identification, exploitation and resolution	Develop personality in creative, constructive, productive personal and community living	Develop problem-solving skills in patients through therapeutic interpersonal processes
Orlando (1961)	Interaction with patients who have a need or response to individuals who are suffering	Care of the needs of patients who are distressed through deliberate action	Relieve distress, physical and mental discomfort and sense of well-being	Deliberate nursing process – where the nurse uses interpersonal skills to address the patient's distress
Travelbee (1963)	An interpersonal process to prevent or cope with experiences of illness and find meaning in this	Interpersonal relations – finding meaning in suffering, pain and illness	Cope with an illness situation and find meaning in the experience	Use of nurse's self and empathy, support and rapport to understand the patient's pain
King (1964)	Action, reaction and interaction where the nurse and patient share information and agree on goals	Nurse–patient interactions that lead to goal attainment in a natural environment	Help individuals maintain their health so that they can function in their role	Goal attainment, transaction and perceptual validation as part of the nurse–patient interaction

In Table 6.1 you can see the interventions recommended by these theorists.

Other researchers, such as Meleis (2012) and Alligood and Marriner Tomey (2010), explain each of these theories in detail. However, for the purpose of this chapter, we will select Peplau's theory. The main reasons for this are the fact that her theory was the first one to be formulated (1952) and is the best known and cited. From our perspective, she can rightly be regarded as the mother of interaction theories in nursing. Peplau's theory was the first contemporary theory in nursing generally, and in psychiatric nursing in particular. Her writings in the 1950s greatly influenced others who later used interpersonal relationships as a basis for their theories.

Reflective Exercise 6.4

Theory selection

Read the descriptions of the four interactional theories in Table 6.1 and decide which one best fits your perspective on interpersonal relationships. If you require more information before you make up your mind, please refer to other articles and books by the theorists (see the list of references at the end of this book).

Now write a short piece (one page) on why you made your choice. What were the main reasons for you selecting that specific theory? Compare your choice with that of other students to see if they have selected the same theory that you have. If yes, was it for the same reasons? If no, what reasons could there be for the difference?

From her long and distinguished experience as a psychiatric nurse, Hildegard Peplau realised that people who have good mental health often have good interpersonal relationships with others such as their family, friends and work colleagues. Conversely, she noted that people who were emotionally unwell invariably had poor interpersonal skills and had difficulty communicating appropriately with others.

As you saw in Chapter 2, theories can be formulated in three main ways: induction, deduction or retroduction. To remind you, induction involves building a theory directly from what is observed and understood in practice. By contrast, theories can be formulated from other existing theories through a process of deduction. Retroduction is an amalgamation of both induction and deduction (see Key Concepts 6.6).

Key Concepts 6.6

Peplau developed her theory inductively and deductively.

Therefore, Peplau's theory was formed using retroduction. She studied interpersonal relations over many years and began to develop her theory deductively due to the influence of Henry Stack Sullivan's (1953) interpersonal relations theory. However, through induction she reflected on her clinical experience in psychiatric nursing. It is noteworthy that Peplau never actually used the term 'interpersonal relationships', preferring instead to use 'interpersonal relations'. This may be due simply to her respect for Harry Stack Sullivan's theory.

Peplau (1952) defined nursing as a therapeutic interpersonal process through which nurses facilitate growth and development among patients. She saw the relationship as reciprocal, with both the nurse and the patient participating in and contributing to it. You will recall from Chapter 1 that all theories often have a number of assumptions. As you saw, these are simply statements that we accept as true, even though they may not have been tested and proved (see Key Concepts 6.7). The following example from Callista Roy's theory illustrates what an assumption is. Among other assumptions, she stated that all people have biopsychosocial dimensions that constantly adapt to a changing environment. We think you will accept her assumption as true.

Key Concepts 6.7

Theories are composed of assumptions, which are statements that you assume to be true even though they may not have been tested.

Consider the following assumptions from Peplau (see also Reflective Exercise 6.5):

- People need relationships with other people (Peplau 1987: 166).
- Relationships constitute the social fabric of life (Peplau 1987: 116).
- Interpersonal relationships are important throughout the life span (Peplau 1994: 13).
- Interpersonal relationships are the bedrock of quality of life (Peplau 1994: 13).
- In every nurse–patient contact there is the possibility of working towards common understandings and goals (Peplau 1952: 10).
- The nurse and patient come to know and to respect each other as persons who are alike and yet different, as persons who share in the solution of problems (Peplau 1952 p.9).
- Each patient–nurse relationship is unique in terms of process and outcome (Peplau 1962: 5).
- Interpersonal relationships are person-to-person interactions that have structure and content and are situation-dependent (Peplau 1994: 10).
- At their best, interpersonal relationships confirm self-worth, provide a sense of connectedness with others and support self-esteem (Peplau 1987: 166).

Reflective Exercise 6.5

Testing assumptions

Read the list of Peplau's assumptions carefully and see if you can agree with them without them being tested scientifically. If you disagree with any of them, please outline the reasons for this.

As these assumptions were formulated in the early 1950s, check their validity with fellow students, family or friends to see if they stand the test of time in the 21st century. Again, identify any that do not gain agreement and determine the reasons why.

See if you can think up some more assumptions around interpersonal relations that you could add to Peplau's list.

Let's have a closer look at Peplau's theory (Table 6.2). To Peplau, the interpersonal process has a starting point called the 'orientation phase' when the nurse and patient are strangers to each other; it proceeds through the 'working phase' and, being time-limited, has an endpoint at the 'termination phase'. Across these phases, Peplau (1988) proposed that the nurses' role changes as they interact with patients. From the table you can see that the

Table 6.2 Phases and roles within Peplau's theory.

Phases in relationship	Orientation phase		Working phase	Terminal phase
Patient's role	Stranger	Infant child	Adolescent	Adult person
Nurse's role	Stranger	Unconditional Mother surrogate	Counsellor Resource person Leader Teacher Surrogate sibling	Adult person

various roles are 'counsellor', 'resource person', 'leader', 'teacher' and 'surrogate sibling'. By adopting these roles, nurses rely more on guiding, supporting, teaching and helping patients to find meaning in their situations – and less on doing and functioning (see Reflective Exercise 6.6).

Reflective Exercise 6.6

Peplau's theory?

Study Table 6.2 carefully. A nurse could be considered a resource person if the patient or patient's family wanted health promotion information or literature. On the other hand, if showing a diabetic patient how to administer insulin, the nurse is adopting the role of teacher.

Identify three situations in which a nurse would adopt each of the roles in the working phase of the theory.

Unfortunately, there remains a dearth of research into the empirical testing of interactional theories. This reflects the situation with most nursing theories. We believe more investigations need to be done into the ways that interpersonal relationships are nurtured, supported, discouraged or avoided. While some of these answers may be found in the philosophy, sociology and social psychology literature, nursing must also generate its own body of empirical evidence in this area. We also believe that there should be a moratorium on new theory development until some of the ones already in existence have been tested and evaluated. However, we realise that this would be difficult to introduce and could have the effect of holding back new knowledge.

Implications for nurse education

It is a given that all disciplines are underpinned by theories. These help us to understand, describe, test and predict the elements of our professions. In the last three decades of the 20th century, all nurse education programmes in the western world had classes on nursing models or theories, with many programmes using them as frameworks for their curricula.

Considering their centrality to nursing, you would expect as much. Because of their relationship with caring, interpersonal relationship theories were particularly valued. In particular, many psychiatric nursing programmes were underpinned by these theories.

As you saw from Chapter 5, in the early 21st century the emphasis on nursing theories and models lessened. The reasons are obvious. General nursing curricula are jam-packed with everything from anatomy and physiology to practical tasks and research methods. The examination of interpersonal relationships now constitutes a small part of such programmes (see Key Concepts 6.8). Also, nursing theories no longer have the popularity they had in the 1970s–1990s; back then it was not possible to pick up a journal or a textbook without seeing them mentioned. Today they are mostly absent in curricula and in journal articles, but we are seeing a re-emergence among teachers and practising nurses. This is mainly due to the benefits highlighted in Table 5.1 (p. 000).

Key Concepts 6.8

While their importance is recognised, interpersonal theories are not a central part of nurse education curricula.

Earlier in this chapter, we noted that there was a prevailing view that new nursing graduates were unskilled in fundamental caring and that many hard-pressed clinical nurses did not have the time to develop interpersonal relationships with patients or their families. A cynic might argue that interpersonal relationship theories belonged to a time when there was no shortage of nurses and when patients remained in hospital for prolonged periods of time – even for minor procedures. We do not sign up to this view and assert that in a busy technological health care setting, interpersonal theories are needed more than ever. Could it be that their absence from curricula in recent years is one reason for the criticism levelled at new clinical nurses?

We recommend that nurse educators redress this void and develop an interpersonal culture of education. Within such a culture, nurses must learn:

- to acknowledge that interpersonal relationships are the foundation stones for quality care;
- to see themselves and the ways in which they talk to each other and to patients as part of the therapeutic process;
- to accept interpersonal responsibility and encourage open, sensitive personal relations and strong feelings of interpersonal trust;
- to develop their personal knowing so that they have a good understanding of their own values, attitudes and knowledge, as this will determine the extent to which they can understand the situation confronting the patient;
- to observe and record their own behaviour in the classroom and get detailed feedback from their fellow students and teachers in order to understand the impact of their own words, actions and reactions on each other and on their learning;
- to be sensitive to the human problems that confront patients and be able to develop with patients the kinds of relationships that will be conducive to dealing with these problems.

Social capital

Another way of viewing interpersonal relations is through a phenomenon called social capital (Ferragina 2012). There are three kinds of capital: economic capital, human capital and social capital. Social capital is the most important type in the context of this chapter, a term first used in 1972 by Pierre Bourdieu in *Outline of a Theory of Practice* (see Bourdieu 1977). One way to understand this concept is to consider the two words that comprise the term, 'social', meaning relating to humans, and 'capital', meaning wealth. Within the context of interpersonal relationships, nurses must be educated to become expert in developing this social wealth in themselves and in their patients.

According to Cohen and Prusak (2001: 4): 'Social capital consists of the stock of active connections among people: the trust, mutual understanding, and shared values and behaviors that bind the members of human networks and communities and make cooperative action possible.' Therefore, social capital represents the values and norms that individuals share with others and which permit the development of interpersonal relationships (see Key Concepts 6.9).

This ability to generate social capital within nursing not only benefits patients directly but also facilitiates multidisciplinary teamworking. It is a truism that modern health care is mainly provided through multiprofessional team members bringing their own skills and competencies to the clinical situation. Skills in interpersonal relationships are crucial for effective teamworking. If different members of the multidisciplinary team have the same theoretical leanings, it makes the team stronger and more cohesive and is less confusing for patients.

Key Concepts 6.9

Social capital: the values and norms that individuals share with others that permit relationship-building.

Conversely, a lack of team cohesion damages interpersonal relationships between professional colleagues and also between nurses and patients. One way of addressing this is to encourage interprofessional learning, whereby different health care disciplines are educated together from the beginning. This will teach them that no one professional grouping 'owns' the patient or the patient's problems. As nursing education has become established in universities, the opportunities for interprofessional learning have increased, but this does not necessarily mean that such opportunities have been fully exploited.

The educational challenge is to endow students with the ability to work individually or in a team, to be creative and imaginative in solving problems, to communicate clearly and effectively and to be experts in the development of interpersonal relationships. Many of these competencies are not taught in class but can be encouraged or discouraged by the pervading ethos of the university.

Threats to the development of interpersonal relationships in nursing and the use of interpersonal theories

Earlier, we alluded to the fact that nurses were being criticised in the media and in journal articles for becoming less caring and less able to develop meaningful relationships with patients and their families (see Key Concepts 6.10). We will now outline some of the reasons for this situation.

Key Concepts 6.10

In modern nursing there are a number of threats to using interpersonal theory in practice.

Pace of modern health care

Many readers can remember when health care delivery was a much more relaxed endeavour. Twenty to thirty years ago, patients often spent weeks in hospital and, as they improved, they assisted nurses in tasks such as the distribution of meals, the feeding of other patients and making beds. Nurses had time to get to know their patients and their patient's families.

However, in the 21st century, nursing has become 'intensified' – there is less time to 'nurse' than was previously the case. Patient throughput has increased and new treatments and technologies have made health care more complex. Let's face it, hospitals are little more than large intensive care units where, as soon as patients are over the acute stage of their illness, they are discharged home and/or to community care. This has implications for the theories that nurses are taught and, as mentioned earlier, some cynics question whether detailed interpersonal theories are still relevant today.

Measuring interpersonal relationships

Health care managers and policymakers are fixated on measurement, adhering to the adage that 'if it cannot be measured, it cannot be costed'. Because of the decline in the study of theories in the curriculum, nurses are not good at explaining what they do and providing evidence of effectiveness. For instance, a health service manager who sees a nurse talking to a patient in a busy clinical setting may perceive this as an example of inefficiency. Although the nurse may be establishing a therapeutic interpersonal relationship with the patient, to the untrained eye the nurse is simply talking to the patient – a task that, the manager may judge, less expensive, untrained staff could do just as well. Interpersonal relationships are difficult to measure and thus not easily subjected to rigorous studies of effectiveness. But we should again take comfort from Peplau (1995: x) who stated:

> Despite our current emphasis on medical diagnoses, sophisticated technology, economic cutbacks and 'quick fixes', what patients need most in the midst of this health care maze are sensitive and caring individuals who are willing to enter into interpersonal relationships that foster hope and prevent hopelessness.

Increased technology

Many people commence a career in nursing because they want to help others in direct and tangible ways. Traditionally, nursing is perceived as a high 'touch' profession that values personal interaction. The need to reach out and touch someone else is just as strong in the development of interpersonal relationships with patients. Here nurses pay attention to touch, facial expressions, body language and tone of voice. This is important but presents significant challenges to education when there is a greater emphasis on e-learning and distance learning. You may wish to revisit the section on 'gnostic and pathic touch' in Chapter 2 (p. 000).

Increasingly, we are using technological gateways that are taking the place of face to face teaching. Nurses who value human contact can quite easily become frustrated simply because they are geographically removed and unable to physically connect with the person who is teaching them or their fellow students (see Reflective Exercise 6.7).

Reflective Exercise 6.7

Connected health

In today's health care systems and in the future, the emphasis on telemedicine, telehealth, telenursing and remote monitoring will increase. This revolution in connected health means that from a distance patients can be monitored in their own homes through digital videoconferencing. Vital signs will be recorded remotely through a smart patch applied to the patient's chest.

Consider in two paragraphs what this will do to interpersonal relationships between nurses and patients. What effect will it have on nursing theories that emphasise such relationships?

The same can apply in clinical situations. In the early 1960s, Isobel Menzies claimed that nurses were engaging in low-level non-nursing tasks as a means of distancing themselves from the stress of dealing directly with patients' problems. Peplau (1962) called this 'busywork' and it kept the nurse away from direct contact with the patient. We believe that 'busywork' to distract nurses is still in existence today, but that it takes the form of computer technology and administration paperwork. While the distractions have altered, they can still keep nurses away from direct contact with patients and, as Menzies intimated, it may be what some nurses subconsciously want. Nurse educators must ensure that new graduates are not enticed towards technologies as a means of isolating them physically from patients or emotionally from patients' problems.

Role drift

In Chapter 4, we discussed the increase in the number and type of new roles in nursing and role theory. In a climate of a global shortage of registered nurses and demands for them to undertake more medical duties, there is an increasing reliance on assistants to fill the gaps in care (Hasson et al. 2012). As a result, duties and workload are shifting from doctors to nurses and from nurses to health care assistants. The majority of health care assistants are

caring and conscientious individuals who are often pressurised to go beyond their level of competence to perform duties for which they are not qualified or trained, potentially endangering the safety of patients and the quality of care (McKenna et al. 2004).

Some of the duties undertaken by health care assistants that were once the remit of nurses include catheter care, wound dressing, venepuncture, formulating patient care plans, setting up and monitoring diagnostic machines, setting up infusion feeds, giving injections, taking charge of shifts, monitoring, providing advice on parenting skills and breast-feeding. According to the literature, much of this work is unsupervised (Hasson & McKenna 2011). Therefore, while many nursing roles are becoming medicalised, health care assistants, because of their increasing numbers and their visibility in the clinical setting, are becoming more involved in developing interpersonal relationships with patients and their families (see Key Concepts 6.11 and Reflective Exercise 6.8).

Key Concepts 6.11

Nurses have to be placed in the best position clinically and strategically to develop therapeutic relationships with patients, families and communities.

We wonder if it is time to re-humanise nursing and ensure that nurses are in the best position clinically and strategically to develop therapeutic interpersonal relationships with patients, families and communities. There are a range of well tested nursing theories that help us to do so.

Reflective Exercise 6.8

Barriers to nurses developing interpersonal relationships with patients

Can you think of any other reasons why clinical nurses may have difficulty developing interpersonal relationships with their patients?

If you cannot think of any, ask your fellow students. If you get the opportunity, ask nursing assistants for their views on this.

Conclusion

The focus of this chapter has been on the importance of interpersonal relationships in nursing and how different theories deal with this issue. From this chapter we can be certain about six things: interpersonal relationships are at the core of nursing; life generally is about interpersonal relationships; the development of positive interpersonal relationships can be therapeutic; there are nursing theories that guide the development of therapeutic interpersonal relationships; and nurse education has a central role to play in ensuring that nurses

have the knowledge and skills necessary to develop interpersonal relationships with others. There are a number of threats to nursing's centrality in interpersonal relationships with patients, including the pace of modern health care, increased technology, the inability to measure interpersonal relationships and the increased role of the health care assistant.

Revision Points

- The focus of many nursing theories are on interpersonal relationships, but each of these theories deals with it differently.
- Interpersonal relationships are at the core of nursing.
- Life generally is about interpersonal relationships.
- The development of positive interpersonal relationships can be therapeutic.
- There are nursing-specific nursing theories that guide the development of therapeutic interpersonal relationships, including those of Kind, Travelbee, Peplau and Orlando.
- Nurse education has a central role to play in ensuring that nurses have the knowledge and skills necessary to develop interpersonal relationships with others.
- There are a number of threats to nursing's centrality in interpersonal relationships with patients, including the pace of modern health care, increased technology, the inability to measure interpersonal relationships and the increased role of the health care assistant.

Additional reading

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Meleis A. (2012) *Theoretical Nursing: Development and Progress*, 5th edition. New York: Lippincott Williams and Wilkins.
Peplau H.E. (1952) *Interpersonal Relations in Nursing*. New York: G.P. Putnam & Sons.

Useful web links

www.sciencedaily.com/articles/i/interpersonal_relationship.htm
http://psychology20.wikispaces.com/02.+Interpersonal+Relationships
http://currentnursing.com/nursing_theory/interpersonal_theory.html

Don't forget to visit to the companion website for this book:
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7

How to select a suitable model or theory

Outline of content

Imagine you are a clinical nurse who has been asked by her unit manager to select a suitable theory for application in the unit. Your immediate thought is that it is a great honour to be asked to do this and you set about the task with enthusiasm. You soon discover that there are around 50 grand nursing theories and almost as many mid-range nursing theories. How do you decide which one to choose? This chapter will help you do this. It will start off by describing how the selection process was done in the UK. It will then progress to identifying criteria that you could use to select an appropriate nursing theory. Along the way, it will deal with the problems you might come across and how the process will be viewed by other nurses and health professionals.

Learning outcomes

At the end of this chapter you should be able to:

1. Describe how nursing theories were introduced in clinical settings
2. Outline the 12 potential problems when selecting a nursing theory
3. Understand the roles of grand and mid-range theories in theory selection
4. Identify the criteria used to select a suitable theory
5. Discuss the role of the metaparadigm in theory selection
6. Understand who are the best people to select a theory for practice
7. Explain the advantages and disadvantages of borrowed theory.

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Introduction

You will recall from Chapter 1 that we all use theories in our daily life, either knowingly or unknowingly. Our conversations will be underpinned by communication theories or interpersonal theories. Our choice of what to purchase in a shop may be influenced by financial theory or decision theory. Even when climbing a ladder or boarding a plane, we will take account of the theory of gravity! It is surprising, then, that UK nurses in the late 20th century did not accept nursing theories more readily. With hindsight, it is perhaps not surprising; after all, they were mainly imposed on practising nurses by nurse educators and nurse managers. Nursing theories (at that time they were mostly called nursing models) were the new fashion to hit UK nursing; there were dozens of books written about them, and most nursing journals and professional magazines published articles about them (see Key Concepts 7.1). Being so popular, they were obviously perceived as good. Invariably, clinical settings were perceived as not being up to date unless the nurses were using a nursing theory to guide their practice. If the hospital in the next town was using one, we were behind the times if we weren't doing so. Nurse managers returned from nursing theory conferences loaded down with templates of care plans for one theory or another.

Key Concepts 7.1

Nursing theories: assist nurses in using the nursing process to assess needs, plan care, intervene and evaluate the outcomes of care

In addition, and several years previously, the 'nursing process' had been introduced. By all accounts, it too was the great saviour for patient care. It seemed simple enough: you assessed your patient's needs, planned the care, implemented the care plan and evaluated whether the patient's need had been met. But for some reason it, too, was having difficulty taking root in most clinical settings. Then the proponents of nursing theories spotted what was wrong. In order to make the nursing process work, a theory was required to give it structure. In fact, it had been argued that the implementation of the nursing process without a theory to underpin it was an empty approach, often described as 'practising in the dark' (Aggleton and Chalmers 2000: 22). As a result, nursing theories were perceived as the saviour of good care planning and they were imposed uncritically onto hard-pressed clinical nurses.

Reflective Exercise 7.1

Change

If you wish to change someone's behaviour, you need to change their beliefs and attitudes. Otherwise they will not enthusiastically adopt a new way of working.

Consider how you would implement a new evidence-based procedure to change the way nurses in a clinical setting practised. How would you approach the problem?

You will get some ideas if you read the seminal work of Everett M. Rogers (1962), *The Diffusion of Innovations*. See also http://en.wikipedia.org/wiki/Everett_M._Rogers and http://en.wikipedia.org/wiki/Diffusion_of_Innovations.

It was not unusual for clinical nurses to be informed by managers that they were to introduce a nursing theory to guide their practice by the following week. A common motive for imposing a theory on an unsuspecting workforce was that nurse teachers in the local school of nursing were teaching the specific theory to their students or it underpinned the curriculum. Clinical nurses soon realised that if they were going to have to use nursing theories, it would be better if they could select one that was appropriate for their type of clinical setting.

Selecting an appropriate nursing theory

It is surprising that the choice of a nursing theory took little account of patient needs and views or the clinical specialism (see Reflective Exercise 7.2). You will recall from the previous chapter that the theories selected most often had more than a passing resemblance to the biomedical model. For instance, Henderson's (1966) and Roper et al.'s (2000) theories were the most popular choices. This was the case regardless whether the patient population comprised people with mental health problems, women in labour, sick children or older people. Peter Wimpenny (2002) rightfully criticised this, pointing to the advantage in matching particular theories to particular clinical specialities. After all, he argued, different theories had been developed from particular experiential perspectives.

Reflective Exercise 7.2

It is interesting that nurses did not involve patients or patient pressure groups in the selection of nursing theories. Think about this and try to understand why. Your answer may reflect the fact that this was the 1980s and 1990s. Why?

McKenna and Slevin (2008) noted that there were over 50 grand theories of nursing and a growing number of mid-range theories. Since assessments of patient need, planning care, interventions and evaluation of care differ depending on what nursing theory is being used, a new awareness exists as to the necessity of making the right choice. The alternative is to have a nursing theory that moulds practice to fit it, rather than the other way around. However, there is a dearth of research evidence available to help practising nurses decide which theory is best suited for which clinical speciality. For instance, in a psychiatric unit, where the development of interpersonal relationships is important, would Peplau's theory (1992) be most appropriate? But the theories of Orlando (1961), Travelbee (1966), King (1968), Wiedenbach (1964) and Paterson and Zderad (1976) also focus on interpersonal relationships. As a result, choosing the most relevant theory is a daunting task and must be carried out with care.

You will recall from Chapter 3 that grand theories are broad conceptualisations of a discipline. In nursing, they deal with everything from self-care to adaptation, and nurse–patient interaction to activities of daily living. It could be argued that grand theories are so all-encompassing in their scope, they should be applicable in any setting where nursing is taking place. For instance, Orem's self-care theory (Denyes et al. 2001) could be used in any setting where the patients were being encouraged to be independent. This would give it wide applicability. So, is sorting through theories to find a suitable one a waste of your valuable time? Barbara Stevens Barnum (2006) did not think so; she asserted that there was a need to

employ different theories to suit different patient settings. We would concur with this view and argue that the choice of one theory for application throughout a hospital is imprudent and perhaps even dangerous. Should patients and staff have to put up with a theory that has a less desirable 'fit' for the sake of conformity to management or educational dictates? Fitting the patient's problems to a theory rather than the theory fitting the patient's problems is a foolish and labour-intensive exercise.

As stated many times in this book, grand theories are broad frameworks and are often well recognised and publicised (e.g. self-care, adaptation, activities of living etc.). By contrast, mid-range theories are those that have more limited scope and less abstraction, address specific phenomena or concepts and reflect best practice (see Key Concepts 7.2). Invariably, they are based on evidence that emerges out of research studies. Examples of mid-range theories were given in Chapter 3. Others include mid-range theories of information-seeking behaviour of newly diagnosed cancer patients (McCaughan and McKenna 2007), comfort (Kolcaba 2001), quality caring (Duffy 2008) and self-transcendence (Runquist and Reed 2007). You should refer back to Chapter 3 if you need to update yourself on the difference between grand and mid-range theories. However, regardless of whether we are dealing with grand or mid-range theories, we believe that there are 11 potential problems to acknowledge when selecting an appropriate one for your practice. Some of these reflect the limitations of theory outlined in Table 5.2 (p. 004).

Key Concepts 7.2

Grand theories: broad frameworks that may be widely applicable

Mid-range theories: these are very specific and are appropriate for a more focused area of care

Potential problems when selecting a nursing theory

American or UK nursing theories?

> England and America are two countries separated by a common language. (George Bernard Shaw, 1856–1950)

Although Florence Nightingale (1859) can be credited with being the first nurse theorist, most modern nurse theorists are based in the United States (see Reflective Exercise 7.3). A question has been posed as to whether their nursing theories are transferable to nursing practice in the Europe (Cutcliffe et al. 2009). There is nothing wrong with nurses from different countries exchanging ideas, but the application of one group's practices to another group may not always be appropriate. After all, as has been pointed out in earlier chapters, the UK has a different health care system from the US, a different nurse education system and a different culture (see Key Concepts 7.3). Therefore, it is understandable that American theories may not always be the best choice for nursing care in other parts of the world. If nurses in different countries continually look towards the America for conceptual guidance, any

selected theory will have to be manipulated so as to fit their health services. Of the 50 or so well-known grand nursing theories, about 12 were formulated in the UK. By far the most popular of these is that of Roper et al. (Holland et al. 2008).

Reflective Exercise 7.3

Why America?

It is a truism that even though the first nursing theory by Nightingale was British, US nurse theorists have taken the lead in the development of modern nurse theories. Most of the 50 grand theories and many of the 40 or so mid-range theories are American in origin.

In addition, Peplau developed her interpersonal nursing theory in the 1950s in the US; this was followed by many other US theories in the 1960s, 1970s and 1980s. By contrast, nursing theories only emerged in the UK in the 1980s and 1990s.

Think about why this might be the case and why UK nurse theorists were less willing to call their work theory – preferring the word model. Discuss your conclusions with other students and compare views.

Some of the content in Chapter 5 may be helpful for this exercise.

Key Concepts 7.3

Nurses in various parts of the world are attracted to American nursing theories. This may be because they view US nursing as being more advanced. However, it may be inappropriate to impose a US theory on a non-US health care system.

Ethical and moral issues

The selection of a nursing theory is value-laden. It follows, therefore, that the choice will be influenced by a nurse's beliefs about and attitude towards the nature of patients, people and health care. For instance, Orem's (1995) self-care theory would not be a nurse's first choice if he or she held the view that patients are dependent and should adopt the sick role and do as little for themselves as possible. On the other hand, if a nurse were to select a theory that encourages dependency, this could do a great deal of damage to the patient's rehabilitation and self-esteem.

Over a number of years, the psychologist Richard Lynn (2010) wrote that black people were less intelligent than white people and that men were more intelligent that women. The selection of Lynn's theory to frame policy would have implications for hiring employees, providing educational opportunities and for the self-esteem of many people. This would be highly unethical. Similarly, the rigid application of the theories that the Earth was flat and the Sun orbited the Earth led to people like Galileo Galilei (1564–1642) being imprisoned and victimised (see Reflective Exercise 7.4).

Reflective Exercise 7.4

Ethical considerations

In Chapter 6, you will recall, we discussed the barriers to the use of interactional theories to build interpersonal relationships. Among other things, we mentioned the fast pace of modern health care and the increasing use of technology.

Later on in this chapter, we will show that when using a nursing theory, a nurse undertakes a comprehensive and detailed assessment and identifies many actual and potential physical, social and psychological problems. However, in the modern health care system, the patient will only be in hospital for a short length of stay.

Write a one-page account of the ethical implications of these issues for nursing care.

Length of patient stay

Time is an important factor when selecting a theory. For example, a theory used in a long-stay ward for the care of older people would not work in a very rushed emergency room setting. In the former, a human needs theory like that of Minshull et al. (1986) would be appropriate, whereas the FANCAP theory (**f**luids, **a**eration, **n**utrition, **c**ommunication, **a**ctivity, and **p**ain) would be more appropriate in the emergency room. To implement Roy's theory correctly it has been calculated that 16 A4 pages of a care plan would be required (McKenna & Slevin, 2008).

It was noted in Chapter 6 that the pace of hospital treatment has increased and that these days patients are often discharged home once they are over the acute phase of their illness. This has implications for the choice of nursing theory. We should ask ourselves if it is morally correct to put patients through a comprehensive assessment and set goals for nursing interventions when they may not be in the clinical setting long enough to receive the interventions or have the goals of their care plan met. One obvious way to address this is to ensure there is a good discharge plan so that community nurses can pick up the care once the patient has returned home. Of course, this raises another potential complication – if community nursing staff are using a different theory from that used in hospital, the opportunities for confusion and misunderstanding are increased. You were asked to consider the ethical aspects of this example in Reflective Exercise 7.4.

Nurses' knowledge of nursing theories

While the level of knowledge about different theories will influence the selection process, readers will spot the obvious flaw with this method of selection. Considering that there are over 50 nursing grand theories available, is it realistic to expect busy practising nurses to be familiar with any more than a few of the most popular ones. Their level of knowledge about theories is also biased according to which ones they were taught as students and which ones have the highest profile in the journals and books they have read. Further bias is introduced according to the journals the nurse reads and, as alluded to earlier, the predilections of her nurse educators and managers.

The growth in mid-range theories complicates the selection process. At last count there were 40 of these (see the nurses.info link in the useful web links at the end of the chapter). It is

difficult enough to be up to date on the vast number of grand theories, but there are almost as many mid-range theories and the number is growing (Fawcett 2005b; Smith & Liehr 2008).

The implications of a wrong choice

Cutcliffe et al. (2009) maintained that the quality of care would be adversely affected by an inappropriate choice of a nursing theory, while McKenna and Slevin (2008) maintained that an early decision on an unsuitable theory may stifle creativity. Therefore, mistakenly selecting an incompatible theory may have undesirable consequences. In Chapter 1 we used the analogy of a map. A map will help to direct you to where you want to go and there are different maps according to your specific needs. An underground rail map is different from a street map, which is also different from a map used by airline pilots. An incorrect choice of map can get you lost; the same applies to the incorrect choice of theory. Of course, the map might be the right one but you have simply read it incorrectly. Similarly, the nursing theory may be the right one for your clinical setting but you may have misunderstood it or implemented it incorrectly. However, although an unsuitable choice is regrettable, it is not an insoluble situation: as with an incorrect map, an incorrect theory can be changed (see Reflective Exercise 7.5).

Reflective Exercise 7.5

Think of the city or town in which you live and identify 10 different maps that could be used to understand the terrain. This should make you appreciate why there are so many different nursing theories looking at the same thing – nursing.

Hybrid nursing theories

The idea that different concepts can be chosen from several different theories and applied in the clinical area as one amalgamated theory is supported by some (Fawcett 2004), but is seen as totally untenable by others. However, there is a danger that such a strategy could lead to the loss of coherence and rigour, to the introduction of contradiction, and to the theoretical status being compromised. More research is being carried out on nursing theories and many of these studies show that particular theories are valid for guiding practice. For example, Anderson (2001) showed the effectiveness of using Orem's (1995) theory with homeless adults and 25 years of research on Roy's theory has shown the positive outcomes of encouraging adaptation (Yeh, 2001). Similarly, McKenna (1997) showed that Minshull et al.'s (1986) human needs theory had a positive effect on quality of patient care in a mental health setting. Therefore, if bits and pieces from these theories were extracted and put together to form a hybrid theory, the validity of the parent theory could be compromised and the effectiveness demonstrated by research could no longer be assured (see Reflective Exercise 7.6). Fawcett (2005a) asserted that while modification of a theory may be acceptable, the modifications should be acknowledged and consideration should be given to renaming the theory. Our suggestion is that such a hybrid theory should be retested through robust research.

Reflective Exercise 7.6

Consider Reflective Exercise 7.5 where you looked at 10 different maps of your town or city. Imagine taking bits of these maps and putting them together in a collage. You would probably end up with a section of the bus route map, alongside a section of the sewage system map, alongside a section of the electrical grid map, alongside a section of the Ordnance Survey map and so on. In other words, it would be a confused tangle of information. The same principle might apply if you selected bits and pieces of nursing theories to form a hybrid theory.

Method of choice

It is often written that experienced nurses know their patients well and through using tacit knowledge they can almost second-guess their needs (Polanyi 1967). This awareness will influence the choice of theory. In Chapter 2, we referred to this tacit knowledge and how nurses have a 'gut reaction' when it comes to assessing and providing care. But should the selection of a theory really be based upon such 'gut reaction', or should nurses be pursuing the best possible research evidence to choose the most appropriate theory? The former stance was supported in a seminal article by Mary Silva (1986). She urged nurses to value truths arrived at by intuition and introspection as much as those arrived at by scientific research. By contrast, Aggleton and Chalmers (2000) stressed that preferences must be decided on more logical grounds. However, in support of Silva's assertion, we are aware that in most cases in nursing, the theory exists before the research to test it is undertaken. Therefore, if we waited for the research to be completed in all cases, we would have little theoretical creativity or innovation.

Single or multiple theories?

Although the selection within one clinical setting of different theories for different patient groups may be a desirable and recommended stratagem (Fawcett 2005b), it leads to complications with staff training. It could take a prolonged period of time for clinical nurses to be educated about a range of theories and then trained on how best to employ them in practice. Also, if different theories are used in the same setting, there are likely to be problems with care planning documentation. Furthermore, using a range of different theories could contribute to communication problems. For example, those staff working across a hospital site, such as managers and clinical lecturers, would require a high degree of theoretical sophistication. To the uninitiated, such a patient care system may resemble a conceptual 'Tower of Babel'. Furthermore, communications within and between members of the multiprofessional team could be hampered by such a strategy and patients who are transferred from ward to ward or from ward to outpatient clinic as their condition changes may have trouble understanding or contributing to their care plans. Fawcett (2005b) pointed out that all the successful implementation projects reported in the literature tend to focus on the introduction of only one theory, rather than multiple nursing theories (see Key Concepts 7.4).

Key Concepts 7.4

Theories can be complex and are developed over many years. Therefore, the expectation that a clinical nurse to have an in-depth knowledge of many theories is an unrealistic one.

Nursing theories versus midwifery theories

Although several nurse theorists are also midwives, most of the grand theories available have emanated from nursing rather than from midwifery. Midgely (1988) found in her study that many midwives used Orem's (1980) theory of nursing. This raises the question as to whether nursing theories can be generalised to midwifery or whether they have to be altered in the transition. If alteration is required, is the original theoretical status of the theory being compromised? But if it is felt that the grand theories of nursing are broad enough to be applied in most care settings then transference between specialities and health professions may not be an issue. A recent textbook on midwifery theories by and Bryar and Sinclair (2011) posited the view that there were theories specifically related to midwifery practice, a perspective previously put forward by Fahy and Parratt (2006).

Inherent limitations of theories

As stressed in Chapter 1, all theories have their own set of assumptions. Remember, these are statements that we can take as true even though they have never been tested. An obvious one would be that all humans require sleep to enable them to function. These assumptions are the distinguishing marks of a particular theory. However, it could be argued that each theory is limited by its assumptions because no one theory will be able to deal with all eventualities. While nurses may want assurance that a so-called 'right choice' of a theory would eliminate all their patient's care problems, it is possible that the limitations inherent in individual theories may burden nurses with too narrow a perspective. For example, we cannot be criticised for failing to emphasise independence in the activities of daily living (Holland et al. 2008) if the theory we are using stresses the manipulation of stimuli to promote adaptation (Roy 2003). Mid-range theories are, by their nature, even more restrictive. It is possible that a specialist nurse is using a number of different mid-range theories, as no single theory on its own will deal with the total needs of all patients in her caseload.

Social and political issues

The Austrian philosopher Paul Feyerabend (1977) argued that theory and truth cannot be divorced from the social and political context in which they exist. He maintained that the theory one chooses is a matter of social convenience or political expediency. Social and political implications also have a role to play in the selection of a nursing theory. It could easily be argued that Orem's work (Denyes et al. 2001) is more suitable to the private health insurance sector because of its emphasis on the patient's ability to undertake self-care as soon as possible. This is also the case in public sector health care, where there is a move away from patients staying in expensive acute hospitals to being cared for in their own homes. This is manifested by everything from early discharge home to the care of families to workers being

encouraged to sign up to private pensions and private health insurance. In addition, the population is getting older, with more chronic conditions, and health care costs are spiralling out of control (see Key Concepts 7.5). You will recall from Chapter 6 that 'connected health' is the term used in relation to supporting older and more chronically ill people in their own homes through the use of modern technology. A self-care theory would fit well into such a connected health world.

Key Concepts 7.5

Nursing theories have political and social connotations. This will have implications for which ones are selected for practice.

There is another dimension to this political influence. The high-profile cases of professional misconduct seen at, for example, Bristol, Alder Hey and, more recently, Mid Staffordshire NHS Foundation Trust, have shaken people's confidence in health professionals. This has also been affected by the easy access to the internet, whereby patients and their families can gain access to the latest information on diagnosis and treatment. Nurses are more accountable now than they have ever been and members of the public are rightly asking increasingly perceptive questions about their care and treatment. If nurses select a theory that will commit them to promoting adaptation, independence or self-care, they can be held accountable by the public for this particular service (see Reflective Exercise 7.7).

Reflective Exercise 7.7

Biomedical model

The main home of the medical model is in the acute hospital system. But hospital care is getting more expensive and there is a trend towards shorter lengths of stay, early discharge, day care, social care and community care.

Think about whether the biomedical model is appropriate in this changing health care world. Write a short paper on this and identify a more suitable theory. Refer back to Chapter 4 if you need to update yourself on the biomedical model.

Staff attitudes

As alluded to in the introduction to this chapter, there is often a distrust of theories in the clinical setting, an assertion supported by Steve Ersser (2006). It is highly likely that the previous dislike of the nursing process has been transferred to nursing theories. Although such negative views do not coincide with McKenna's (1997) research findings, they do influence the selection of theories for practice. It is a truism that if nurses have a view that theories will add more paperwork to their already busy schedule, for expedience they will select the simplest theory available and the one that is easiest to introduce and manage.

The danger is that this may not be the best choice for their patients. The next section provides you with the criteria necessary to select an appropriate nursing theory to underpin your practice.

Choosing a suitable nursing theory

The criteria

Fawcett (2005b: 40) stated that nurses should follow four steps when selecting a nursing theory:

1. Thoroughly analyse and evaluate several nursing theories.
2. Compare the content of each theory with the mission statement of the clinical setting to determine if the theory is appropriate for use with the population of patients served.
3. Determine if the philosophical claims underpinning each theory are congruent with the philosophy of the clinical setting.
4. Select the theory that most closely matches the mission of the clinical setting and the philosophy of the nursing department.

From the previous section you will have spotted the obvious flaws in Jacqueline Fawcett's approach. As we stressed earlier, it would be difficult for busy nurses to analyse and evaluate several nursing theories and, even if they could, which ones would they analyse? In addition, steps 2 and 3 could be counter-productive. For instance, if the pervading philosophy in their unit is the biomedical model, then the nurses will select a theory that matches this way of working and so maintain the status quo. In addition, do all clinical settings have an explicit mission statement or philosophy underpinning their work? Although we are sure that Fawcett meant well, her four steps to selecting a theory may inadvertently allow the introduction of an unsuitable nursing theory. Nonetheless, we concur that there needs to be an agreed checklist to allow busy clinicians to choose the most appropriate theory for their practice. We propose that the following criteria represent such a checklist:

- clinical setting
- origin of the theory
- paradigms as a basis for choice
- simplicity
- patients' needs
- understandability.

These are discussed in more detail in the following sections.

Clinical setting

This criterion concentrates on contextual factors in the clinical situation. This could be an emergency room, a children's clinic, a community-based nursing home, a learning disability unit or a mental health unit. Earlier in this chapter, we likened theories to maps that guide our practice and suggested we require a different map to suit the specific terrain in which we find ourselves. This holds true for clinical settings and so staff should only select a theory if

it fits well with the structure and function of that setting. This criterion reflects well the views of Anderson et al. (2005) when they wanted to select a theory that would be appropriate for care of diabetic patients.

Origin of the theory

In Chapter 2 you will recall that we distinguished between the 'know that' of knowledge and the 'know how' of knowledge. The former is the more deductive cognitive knowledge, whereas the latter is the more inductive practical knowledge. By definition, practising nurses are expected to be 'hands on' professionals. Therefore, they may be more attracted to a theory that has emerged from the 'know how' stable. By contrast, a theory formulated by academic 'armchair theorists' who based their work on reasoning alone may be unattractive to many clinical nurses. Therefore, when selecting a theory, nurses should take its origins into account. It is, of course, possible to identify a theory that was developed through 'retroduction', i.e. where both induction and deduction played a part (see Chapter 6). You will recall that Peplau (1962) studied the phenomenon of interpersonal relationships over many years and began to develop her theory deductively through the influence of Henry Stack Sullivan's (1953) interpersonal relations theory, and inductively through reflecting on her clinical experience in psychiatric nursing. This gives the clinical nurses the best of both worlds – the theory has clinical credibility and is based on good science.

Paradigms as a basis for choice

In Chapter 5 you were shown that every nursing theory has its roots in one or more of the following paradigms: systems, interactional, developmental and behavioural. These 'world views' could help nurses make some preliminary decisions about the type of theory that is most appropriate for their work. For instance, mental health nurses who support the development of interpersonal relationship with patients may find interactional theories more attractive than the more mechanical systems theories. Similarly, nurses who work with people who have severe dementia may not favour interactional theories, whereas behavioural theories that focus on meeting human needs might get their support.

Simplicity

It has been mentioned several times in this text that modern nursing is a complex and demanding profession. Patient throughput has increased and difficult targets have been set for patient outcomes. In such a situation, nurses do not want complex theoretical frameworks to overcomplicate the art and science of patient care. Simplicity has to be an important selection criterion, as long as this does not reflect a lack of theoretical soundness. The principle of 'Occam's razor' states that 'the simplest theory is to be selected from among all other theories that fit the facts as we know them' (William of Occam, 1300–1349) (see Key Concepts 7.6). This traditional belief is synonymous with the modern idea of 'parsimony'. Parsimony dictates that a good theory is one that is stated in the simplest terms possible. There are complex idealistic theories such as that of Rogers (1980) and there are less complex but realistic theories such as that of Henderson (1966). There is little reason to select the former if the latter will suit the clinical requirements just as well.

Key Concepts 7.6

Occam's razor: the principle that we should select the simplest theory that fits the facts as we know them

Parsimony: the principle that the best theory is the one that is described in the fewest and the simplest terms

Patients' needs

When considering theories for practice, nurses should not be too apprehensive about which theory is popular in their hospital, country or region; rather they should be concerned with which is best for the needs of their patients. Experienced nurses know their patients and their patients' needs. They are often best placed to be a patient advocate when patients cannot advocate for themselves. Therefore, the choice of any theory must be based on the nurses' knowledge of their patients. In some cases a patient caseload would have people with varying needs. Therefore, the theory must also be general enough to deal with the many diverse situations the nurse comes across when dealing with a heterogeneous group of patients.

Understandability

Although this concept is closely related to simplicity, it merits separate consideration. A theory must be easily understood if it is get the support of busy nurses. In Chapter 5 we referred to the complexity of Rogers' (1980) work, but we could have been writing about Parse's (1981) theory or Fitzpatrick's (1982) theory – both grew out of Roger's theory. Nonetheless, in case we become overly critical of the complexity of theory, we should acknowledge that a theory must have an element of complexity to be significant. To get their new meaning across, theorists often have to invent new words or use complex terminology (see Reflective Exercise 7.8). For instance, we learned in Chapter 2 that humans have more than one dimension – they have height, width and depth. While this is understandable, clinical nurses may baulk at referring to patients as three-dimensional beings! Likewise, when you take on a new hobby, there is always a lot of new terminology to get used to, be it knitting (purl), photography

Reflective Exercise 7.8

Understandability and jargon

We have noticed over the years examples of anti-intellectualism among many nurses. They complain about the big words and jargon used in nursing theories and nursing research. However, they appear to be enthusiastically fluent when it comes to knowing and reciting the long and complex names of certain diseases, medical interventions and pharmaceutical products.

Take a few minutes to consider why this is the case and what can be done to change things. Discuss with your fellow students whether this is a realistic observation of nursing behaviour or simply a biased perception on our part.

(shutter speed), sailing (tack) or computing (tetrabyte). Why, then, should we expect the language of theory to be like everyday speech? As Bronowski (2005) stated in *The Ascent of Man*, the language of science cannot be freed from ambiguity any more than poetry can.

Further supporting criteria

It has been suggested that a theory will not gain a foothold in a clinical setting or in the 'hearts and minds' of busy clinical nurses if it is not relevant to the patients being cared for there and the practice being provided. The following list supports and adds to the previous criteria (Miller 1989: 47):

- Does the theory have direct relevance for the way in which nursing is practised?
- Does the theory describe real or ought-to-be care?
- Has its assumptions and propositions been tried and tested?
- Does it deal with the resources that are necessary for good care?
- Does it guide the use of the nursing process?
- Does it provide practising nurses and with good direction for clinical actions?
- Are the concepts within the theory too abstract to be applied in practice?
- Is the language of the theory easy to understand?
- Does the theory coincide with the practising nurses' 'know how' knowledge?

Nurses' own philosophy as a basis for selecting a theory

If asked, all professionals would have a personal view regarding the central components of their work. This is based upon their attitudes, values and beliefs and is borne out of the education and experience they have been exposed to over a number of years. Nurses are no different and, if given time to consider, they too can describe and explain the essence of what they do. Because thoughts, beliefs and attitudes are the parents of behaviour, it is not surprising that clinical practice varies according to the thoughts, beliefs and attitudes of the nurse giving the care. These have been referred to elsewhere as the nurse's implicit nursing theory (McKenna and Slevin, 2008).

Previously, Jean McFarlane (1986: 3) wrote:

> Most (practitioners) have a rough picture of practice which includes ideas about the nature and role of the patient and the nurse, the environment ... in which practice takes place, and the major field of function, i.e., health care and the nature of action.

Therefore, we would argue that each clinical nurse has a 'personal theory' that he or she uses as a guide to practice (see Key Concepts 7.7). As with McFarlane's view, these personal theories incorporate assumptions concerning the four metaparadigm elements of, nursing, health, person and environment (see Chapter 5). The literature informs us that all formal nursing theories are also built around these four elements (Fawcett 2005b). Therefore, it is not unreasonable to expect that if clinical nurses were able to match their personal nursing theory with an existing nursing theory they would be closer to identifying a suitable theory for practice.

Key Concepts 7.7

Most nurses have a personal theory of nursing that has been developed over many years based on their education and experience.

If asked, most nurses are able to reveal these personal theories; they can identify their views on the elements of nursing, health, environment and person. However, in the reality of the practice situation, they are seldom articulated. It is not something that nurses talk about during their coffee break. Consequently, they are mostly hidden in the nurse's mind rather than being made explicit.

Some of the problems with this approach to selecting a nursing theory have already been identified above. The main one is the perpetuation of the theoretical status quo. If the nurse's personal theory is based only on being educated and experienced in the physical aspects of the biomedical model, this will reflect her choice of theory. Perhaps, this is why many clinical settings in the UK have adopted Roper's theory with its activities relating to maintaining body temperature, breathing and eating and drinking?

There are other limitations to matching a personal theory with an established one. It is possible that ten nurses in the same clinical unit have ten different personal theories of nursing. Trying to select one to match all ten's values and beliefs would be difficult. Also, many of these personal theories could be immature, untested, unreliable or confused. Furthermore, the internationally recognised nursing theories are by no means 'value free'. They too were initially formulated around the personal views and preferences of their originators. By selecting these nursing theories, practising nurses may simply be exchanging their own biased view with that of another.

Nonetheless, in an era where nursing theories are often perceived to be unpopular, choosing one that best reflects a nurse's own perception of nursing may be the best selection strategy. After all, nurses will have difficulty supporting a nursing theory unconditionally if it does not coincide with their deep-rooted views of what they believe nursing is.

A strategy for choice

From the preceding discussion we would suggest that all nurses have a personal theory pertaining to how they view the metaparadigm elements. As highlighted in Chapter 5, all published nursing theories possess statements about the metaparadigm (Fawcett 2005b). This means that practising nurses can choose a theory that best reflects the beliefs and values that they hold about nursing, people, health and their environment (Cutcliffe et al. 2009).

As mentioned earlier, Fawcett (2005b) maintained that the beliefs held by nurses about the person, the environment, health, and nursing will direct them to look for a theory congruent with these beliefs (see Key Concepts 7.8). Therefore, they can compare the content of theories with their beliefs and select the one that closely matches them.

As mentioned earlier, if nurses cannot accept the way some concepts are treated within a particular theory, they should reject that theory and choose another one whose concepts are more compatible with their own. In this way congruence will be reached between the nurse's personal theory and a recognised theory. The final choice will indicate for nurses what they

Key Concepts 7.8

A nurse's personal theory is composed of her beliefs and views about nursing, health, person and environment. Established nursing theories also make assumptions about these elements. This can form the basis for selection.

have always believed about their work but could not articulate in as clear and distinct manner as articulated by the selected theory (see Reflective Exercise 7.9).

Reflective Exercise 7.9

Theory selection

Refer to any one of the following texts:

- Fawcett, J. (2005) *Contemporary Nursing Knowledge: Analysis and Evaluation of Nursing Models and Theories*, 2nd edition. Philadelphia: F.A. Davis Company.
- Steven-Barnum, B. (2006) *Nursing Theory: Analysis, Application, Evaluation*. New York: Lippincott Williams & Wilkins Publishers.
- Alligood, M.R. & Marriner Tomey, A. (2010). *Nurse Theorists and their Work*. St Louis: Mosby, Inc.
- Meleis, A (2012) *Theoretical Nursing: Development and Progress*, 5th edition. New York: Lippencott Williams and Wilkins.

Using one or more of these books as sources, extract from the theories of Orem, Roy, Henderson, Rogers and Peplau what each says about the person, nursing, health and environment (the metaparadigm). Consider these and see which one matches your personal views about these four elements. Check if any other students had selected the same theory and, if so, why.

Once you have done this, repeat the exercise with five other theorists. Include one from the UK this time, such as Roper's theory of activities of daily living or Minshull's theory of human needs.

Who should select the theory?

As mentioned at the start of this chapter, at one time it was commonplace for nurse educators or nurse managers to select a theory for blanket application across a hospital. It is not surprising that such theories held very little weight with experienced clinically based nurses. The case has been made in preceding sections that a nursing theory has a better chance of being adopted and used if practising nurses themselves have been involved in its selection. Although this may be a lengthy process, in the end the adoption will be longer-lasting if every concerned individual has been party to the decision-making process. A decision imposed by others often means a short-lived allegiance among those who have to implement it.

A slightly more controversial notion is that the nurse sister (unit manager) of each clinical setting should select the most relevant nursing theory. This may indeed be a valid nomination, considering that this individual should have the most knowledge and influence regarding clinical work orientation and practical expertise (see Key Concepts 7.9).

There is a general absence of reports in the literature suggesting that the patient should be involved in the theory selection process. This is strange considering the emphasis on the patient as a partner in care. We would argue that when selecting a theory, the beliefs and values of the most important person concerned, the recipient of care, cannot be ignored. However, if nursing theories are viewed as confusing by many nurses, would patients not find them even more confusing? If the answer is yes then one can see why there has been little evidence of partnership between nurses and patients in the selection of a theory. However, this may say more about the unnecessary complexity of the theory than about patients' knowledge.

Key Concepts 7.9

The ward sister should have a major role in selecting the theory, but the involvement of patients and other nurses who work in that setting would strengthen the commitment to using the theory.

Nursing theories or theories developed by another discipline?

Villarruel et al. (2001) were able to borrow a theory from another discipline and merge it with existing nursing frameworks to create an innovative way of conceptualising condom usage. While this worked for them, there is a great deal of scepticism around using non-nursing theories to guide nursing practice (McKenna & Slevin, 2008). Therefore, an important issue to consider when selecting a theory for nursing is whether we should borrow theories from other disciplines.

Almost 50 years ago, Wald and Leonard (1964) argued that if practitioners continued to borrow theories from other disciplines, research problems based upon these theories would be phrased as questions that had little to do with nursing. For instance, using and testing sociological theories within nursing may do more for the knowledge base of sociology than for nursing. They called for the development of nursing theories rather than trying to make borrowed theories fit. But is this not too narrow a view? Should we not use whatever theory fits the patient problem and can best guide practice? (see Key Concepts 7.10).

Key Concepts 7.10

Borrowed theory may contribute to the quality of patient care but it could also contribute to expanding the knowledge base of the discipline from which it was borrowed.

Bearing in mind the time at which Wald and Leonard were writing their paper, the early 1960s, it is possible to understand why they might have felt threatened by theories from other disciplines. After all, there were very few nursing theories available at that time. The work of Hildegard Peplau (1952), Virginia Henderson (1955), Lydia Hall (1959), Dorothea Orem (1959) and Dorothy Johnson (1959) were the exceptions. There were over 40 more to follow, but we can see why Wald and Leonard feared that the early conceptualisation from nurses would be swamped by an influx of outside theories.

What they may have failed to make explicit, though, was that even these new nursing theories were based on the work of theorists from other disciplines. To name a few – Peplau's theory was based on that of Harry Stack Sullivan (see Chapter 6); Johnson's theory was based on that of B.F. Skinner; and Virginia Henderson's theory was based on that of Abraham Maslow.

Considering the plethora of textbooks on nursing theory that are still being published each year, it would seem that there are still nurses who would rather pursue nursing theories rather borrowed theories. There is perhaps some merit in this. Compared with sociology, psychology, medicine, law and many other professions, nursing is still a relatively new discipline. It requires a body of knowledge pertaining to its practice. We would suggest, however, that the choice should not be either/or. Nurses should formulate their own theories but they should also use and develop theories from other disciplines.

To a large extent, this corresponds to the picture in other allied health professions. Social work, for instance, began with an adherence to the biomedical model, only to supplant it with theories of its own as the discipline evolved. Similarly, occupational therapy, as one of the 'allied health professionals', has moved away from the biomedical model to embrace theories relating to activities of living.

In many instances, nurses borrow theories but do not bother to adapt them. This often results in theories that are incomplete and unrepresentative of nursing. To be useful, such borrowed knowledge must be reformulated and revalidated to suit the particular problems and needs of the nursing profession. For example, psychological or organisational theories are not unique to nursing, but how they are used and the perspective employed can be unique. Yet, because borrowed theories may need to undergo intensive reworking to fit nursing's unique perspective, borrowing may not be as simple a process as it first appears – after much work and adapting, we could end up with an invalid and unreliable hybrid theory.

We should not be worried about ownership, though – theories belong to the scientific community at large, not to one particular discipline. Discovery does not confer the right of ownership. A note of caution is required here: nurses should be careful to avoid the temptation of borrowing from other disciplines without first investigating what those theories have done for their parent disciplines. If a sociological theory of family care has been rejected by sociologists, it may be foolish for nurses to borrow it for their practice unless careful consideration is given as to why it was rejected by its parent discipline. The term 'borrowed' suggests that it will be returned to where it came from. In this case, nursing may adapt a borrowed theory and improve upon it. As a result, the adapted theory could bring new perspectives for its parent discipline (see Reflective Exercise 7.10).

It may not be long before other health care disciplines begin to borrow theories developed by nursing. In fact, as we outlined earlier, there is some evidence to suggest that occupational therapists and physiotherapists are already borrowing and reformulating nursing theories (e.g. self-care and activity of living theories) for their practices.

We maintain that there is nothing wrong with selecting a theory from another discipline if it can shed new light or provide a different, beneficial perspective on the provision of patient care. There is no reason why nurses should 'reinvent the wheel'. The important question is

Reflective Exercise 7.10

Borrowed theory

Take some time to consider where you work, and identify non-nursing theories that you use to do your job. These could be theories of communication, theories of management or theories of teaching.

See how many you can come up with and then identify any benefits they bring to your role.

whether selecting a 'borrowed' theory brings with it benefits for nursing, nurses and the people who rely on us for care.

Conclusion

Because the choice of a theory will affect how patients are assessed and how care is planned and delivered, selection should not be a process that nurses take lightly. This chapter identified several issues that must be taken into consideration when an appropriate theory is to be chosen. It outlined a range of selection criteria nurses may find useful. The issues of who should make the choice and how this should be done are also addressed. In essence, there are many selection approaches available and nurses should consider these carefully. Not to do so could waste a lot of time and end up with nurses employing an inappropriate theory to guide practice.

Theories are like maps and we require a different one depending on the terrain in which we are working. The days should be over when managers and educators choose theories for practice. Patients or their representatives should work alongside nurses in the selection process. If this occurs, the selected theory will be a realistic reflection of what those in practice see as important for quality care and the nurses will be more likely to use it enthusiastically and appropriately. Finally, there are dangers in borrowing theory from other established disciplines for application in nursing. However, if handled correctly, such borrowed theories can bring a great deal of benefit to nursing. They can also be adapted and enhanced and returned to their parent discipline in a more robust form.

Revision Points

- Because the choice of a theory will affect how patients are assessed and how care is planned and delivered, selecting an appropriate theory is important.
- There are 12 potential problems that must be considered when selecting a theory:
  - American or UK nursing theories;
  - ethical and moral issues;
  - length of patient stay;
  - nurses' knowledge of nursing theories;
  - the implications of a wrong choice;

- hybrid nursing theories;
- method of choice;
- single or multiple theories;
- nursing theories vs midwifery theories;
- inherent limitations of theories;
- social and political issues;
- staff attitudes.

- There are a number of selection criteria that should be used when considering a suitable theory for practice, as follows:
  - clinical setting;
  - origin of the theory;
  - paradigms as a basis for choice;
  - simplicity;
  - patients' needs;
  - understandability;
  - matching the metaparadigm to personal theories.
- The days should be over when managers and tutors choose theories for practice. Patients or their representatives should work alongside clinical nurses in the selection process.
- There are dangers and benefits in borrowing theory from other established disciplines for application in nursing, as follows:
  - If practitioners continued to borrow theories from other disciplines, research problems based upon these theories will be phrased as questions that have little to do with nursing.
  - Compared with sociology, psychology, medicine, law and many other professions, nursing is still a relatively new discipline. It requires its own theories.
  - To be useful, such borrowed knowledge must be reformulated and revalidated to suit the particular problems and needs of our discipline.
  - Borrowing may not be as simple a process as it first appears – after much work and adapting, we could end up with an invalid and unreliable hybrid.
  - Theories belong to the scientific community at large, not to one particular discipline. Discovery does not confer the right of ownership.
  - Nursing may adapt a borrowed theory and improve upon it. As a result, the adapted theory could bring new perspectives for its parent discipline.
  - There is nothing wrong with selecting a theory from another discipline if it can shed new light or provide different beneficial perspective on the provision of patient care.

Additional reading

Fawcett, J. (2005) *Contemporary Nursing Knowledge: Analysis and Evaluation of Nursing Models and Theories*, 2nd edition. Philadelphia: F.A. Davis Company.

Polanyi, M. (1967) *The Tacit Dimension*. London: Routledge and Kegan Paul.

Popper, K. (1965) *Conjectures and Refutations: the Growth of Scientific Knowledge*. New York: Harper and Row.

Useful web links

www.nurses.info/nursing_theory_midrange_theories.htm
www.springerpub.com/samples/9780826119162_chapter.pdf
http://currentnursing.com/nursing_theory/Roy_adaptation_model.html

Don't forget to visit to the companion website for this book:
www.wileyfundamentalseries.com/nursingmodels
where you can find self-assessment tests to check your progress.

8

Research and theory: some relationships

Outline of content

From previous chapters you will have learned that there is a strong link between theory and research. We saw that the end product of theory + research was science. We also discussed the development of theory through induction, deduction or retroduction. In this chapter we will introduce you to how theory is produced by research, how research tests and evaluates theory and how a theory can simply be a skeleton on which to hang a research project. You have also been introduced to the meta-theorists James Dickoff, Patricia James and Afaf Meleis. In this chapter, we will demonstrate how their work is linked to research.

Learning outcomes

At the end of this chapter you should be able to:

1. Outline the relationship between research and theory
2. Show how theory is generated by research
3. Show how theory is tested by research
4. Show how theory is evaluated by research
5. Understand how theory can help frame a research study
6. Link Dickoff and James's levels of theory with levels of research
7. Describe Meleis' five levels of research-theory linkages.

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Introduction

From the following two quotations, readers will note that the relationship between theory and research is one of mutual benefit:

> *It is the theory that decides what can be observed.*
>
> Albert Einstein (1879–1955)

> *No generalising beyond the data, no theory. No theory, no insight. And if no insight, why do research.*
>
> Henry Mintzberg (1939–)

According to Albert Einstein, it is through knowing the theory that the researcher will know what to look at and what to look for. Henry Mintzberg said the same thing but in a different way. He maintained that theory provides insight and that without this there is no point in doing research. Practice is the unwritten element of this, because without research, practice stagnates. Therefore, theory, practice and research are like the legs of a three-legged stool. If the stool represents knowledge then its stability is threatened if any of the three legs are weakened or missing.

Building theory through research: an inductive approach

Theories often emerge from practice, are tested by research and are then returned to practice unchanged, adapted or strengthened. From an earlier chapter you will recall that 'phenomena' are things, events or situations that we perceive through our senses. Nurses continually notice phenomena in their daily work with patients. Some of these are ignored because the nurse may see them as commonplace or unimportant. By contrast, nurses may give considerable thought as to why the phenomena exist and what causes them to appear.

Suppose Tricia Reid, a nurse manager, notices that two adjacent medical units had different lengths of patient stay, one being consistently shorter than the other. What puzzled Tricia was that they were both medical assessment units that admitted the same type of patients. Furthermore, they employed the same medical consultants. In fact, the only difference she could see between both units was that one had open visiting and the other did not. She was intrigued by this phenomenon and sought confirmation of her perceptions with colleagues. When she brought it to their attention, they too had noticed this and found it strange.

Tricia decided to investigate the phenomenon further and research it as part of her master's degree dissertation. She started by searching the literature but did not come up with any published papers or reports on open visiting being linked to shorter lengths of stay. She then used a retrospective quantitative design to check for a statistically significant difference in discharge rates over the previous five years across both units. She took into account demographic and other patient and staff variables. For patients, these included gender, age, diagnosis and consultant, and for nurses this included gender, age, education and length and type of clinical experience. She also used observation to check the number and types of visitors (e.g. family, friends, work colleagues) to both units. The data she collected supported her hunch that this is an important, and hitherto un-investigated, phenomenon.

She concluded that there were several concepts linked to this phenomenon – the main ones were open visiting, medical condition and length of stay. These are the building blocks of theory. From Chapter 1 you will remember that theory is developed when relationships are made between two or more concepts. Such a relationship is called a proposition and these are the cement that holds the concepts together. So, for Tricia, a new theory was developing, which (for want of a better term) she called the 'length of stay' theory. It postulates that medical patients, regardless of age, gender or diagnosis, have significantly shorter lengths of stay on medical wards where open visiting is practised (see Reflective Exercises 8.1 and 8.2).

Reflective Exercise 8.1

Phenomena to theory?

Having done the reflexive exercises in Chapter 1, you should now know how phenomena identified in a nurse's daily work can be thought about and labelled as concepts, which can then be linked as propositions that can form a theory.

Think of an event that you have noticed in your practice or clinical setting. Consider this phenomenon and, in a one-page account, take it through the same research process as that undertaken by Tricia Reid.

Reflective Exercise 8.2

Extraneous variables?

The example of the 'length of stay' theory is hypothetical. However, consider the suggested link between length of stay and open visiting on the medical wards.

Take a few moments to write down what else could have been making the difference – remember, patients were assigned by the same consultants to one or other ward, so there was no selection bias. Patients were controlled for age, gender and diagnosis. What else, from a nursing point of view, could have been different in both wards that might have affected length of stay? Theoretically or practically, what could the nurses have been doing in one ward but not another that caused the difference?

In this example, the 'length of stay' theory emerged from practice. We will expand later on how a phenomenon emerges and how it can be given a name to make it a concept, and how different concepts form propositions which, in turn, become a theory (see Key Concepts 8.1). Tricia and her supervisor decided to publish her research in a medical journal. As a result of the publication, a nurse researcher in Australia decided to test the theory to see if it could be verified or refuted when applied to patients in medical wards in a large hospital in Sydney.

Key Concepts 8.1

When you name a phenomenon, it becomes a concept, when you link one concept with another you get a proposition. This is the beginning of theory.

Popper's boat

Karl Popper (1989) supported carrying out research to refute theory. His analogy of the paper boat is worth re-emphasising here. Every young boy knows how to make a paper boat and has probably done so at one time or another. Unfortunately, paper boats, like real boats, sink. As you saw in Chapter 1, Popper compared a paper boat to a theory. You construct the paper boat and you see if it floats. The first time you push it out into the pond, it floats and so the boat has been well constructed and performs well. You try putting small weights in the boat to see if it still floats and you try to make the water choppier. If the boat remains floating after all these tests, it has done everything that was required of it. However, it is also possible that after two or three tests, the boat sinks. The boat has gone beyond its abilities and has sunk – in Popper's parlance, the theory has been refuted. However, a great deal has been learned from its sinking (refutation), which could lead to the construction of a better and stronger boat (theory).

The same principle applies to the testing of the nurse Tricia Reid's 'length of stay' theory. The Sydney researchers could inductively replicate her study and see if they come up with the same theory. Alternatively, they could accept the theory and – like a paper boat – test it deductively to see if it can be refuted. They could do this by identifying two medical units that have similarities to those investigated by Tricia Reid. They could then randomly introduce open visiting to one of these and prospectively check the lengths of patient stay. The results of such a test, like those with the paper boat, would either verify or refute the theory. If the former, the Australian team of researchers would then publish the results showing that their research in Sydney upheld the 'length of stay' theory (see Key Concepts 8.2). They would also make recommendations to strengthen the theory, such as doing a cost–benefit analysis to show how many more patients are treated on the ward with the shorter length of stay, and these could be taken up by other researchers in other parts of the world. Over time, the theory would become strengthened and established until, somewhere else in the world, another test refuted it. However, if it is never refuted, the theory would find its way into nursing textbooks and hospital management guidelines. In time it would become part of established practice. It may even, after a longer period of time, become a law!

Key Concepts 8.2

Hypotheses: some propositions of existing theories are called hypotheses – these can be tested through research

In summary, the 'length of stay' theory would have emerged from practice, been tested and returned to inform practice. This reciprocal relationship between theory, research and practice is how science can be developed in nursing and how theory can lead to improvements in patient care.

From the foregoing example of the 'length of stay' theory, you can see that research does two main things. It generates theory or it tests it. Jacox (1974) stated that research without theory was analogous to a team of bricklayers, each making a brick in isolation from other bricklayers and with no blueprint to follow. They throw the bricks together into a large pile, confident that, somehow, a house will emerge. Similarly, Tricia Reid could easily have ignored the phenomenon she observed and failed to see the propositional relationship between the concepts – open visiting, medical wards and length of stay. To use Jacox's analogy, these would just be unnoticed, disregarded bricks. Therefore, without theory, the knowledge that Tricia Reid constructed would be a mass of data and observations with no coherence or understanding.

New theory generated from practice will lead to new research studies, which will lead to new knowledge for practice. In turn, new knowledge presents us with new facts, which encourage us to develop theories to explain these facts. Unfortunately, practice is occasionally carried out without being guided by either research or theory. Furthermore, studies continue to be undertaken which are descriptive and poorly linked to theory.

Meleis (2012) stated that researchers often view theorists as 'ivory tower' philosophers who dream up ideas unconnected with practice or research. Similarly, theorists view researchers as investigators who focus on small research projects to confirm, or not, disconnected propositions that do not add up to theory. Such research has limited usefulness. The end product of research is poor if it does not provide theory to help describe or explain phenomena or help practising nurses to predict outcomes and prescribe interventions.

You will recall from Chapter 3 that the American philosophers James Dickoff and Patricia James made a large contribution to the generation and testing of nursing theory. While they were not nurses themselves, they worked closely with Ernestina Wiedenbach, who was a well-known early nurse theorist (Wiedenbach 1964). In 1968, Dickoff and James published a seminal paper in the *Nursing Research Journal*. It was entitled 'A theory of theories: a position paper'. They stated that research is for the sake of theory and theory is for the sake of practice and that theory produced without research has little hope of viability. Research, they argued, was pointless unless done (a) in the context of theory and (b) with a clear realisation of what it can contribute to theory. In other words, like Jacox, they believed that research was inextricably linked to theory – it either generated or tested theory.

Is the link between theory and research strong?

In recent years, nurses have become fascinated by 'evidence-based practice'. This is where practice is informed by the best available research findings. It has led most nurses to view with suspicion any guideline, policy or intervention that is based on mere conjecture or hunch. Patient care is too serious to be underpinned by hunches or untested rituals.

Nursing has been criticised over the years for the large number of grand theories that have been generated by so called 'armchair theorists'. These were nurses who developed their models and theories through reasoning rather than active research. Not only were these not generated through research, but most were not tested by research either (see Reflective Exercise 8.3) You will remember from Chapter 5 that the concepts and propositions within grand theories are so broad in scope that it is not possible to know many of them. It is a truism that if nurses are taught theories that have no basis in research, then the nursing

care based on these theories are unlikely to have a positive effect on patients. Teachers and managers who promulgate such theories must be aware of the ethical implications of doing so. Their implementation in practice in an unquestioning manner may do a great deal of harm and may become just as much a ritual as the habitual carrying out of existing unsubstantiated routines.

It was perhaps this lack of a sound research base that turned clinical nurses off nursing theories. It may also be the reason why many educational programmes do not have as much nursing theory content or why curricula are not commonly framed by a nursing theory.

Reflective Exercise 8.3

Propositions from grand theory

By now you will know that all theories are made up of concepts and statements (propositions) linking them together in some way. Grand theories, such as those of Roper et al., Orem and Roy, are also composed of these elements.

For this exercise, select one theory with which you are familiar or one from a textbook. Identify one or two propositions in that theory and write a short report on how you would go about testing whether the propositional relationship was valid.

Research in nursing

For many years, research approaches in nursing have been divided into two main camps. There are hypothesis-testing studies where, through deductive testing, the object is to create explanatory and practice theories [what Dickoff & James (1968) referred to as 'situation relating' and 'situation producing' theories]. In the past, such research was labelled positivism or empiricism (see Chapter 2). By contrast, qualitative research uses induction where the emphasis is on creating descriptive and exploratory theories. As you should now be aware (see Chapter 2) these come from the philosophy of historicism.

Quantitative and qualitative research may be differentiated by where the theory lies in the research process. In qualitative research, the theory is the product and emerges (possibly not fully formed) at the end of the study. Conversely, in quantitative research, the theory is present at the beginning of the study and the researcher formulates testable hypotheses from its propositions, and tests these to see if the theory's propositions can be refuted or verified. In 'theory-generating research', the researcher seeks to identify a phenomenon, discover its characteristics and formulate propositions; in 'theory-testing research' the investigator seeks to develop evidence through researching hypotheses derived from an existing theory's propositions.

Barbara Stevens Barnum (2006), a renowned meta-theorist, refused to recognise the existence of research which is not linked in some way to theory. Again, this would be in line with the thinking of Dickoff and James (1968) and Ada Jacox (1974). She maintained that theory directs research, research corrects theory, and corrected theory directs more research (see Key Concepts 8.3).

Key Concepts 8.3

Research–theory relationship

Research only does two things – it either generates or tests theory.

By contrast, Peggy Chinn and Maeona Kramer, two other meta-theorists, who have been writing about nursing theories for a generation, do identify research that has nothing to do with theory. In the eight edition of their textbook (Chinn & Kramer 2011: 208), they argued that there are two main types of research: theory-linked research and theory-isolated research. They conceded that both can be of excellent quality and can contribute to new knowledge, but because the former is conducted within the framework of theory, it has greater potential for developing new understanding. Theory-linked research is related to the generation or the testing of theory while, by definition, theory-isolated research has no discernible theoretical connection. While it is possible to argue against Chinn and Kramer's stance, we would assert that most useful research has strong links with theory (see Key Concepts 8.4).

In our experience, there are four possible linkages between research and theory (McKenna & Slevin 2008):

- Research generates theory inductively from practice – *theory-generating research* (TGR);
- Research tests theory deductively in practice – *theory-testing research* (TTR);
- Theory guides the research project – *theory-framed research* (TFR);
- Research evaluates the use of theory in practice – *theory-evaluating research* (TER).

Key Concepts 8.4

There are four main linkages between research and theory. Research can generate, test or evaluate theory and theory can help frame a research study.

Theory-generating research (TGR)

Elsewhere in this book we have illustrated the difference between grand theory, mid-range theory and practice theory (see Chapter 3). Grand theories are very broad and, in most cases, have not been generated through research. Mostly they have been developed through reasoning based upon the experience of the theorist concerned. This included the work on Orem (1995) and Henderson (1966). However, such an approach to theory development is not new. You will recall that Freud (1949) created his psychoanalytic theories without ever carrying out any empirical research. Most of his theory was developed from his experience in seeing patients. It is also well known that the technology and methods required to test Einstein's theory of relativity ($E = MC^2$) were not available until many years after it was developed!

In contrast to grand theories, mid-range and practice theories have their origin in research. Speaking generally for science, Larry Laudan (1977) stated that theoretical progress in a discipline is often measured by the number and quality of the theories developed by its scholars. Therefore, the most useful outcome of nursing research is the number of meaningful theories that impact positively on the health and well-being of patients, their families and communities. TGR contributes significantly to the growth of such theories.

When little is known about clinical phenomena, TGR is conducted for the purpose of their discovery and exploration (remember nurse Tricia Reid earlier in the chapter). The resultant theories are normally generated inductively by researchers who realise that within nursing practice there lies a large number of phenomena awaiting observation and description. Because the research eventually leads to inductively formulated theory, TGR may be referred to as the 'research-then-theory' approach to knowledge development – simply because the research precedes the theory.

Dickoff and James (1992) claimed that since nursing practice predates nursing research, it makes a sound foundation for theorising. Furthermore, if nurse researchers are to be expert in TGR they must work in partnership with clinical staff who can provide them with researchable phenomena of specific interest to patient care.

Chinn and Kramer (2011) pointed out that, when attempting to generate theory, the researcher enters the research setting with as open a mind as possible in order to see new relationships between phenomena. This 'blank sheet' approach to knowledge creation is similar to what René Descartes referred to as the *tabula rasa* (see Chapter 2). However, we would question if this is really possible. No matter how much we try to clear our mind, we all enter a situation with our own conceptual baggage, so this is not always an easy process. Furthermore, what to the researcher's eye is an interesting researchable phenomenon may be perceived by an experienced clinical nurse as humdrum and ordinary. Therefore, researchers and the clinical staff with whom they work should be acutely aware of the possibilities that phenomena may have for theory generation, but they should also be aware of their biases.

Research approaches to theory generation

In her recent book on this subject, Julianne Oktay (2012) breathed new life into Glaser and Strauss's (1967) work on *grounded theory*. Their approach involves the simultaneous collection of data, coding, categorising observations and forming concepts and relationships based on the data. Put simply, in grounded theory the researcher generates theory from data (Glaser and Strauss 1967).

Ethnography has its basis in social anthropology. Brian Hoey (2012) maintained that the term ethnography has come to be equated with virtually any qualitative research project where the intent is to provide a detailed, in-depth description of everyday life and practice (see Reflective Exercise 8.4). Inevitably, the researcher seeks to get involved in the setting, experience the phenomenon first hand and soak up the concepts that are important in describing that phenomenon. Only then do they feel that they really know the phenomenon and could attempt to generate theory.

According to Stan Lester (1999), *phenomenology* is a qualitative research approach used to identify phenomena through how they are perceived by the 'actors' in a situation. In the human sphere, this normally translates into gathering 'deep' information and perceptions through inductive, qualitative methods such as interviews, discussions and participant

observation, and representing it from the perspective of the research participant(s). Phenomenology is concerned with the study of experience from the perspective of the individual. Therefore, phenomenology is designed to describe the subjective 'lived experiences' of people and to comprehend the essence and meanings that they place on these experiences. The experiences cannot be observed; researchers can only directly access them through questioning the person who has the experience.

Reflective Exercise 8.4

Types of qualitative research

In Chapter 2 you were introduced to historicism. This is the basis for qualitative research, and qualitative research methods are normally used in theory-generating research. Get a research methods textbook and look up qualitative research. Over the years different research approaches have been developed in qualitative research. Identify the main ones and write a paragraph on each.

Regardless of whether a researcher uses phenomenology, grounded theory or ethnography, the research findings are usually presented in the form of concepts and propositions that form the basis for a new theory. While the end result of TGR is often mid-range theory, the following grand theories were developed using interpretative qualitative approaches: Parse (1981), Paterson and Zderad (1976) and Watson (1985b).

The research process in TGR

In TGR, the clinical problem, the research questions and the research purpose need to be stated in advance (see Key Concepts 8.5). According to Chinn and Kramer (2011), research hypotheses may also be used. However, more commonly, research questions or problem statements are enough to guide the study.

In TGR the data are collected by direct (physical observation) or indirect (interviews/focus groups) approaches. In addition, because of their inherent theoretical bias, research instruments such as structured questionnaires or scales may not be very useful in TGR. After all, such structured research instruments are often based upon an existing conceptual understanding of the phenomena.

Key Concepts 8.5

Theory-generating research: this has been termed the 'research then theory' approach to knowledge

The TGR researcher approaches the study with the following mindset: there is some phenomenon or event happening in the real world that will be become clear if I observe this event or this particular group of people and this event or group of people is sufficiently like other events or groups of people who have this experience.

Strange as it may seem, a 'time series' with comparison group can also be used for the qualitative generation of theory. For example, if researchers were studying the experiences of hospitalisation of children with a diagnosis of cancer, they might take a longitudinal approach with qualitative data re collected before, during and after the hospitalisation. At the same time they might identify other groups of children with similar problems who were being treated in the community. The comparison would tell the researcher whether aspects of the phenomenon were unique to one care setting or another. These data could contribute to the development of theory related to the hospitalisation experience for this group of individuals.

In TGR the analysis of data involves identifying themes and categories that emanate from the data. The researcher proposes concepts generated from the data and, if the evidence supports them, theoretical propositional statements.

The discussion and conclusions focus on the theoretical significance of the study. In TGR, though, the conclusions centre on the newly discovered concepts and relevant propositions. It is possible that this could have immediate clinical impact because of their grounding in the experience or setting from which the theory was generated. Table 8.1 provides three different types of proposition that may emanate from TGR.

The next step in TGR is diagramming or putting the concepts and propositions into diagrammatic form. Diagramming is done after the concepts, definitions and propositions have been identified and propositions have been hierarchically ordered by level of abstraction (Fawcett and Downs, 1992). Within the diagram, the existence of a relationship is denoted by an unbroken line. For connecting concepts, an arrowhead at one end indicates an asymmetrical relationship and an arrowhead at both ends indicates a symmetrical relationship. A positive relationship is denoted by a plus (+) sign and a negative relationship is denoted by a minus (–) sign (see Figure 8.1). A question mark may be used if the direction is unclear.

In a robust TGR study, there is a comprehensive literature review pertaining to the phenomenon being studied, the method employed is clear and the resultant concepts and

Table 8.1 Types of propositional statements developed through theory-generating research.

Proposition	Statement
Descriptive	There is a relationship between *x* and *y*
Directional	There is a positive relationship between *x* and *y*
Concurrent	If *x* then, also *y*
Sequential	If *x* then, later *y*
Deterministic	If *x*, then always *y*, if no interfering conditions
Probabilistic (stochastic)	If *x* than probably *y*
Necessary	If *x*, and only if *x*, then *y*
Substitutional	If x_1 but also x_2 then *y*
Sufficient	If *x* then *y*, regardless of anything else
Contingent	If *x*, then *y*, in the presence of *c*

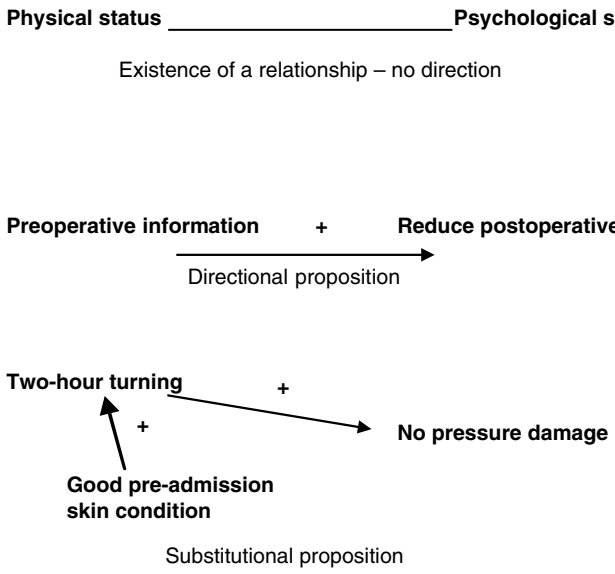

Figure 8.1 Examples of propositional diagramming.

propositional statements are stated. Where possible, the researcher should also make clear what type of propositional statements have been generated and diagram the relationship in terms of existence, direction and symmetry. Some of the propositions discussed may also be stated as researchable hypotheses. In this way TGR is opening up an opportunity for TTR to take place.

In TGR, the findings may:

- lead to the formulation of a new theory;
- lead to supporting an existing theory;
- lead to a rejection of an existing theory;
- lead to an existing theory being adapted or revised.

Theory-testing research (TTR)

Because those who undertake TTR propose an *a priori* theory (see Chapter 1) from which hypotheses are derived and then verified or refuted through research, TTR can be referred to as the 'theory-then-research' process – simply because the theory precedes the research that tests it (see Key Concepts 8.6).

In TTR a theory exists and research is undertaken to establish its validity. However, this is factually incorrect. A theory may have many propositions and some are these are in the form of testable hypotheses so what the researcher does is to test them. Furthermore, they may not test all the propositions. Therefore, it would probably be more correct to call this section hypothesis-testing research, but for the purposes of this chapter we will refer to this process as theory testing.

The research methods in theory-testing studies are designed to ascertain how accurately the theory depicts real-world phenomena and their relationships. For a theory to be testable you need:

- concepts that describe the phenomena of interest;
- theoretical and operational definitions of these concepts;
- propositional links between the concepts that describe, explain or predict phenomena.

Key Concepts 8.6

Theory-testing research: this has been termed the theory then research approach to knowledge

Theory testing normally involves a quantitative deductive approach where hypotheses are tested using randomised controlled trials, experimental or quasi-experimental approaches. Research questions can also be used to test a theory; this usually takes place within a correlational design. The concepts within the research questions or hypotheses are derived from the theory. Figure 8.2 shows one such theory-testing process (adapted from Moody 1990). Please note that the process illustrated is not necessarily linear – it may be iterative. This figure shows how TGR is related to TTR. TGR uses induction to generate a theory and TTR uses deduction to test the same theory.

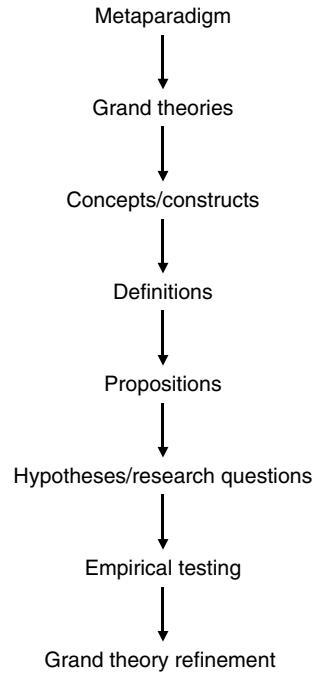

Figure 8.2 A typical theory testing process.

The research process

In TTR, the research purpose, the research problem and the hypotheses/or research questions are designed to show the relationships between the theory and the research study, and these are formulated in advance of conducting the study. Previous studies based upon the theory form a substantial part of the literature review. The review also includes a critique of alternative theories shown to be relevant to the study's central purpose. Furthermore, the literature review should indicate how the study was conceived and why the specific propositional relationships within the theory are being tested. There should also be a critical review of existing research that relates to the topic.

In TTR the data are collected by direct (physical observation) or indirect means (interviews and self-completion tools such as questionnaires and scales). Psychometric properties of the data collection tools, such as reliability and validity, should be given serious consideration. The sample and population must be carefully considered and statistical power analysis is invariably used in deciding the sample size. In TTR, the analysis focuses on whether the data provide sufficient evidence to support or reject the hypotheses or answer the research questions. Conclusions are then made regarding the empirical adequacy of the theory.

The reasons why a theory is verified or refuted may not always be obvious, but knowledge and understanding will have been increased and possible false leads eradicated (Stevens Barnum 2006). Strange as it may seem, TTR can actually lead to theory generation. Because of the insight gained through the research, the basis for a new theory may be formed.

As with Popper's paper boat analogy, the theory is a description or explanation of the phenomenon until it is refuted or until a better one comes along.

Linda Moody (1990) argued that nursing must:

- develop innovative strategies for theory testing through research;
- encourage nurse scholars to generate testable hypotheses deduced from the underlying assumptions and propositions of existing nursing theories;
- organise multiple site studies at national and international levels where several investigators can focus on systematic testing of the hypotheses from nursing theories;
- identify criteria for theory testing in nursing research and nursing theory courses;
- collaborate in national and international research endeavours with practitioners who are engaged in implementing nursing theories in clinical areas.

However, because of ethical considerations, some theories are not testable. For instance, while theories may be formulated on sleep deprivation in children or on the starvation of pregnant women, it would be unethical to test them in practice.

To conclude this section, there has been a great deal written about the necessity to test theories of relevance to nursing so as to provide evidence of the validity and accuracy of their concepts and propositions. However, little progress has been made towards this goal either by the theorists themselves, researchers, or by those nurses who use them in practice. Not to test theory would have consequences for the quality of care and evidence-based practice because of the implications of nurses using a theory of dubious validity to underpin the care of patients. In TTR, the findings may:

- confirm the validity of the theory;
- refute the validity of the theory;
- lead to the theory being adapted or revised;
- lead to the formulation of a new theory.

Theory-framed research (TFR)

In TFR, researchers may not necessarily be generating theory or testing theoretical propositions. Rather, the theory is used to frame the study and provide it with a focus. So important is the theoretical framework that researchers could more easily dispense with the physical operations of a study than the framework which gives meaning to all the research activity. The same methods could be used in a different study and give different outcomes if the theoretical framework were changed.

When used as a framework to structure a study, a theory can:

- give direction to the investigation;
- give structure to a thesis, a publication or a report;
- abstract, summarise and order research findings;
- relate the study to previous research and theory.

More specifically, Moody (1990) stated that when a theory acts as a framework for research, it serves to provide parameters for the study, guides data collection and provides a perspective for interpreting the data so that the researcher is able to weave together the findings in a meaningful pattern (see Key Concepts 8.7). When a study is placed within such a theoretical context, the theory guides the research process from the research questions through design, analysis and interpretation to the conclusions. Researchers should identify the theoretical framework at the beginning of the study, however tentative it may seem, for it is this theoretical framework that determines what questions will be addressed by the study and how the data will be collected and the findings reported.

Key Concepts 8.7

Theory can provide a guiding framework to a research study that helps to bring coherence and structure.

According to a University of Southern California Research Guide (2012), a theoretical framework strengthens the study in the following ways:

1. An explicit statement of theoretical assumptions permits the reader to evaluate them critically.
2. The theoretical framework connects the researcher to existing knowledge. Guided by a relevant theory, you are given a basis for your hypotheses and choice of research methods. Articulating the theoretical assumptions of a research study forces you to address questions of why and how. It permits you to move from simply describing a phenomenon observed to generalising about various aspects of that phenomenon.
3. Having a theory helps you to identify the limits to those generalisations. A theoretical framework specifies which key variables influence a phenomenon of interest. It alerts you to examine how those key variables might differ and under what circumstances.

For example, if you were investigating how students' examination results are affected by the introduction of an e-learning course, you could use a learning theory to frame your study. Similarly, if the research topic is how families cope when their loved one has a stroke, you

could use 'transitional' theory (Meleis 2012) or 'uncertainty in illness' theory (Mishel 1990) or Roy's 'adaptation theory' (Roy 2003). Another example is using the 'end of life' theory (Ruland & Moore 1998) to frame a study on palliative care or the 'theory of planned action' (Ajzen 1988) if you were studying an aspect of health promotion.

However, the selected theory must be relevant and used in a meaningful way. Too often we have seen students introduce the theoretical framework at the beginning of a study to lend the research report some theoretical credibility, after which the theory is not referred to again; it was, in reality, merely 'theoretical window dressing'. A potentially more serious problem relates to the inappropriate selection of a theory to frame the study. Such a choice may lead to premature commitment to a particular theory with the result that theoretical and research vision is restricted. For instance, a community support theory developed in sub-Saharan Africa by a social anthropologist may not be appropriate when applied to research into the effects of community engagement in inner London. Similarly, a theory that focuses on self-care may miss patients who do not want to be or cannot be independent.

A theoretical framework used to structure a research study may take on an agenda-setting role, bringing with it inherent biases. Reed (1989) put it very well when she stated that the conceptual nets cast out by researchers could be used to catch fish only of their liking. Like all good investigators, nurse researchers should ask 'why' when they start a study and the answer should contain a relevance to nursing. Controversially, Fawcett (2006) argued that in research that pertains to nursing practice, the theory framing the study should be a nursing one. However, because of the relatively short history of nursing theories, this might result in a focus that is too narrow. A better suggestion would be that nurse researchers use the best possible theory to frame the study and are able to justify their choice.

A theoretical framework can be viewed as a 'red thread' that goes through the study linking the various parts of it together in a coherent fashion. If applied correctly, such a theory will mean that the literature review, methodology, findings and conclusions come together in an aesthetically pleasing way. For instance, if a study was focusing on the development of advanced practitioners in nursing, the researcher could use role theory (Biddle & Thomas 1966) to frame the research (see Chapter 4). In such a TFR study, one would expect to see reference in the literature review to role conflict, role overlap, role norms, role set, role stress and role confusion. The questions asked in the questionnaire or interview schedule would also reflect these concepts. The findings and discussion sections could also be structured using subheadings from role theory. Remember in this research study, role theory is not being generate or tested; rather it is being used almost as a theoretical skeleton for the research.

In TFR, the findings may:

- contribute indirectly to establishing the worth of the theory as a template for the study;
- ensure that the study is focused;
- lead to a rejection of an existing theory as a guide for a research study;
- lead to an existing theory being adapted or revised as a guide for a research study.

Theory-evaluating research (TER)

While there is the potential for confusion between TER and TTR, there are significant differences. Because of their broad scope, several grand theories cannot easily be tested and the best we can do is to evaluate their application to see if they have any noticeable effect. Therefore, while it may not be possible to research the underlying assumptions and propositions of some

of these grand nursing theories, it is possible to analyse certain aspects of nursing care that are affected by their introduction.

You will recall from Chapter 7 that at one time many senior nurse managers and educators were dictating that nurses had to use a grand theory in their practice. This order from on high meant that theories such as Orem (1980), Henderson (1966) and Roy (1980) were being shoehorned into practice without reference to their suitability and without a sound knowledge of the theory among the clinical nurses. In most cases, the theory was used to structure the admission paperwork for the assessment of patients and it had no further application thereafter. In a small number of instances, it was used to assess, plan, guide and evaluate nursing actions.

An in-depth search of the literature (Cutcliffe et al. 2009) shows that many of these theories were not evaluated to see if they had a positive, negative or neutral effect on patient care. In other words, no TER was undertaken. Unlike TTR, TER does not attempt to test the hypotheses that are derived from the theory's propositions; rather, it focuses on what impact the theory had when applied in clinical practice (see Key Concepts 8.8). We will discuss the evaluation of theories in greater detail in Chapter 9. In the meantime, a short overview here will suffice.

Despite the fact that nursing theories were introduced into curricula across the US and the UK many decades ago, the amount of empirical research regarding their effect on nurse learning is conspicuous by its scarcity. McCrae (2012) found that, in contrast to some theoretically orientated centres of excellence in the USA, there is little evidence that theories have changed practice in the UK. He recalls that when Griffiths (1998) compared two wards using different nursing theories, no difference was found in how nursing care was being provided.

Key Concepts 8.8

Theories for their own sake are unimportant. What is crucial in a practice discipline like nursing is that they have a positive effect on nurses' thinking and actions and that this improves patient care.

In 1991, Salanders and Dietz-Omar reported the results of an American survey into whether nurses believed nursing theories helped them in clinical decision-making. Data were collected at three points in time: prior to taking a nursing theory course, on completion of the course, and two years later. At the first data collection point, respondents were neutral in their responses, neither agreeing nor disagreeing when asked if nursing theories provided a guide for their clinical decision-making. However, at the two later data collection points the respondents believed that nursing theories did indeed provide such a guide. Although Salanders and Dietz-Omar (1991) gave detailed statistical results of their research, they omitted to include all aspects relevant to the methods they used. Without this information one cannot judge the entire relevance or applicability of these findings.

After undertaking a comprehensive trawl of the literature, McKenna (1995) identified three major assumptions:

1. Nursing theories lead to better quality of care.
2. Nursing theories have an uncertain effect on quality of care.
3. Nursing theories lower the quality of care.

He undertook an action research approach to implement a nursing theory in a long-stay psychiatric setting. The theory concerned was the human needs theory of Minshull et al. (1986),

previously selected by a population of ward managers (n = 95). Within a broader quasi-experimental design, quality-of-care indicators were appraised before and after the implementation of the theory. These dependent variables were also monitored on a control ward and data were collected on both wards at one pre-test and two post-test points. Planned change theory was used as a guiding framework for the implementation of the theory (TFR).

Results showed that on the experimental ward there were statistically significant improvements in care quality, patient and staff perception of ward atmosphere, client satisfaction, staff views about nursing theories and client dependency levels. No significant changes were noted in practitioner satisfaction levels or practitioners' perception of patients' behaviour. These findings suggested that when implemented through an action research approach, where practitioners were involved as partners in the change process, a nursing theory has positive influences on quality of care (see Reflective Exercise 8.5).

But will such findings be adopted by others and create positive differences to future practice? It is reasonable to suggest that nurses are no different from anyone else and research evidence is not a good enough reason in many instances for changing established behaviour.

In TER, the findings may:

- contribute to establishing the worth of the theory in practice or education;
- contribute to the generation of ideas for new theory;
- lead to a rejection of an existing theory as a guide for practice or curricula;
- lead to an existing theory being adapted or revised within practice or education.

Reflective Exercise 8.5

Theory evaluation

You will now know that the evaluation of theory focuses on the impact or effect of that theory on processes and outcomes in practice.

Think specifically about your clinical area and what processes and outcomes you would expect to see improve after the introduction of a nursing theory. Examples could include improved patient satisfaction, earlier discharge or improved staff satisfaction.

Outline research approaches that you could use to assess whether the changes in processes and outcomes had really happened (e.g. a patient satisfaction questionnaire).

The empirical relationship between theory and research

In Chapter 3, it was noted that the philosophers James Dickoff and Patricia James (1968) had identified four levels of theory. Table 8.2 shows how, a decade later, Donna Diers (1979) linked these to research approaches.

Building on this hierarchy of theories, it is possible to identify three main types of theory and their related research methods. Although these were mentioned in Chapter 3, the following descriptions are more in-depth and research-oriented:

- *Descriptive theory*. There are two types of descriptive theories: naming theories and taxonomies (classification theories). Descriptive theories are generated and tested by

Table 8.2 The relationship between levels of theory and levels of research.

Dickoff and James	Donna Diers
Factor-isolating theory – describes and names concepts	Factor-naming or factor-searching research – describes, names a phenomenon, situation or event in order to gain new insights (also called descriptive or exploratory research)
Factor-relating theory – relates named concepts to one another	Factor relating or relation or searching research – develops links among variables and describe the relationships that are discovered after factor searching research (may be qualitative or grounded theory)
Situation-relating theory – forms interrelationships among concepts or propositions	Explanatory/correlational research – aims to determine factors that occur or vary together (no attempt is made to experiment)
Situation-producing theory – prescribes actions to reach certain outcomes	Causal-hypothesis testing – research addresses causal relationships between variables in an attempt to predict events

descriptive research – generally called descriptive/exploratory research. The sorts of research questions asked within descriptive studies are: what is this; or, what are the characteristics of ...? Descriptive studies involve the observation of phenomena in their natural setting. Data collection can be qualitative (e.g. case studies, ethnography, phenomenology, grounded theory) or quantitative (surveys of attitudes, attributes, knowledge and opinions).

- *Explanatory theory*. This type of theory focuses on relationships between the dimensions or characteristics of individuals, groups, situations or events. They explain how the parts of the phenomena under study relate to each other. These theories can only be formulated once phenomena have been identified through the development of descriptive theories. Explanatory theories are developed through explanatory (qualitative) or correlational (quantitative) studies. An example of a research question would be: to what extent is age related to dependency?

  Data for explanatory theories can be collected through surveys (observations, interviews, questionnaires) yielding quantitative or qualitative data. Closed-ended instruments may also be employed because the parts of the phenomena are believed to be already known (as a result of the existence of descriptive theories). To prove a correlation, qualitative data may be transformed into quantitative data and statistical tests applied, such as Pearson product–moment coefficient (parametric) or Spearman's rho (non-parametric). Other more sophisticated tests, such as multiple regression and path analysis, may also be used.
- *Predictive theory*. This type of theory goes beyond whether one thing is related to another and seeks to identify cause and effect relationships. Predictive theories may build on explanatory theories and are generated and tested by experimental research. Questions addressed include: what will happen if you give specific information to patients before surgery? Quantitative data are required so as to check for statistical significance. Tests include Mann–Whitney *U*-test (non-parametric) and *t*-test, ANOVA and MANOVA (parametric) (see Key Concepts 8.9).

To recap, if little is known about the phenomena, descriptive (descriptive theory) research is required, but if the phenomena have been adequately described, correlational (explanatory theory) research may be carried out. If phenomena have been adequately described and relationships are well known then experimental (predictive theory) research may be carried out. Table 8.3 shows the relationship between these types of theories and the research approaches.

Key Concepts 8.9

The best type of theory for a practice profession is predictive theory. From elsewhere in this book you will recall that it can help nurses to prescribe care. However, we will always have theories at all three levels.

Quantitative and qualitative methods are mutually supportive and can provide the researcher with binocular vision of the phenomena under study, which neither can provide when used in isolation. This is probably the reason why many nurse researchers are using mixed methods in their studies.

Readers will recall that Barbara Carper (1978) identified four different ways of knowing in nursing. These were empirics, ethics, aesthetics and personal knowing. Chinn and Kramer (2004) outlined how these are produced by a specific research approach (Table 8.4).

Table 8.3 Relationships between types of theory and research methods.

Theory	Research
Descriptive	Qualitative descriptive Quantitative descriptive
Explanatory	Qualitative explanatory Quantitative correlational
Predictive	Quantitative experimental

Table 8.4 Carper's ways of knowing as related to research approach.

Way of knowing	Mode of enquiry
Empirics	Scientific research
Ethics	Dialogue about justice
Personal knowing	Reflection on the congruity between the authentic and disclosed selves
Aesthetics	Critique of the act of nursing

Strategies for theory development through research

Meleis (2006) identified five major strategies for theory development:

- theory–practice–theory;
- practice–theory;
- research–theory;
- theory–research–theory;
- practice–theory–research–theory.

You will see how these strategies are linked to theory-generating and theory-testing approaches with which you are already familiar.

Theory–practice–theory strategy

Here theory from other disciplines is introduced into nursing and becomes shared knowledge. For example, the application from Harry Helson's (1964) physiology of adaptation theory led to the formulation of Roy's (1980) theory. Similarly, Von Bertalanffy's (1951) systems theory, when applied in nursing, led to the development of Neuman's (1995) theory.

Practice–theory strategy

The discerning reader will note the relationship of this strategy to TGR. In this strategy, according to Meleis (2012), theory emanates from clinical experience. The process usually starts when the clinician has a nagging hunch about some phenomena. She develops concepts and describes definitions, boundaries and examples of these concepts This strategy is based heavily upon Glaser and Strauss's (1967) grounded theory approach where the theorist keeps diaries, observes, analyses similarities and differences, develops concepts and then linkages. Orlando (1961), Travelbee (1966) and Wiedenbach (1964) used these methods. They became immersed in the clinical area, either giving care themselves or observing other nurses doing so. They collected data using case studies, interviews and observations.

Research–theory strategy

This strategy is also related to TGR. This is an inductive approach using four steps:

1. Select a phenomenon that occurs frequently – list all its characteristics.
2. Measure characteristics in a variety of settings.
3. Analyse resultant data to determine systematic patterns worthy of further attention.
4. Formalise these patterns as theoretical statements (axioms).

Proponents of this strategy believe truth exists that can be captured through the senses and verified or refuted. Repeated verification is indicative or truth and prompts the development of scientific theories.

Theory–research–theory strategy

This strategy shows similarities with the TTR approaches outlined earlier. The following four steps are followed:

1. A theory is selected that explains the phenomena of interest.
2. Concepts of the theory are redefined and operationalised for research.
3. Findings are synthesised and used to modify, refine or develop the original theory.
4. In some instances the result may be a new theory.

Practice–theory–research–theory strategy

There are seven stages in this strategy, as follows:

1. taking in;
2. description of phenomenon;
3. labelling;
4. concept development;
5. proposition development;
6. explicating assumptions;
7. sharing and communicating.

Meleis (2012) stated that these seven steps may not occur linearly; rather they may occur simultaneously or out of sequence (see Key Concepts 8.10).

Taking in

A clinical situation has attracted a nurse's attention and she develops a hunch about it. She may have observed this event not only through her eyes but also through her other senses and through mental activity (remember Tricia Reid at the start of the chapter). The result is 'attention grabbing', which may occur concurrently or retrospectively. The attention-grabbing phase is followed by the attention-giving phase, a more deliberate process. She may ask the following questions:

- What has attracted my attention?
- Why does it happen?
- Is it similar to or different from happenings under different sets of circumstances?
- Under what conditions do I observe it, see it, hear it, touch it?
- Can I describe it?
- Can I document it with theory cases and prototype situations?

Key Concepts 8.10

The practice–theory–research–theory strategy is a very robust approach to generating theory for practice.

Description of phenomenon

At this second stage she should attempt to answer a further set of questions:

- What is the phenomenon?
- When does it occur?
- What are its boundaries?
- Does it vary? Under what circumstances?
- Does it have a function?
- It is related to time or place?

Another way to begin the description of a phenomenon is by asking questions that start with:

- Why do patients...?
- What is it that happens when...?
- What are the properties of...?

To ensure that the phenomena are of specific interest to nurses and nursing, it is a good idea to attempt answers to some further questions:

- In what way is the phenomenon related to nursing's substantive knowledge base?
- In what way would understanding the phenomenon contribute to understanding some aspect of nursing care?
- Can I think of some questions relating to the phenomenon, the answers to which would be significant to nursing?
- How is the phenomenon related to the definition of nursing policy?

For instance, a nurse may observe that children undergoing cancer chemotherapy appear to be less anxious and stressful when a parent is present during the procedure. This is a beginning observation of a phenomenon. As similar observations occur, the nurse can ask questions of other staff, and read and reflect. The end result would be an in-depth description of a phenomenon.

Labelling

In the example in the preceding section, the nurse labels the phenomenon with a word or a short phrase. What she is in essence doing is identifying a concept that best describes the phenomenon. These labels should be concise and precise, they should be used consistently when referring to the phenomenon, contain one cardinal idea and be fundamental to the definition/description of the phenomenon. In this particular case the nurse may label the observed phenomenon 'parental reduced stress'.

Concept development

The techniques shown in Table 8.5 have been identified by Meleis as appropriate ways of developing concepts from phenomena.

Table 8.5 Developing concepts.

Activity	Rationale
Defining	Seek definitions/synonyms of the concept
Differentiating	Ask the question: how does this concept differ from similar concepts?
Delineating antecedents	Define the context – part of this relates to identifying what precedes the occurrence of the concept
Delineating consequences	Identify what results from, or follows, the occurrence of the concept – positive as well as negative consequences should be identified
Modelling	Identify cases – contrasting and similar – to help depict what the concept is and what it is not
Analogising	Compare the concept with similar concepts that have been studied more extensively – this may help to shed more light on the new concept
Synthesising	Bring together the findings, meanings and properties that have been amplified by the previous processes

Propositional development

The identification of propositional statements is a further step in the process of theory development. As outlined in Table 8.1 there are different types of propositions and the more developed propositions are, the more they are able to define, explain and predict the nature of the relationship between concepts.

Explicating assumptions

The observer reflects on the concepts and propositions and identifies both explicit and implicit assumptions. Reflections on one's own views, values and beliefs will help to delineate assumptions. Assumptions were also dealt with in Chapters 1 and 5.

Sharing and communication

This step goes beyond publishing and presenting at conferences. It involved seminars, conference presentations, journal clubs and other fora where theoretical issues are discussed.

Role of the study

It is important that nurse researchers are aware of the part their study will play in the generation, testing, or evaluation of theory (see Key Concepts 8.11). One way of checking this is to answer the following questions:

- What are the nature and scope of the research aims: exploratory, descriptive, explanatory or predictive?
- Did an existing theory provide the initial idea for the research?
- Is the aim of the study to test existing concepts or propositions from a theory?
- Were study concepts or propositions derived from an existing theory?
- Is the purpose of the study to describe or understand phenomena and from these phenomena develop descriptive or explanatory theory?
- What predominant world view is reflected in the nature of the research questions?
- Has there been much theoretical progress undertaken on this particular topic?

Key Concepts 8.11

It is important that nurse researchers are aware of the part their study will play in the generation, testing or evaluation of theory

Conclusions

This chapter has given particular emphasis to the linkages between research and theory. Four links were identified, theory-generating research, theory-testing research, theory-framed research and theory-evaluating research. All four were discussed at length and their contribution to the knowledge base of nursing was explored.

Various authors have also examined the linkages between theory, practice and research. Chinn and Kramer built on Carper's (1978) work and specified how the four ways of knowing are related to methods of research. Similarly, Donna Diers (1979) constructed a taxonomy of research–theory relationships by building on the work of Dickoff and James (1968). Meleis (2006) identified five distinct strategies highlighting the linkages.

McKenna and Slevin (2008) ask us to imagine that theory, practice and research are three dancers. This is a useful metaphor. The dancers interact to produce a systematic and aesthetic beauty and elegance. One weak dancer who stumbles or does not undertake the appropriate movements would cause problems for all three and such a passenger can only be 'carried' for so long. Therefore, all three partners need to be strong and skilled. Similarly, research with weak theory or practice with weak research would be the death knell of nursing as a discipline. It is in the profession's best interest to keep these three components strong and ensure that they interact appropriately.

Revision Points

- Research does one or two things – it either tests or generations theory.
- There are four links between research and theory: theory-generating research (TGR), theory-testing research (TTR), theory-framed research (TFR) and theory-evaluating research (TER).

- TGR inductively develops theory from clinical phenomena.
- TTR empirically tests the validity of the theory's propositions.
- TER does not test propositions for truth; rather it assesses the effects of implementing a grand theory in a practice setting.
- TFR is where a theory acts as an organising structure for a research investigation.
- Dickoff and James identified four levels of theory and Donna Diers linked these to four levels of research.

Additional reading

Chinn P.L. & Kramer M.K. (2011) *Integrated Theory & Knowledge Development in Nursing*, 8th edition. New York: Elesvier-Mosby.

Dickoff J. & James P. (1968) A theory of theories: a position paper. *Nursing Research*, **17**(3), 197–203.

Fawcett J. & Downs F.S. (1992) *The Relationship of Theory and Research*, 2nd edition. Philadelphia: F.A. Davis.

Useful web links

http://journals.lww.com/advancesinnursingscience/Citation/1978/10000/The_Relationship_Between_Theory_and_Research__A.7.aspx
www.groundedtheory.com
http://en.wikipedia.org/wiki/Nursing_theory
http://currentnursing.com/nursing_theory/research_and_nursing_theories.html
www.sandiego.edu/nursing/research/nursing_theory_research.php

Don't forget to visit to the companion website for this book:
www.wileyfundamentalseries.com/nursingmodels
where you can find self-assessment tests to check your progress.

9

Criteria for theory description, analysis and evaluation

Outline of content

This chapter begins with the assertion that theories are still uncritically accepted to support practice and education. Concept and theory analysis will be described. Theory analysis is described in relation to scope, context and content. The movement towards theory evaluation involves a consideration of terminology, including discussion of clarity, simplicity/complexity, importance/ significance, adequacy, testability and acceptance. Problems arising from the fact that the theory that was analysed or evaluated is not useful, adequate or significant are addressed. The particular place of testing a theory is considered, and the relationship between theory evaluation and theory testing is clarified. The usability criterion is presented as an important consideration in nursing, in respect of the theory–practice relationship, and is proposed together with others as a core evaluation criterion.

Learning outcomes

At the end of this chapter you should be able to:

1. Discuss theory description
2. Define knowledge of theory analysis and evaluation
3. Identify criteria for concept analysis
4. Determine scope, context and content of theory analysis
5. Discuss important criteria for theory evaluation

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Companion website: www.wileyfundamentalseries.com/nursingmodels

Introduction

Over the years, many approaches to theory analysis and evaluation have been published. The criteria to do this are constantly changing and developing over time, possibly confusing students and staff who often have to analyse and evaluate nursing theories. No reasonable reader will deny that before theories can be used in practice, they need to be reviewed for their usefulness and fitness for practice. You have seen elsewhere in this book that nurses have frequently selected theories for education, practice and research in an uncritical way. This inevitably caused problems, as highlighted by Jacono and Jacono (1995). Nurses have generally adopted nursing theories reluctantly, because, as Meleis (1997) put it, they consider theory to be an ivory tower activity.

Nursing theories change and develop over time because in nursing practice there are always new demands from patients and new technologies are always being introduced. You will recall from Chapter 1 that all theorists try to describe, explain and predict the phenomena that are important for nursing. Many of the more recent nursing theories that were developed in the mid-to-late 20th century have been revised and developed further. This is because, as Murphy et al. (2000: 1334) explained, a selected theory must 'fit' with the needs of the patients and the philosophy of the nurses using them.

As you have seen, the nursing literature contains many grand, mid-range and practice theories. While they may all be useful for practice, education or research, each needs to be analysed and evaluated before its usefulness in practice is ascertained (Pajnkihar 2011). A theory must prove that it is 'good' or 'right' for practice. The same applies for borrowed theories from other disciplines; systematic evaluation and examination of them are needed to assess their usefulness in nursing situations (Villarruel et al. 2001). Therefore, in order to use nursing theories appropriately, we need to know how to describe, analyse and assess them (Dudley-Brown 1997). We need to know what is the theory's potential and actual usefulness (Theofanidis & Fountouki 2008). Such description, analysis and evaluation of theory help to advance the science of nursing (Dudley-Brown 1997).

The chapter is based on the steps outlined in Figure 9.1 and is intended for students, novice nurses and nurses in countries where the analysis and evaluation of theories have not yet been practised. The chapter refers to 'evaluators' as a generic term for any student of theory.

The evaluator of a nursing theory

Any educator, researcher, student or clinical nurse may want or need to evaluate a theory and therefore needs to be aware of the significance of the theory. The evaluator needs to understand the various theories, how they are internally constructed and how these components work. The process of theory description, analysis and evaluation depends on the evaluator's experience and knowledge.

Significance of the theory

The evaluator has to be aware of the significance of a theory (see Key Concepts 9.1). It must be clear what a theory can bring to nursing practice, education or research. The best theories are those that have repeatedly withstood challenges sufficiently well so that we can have

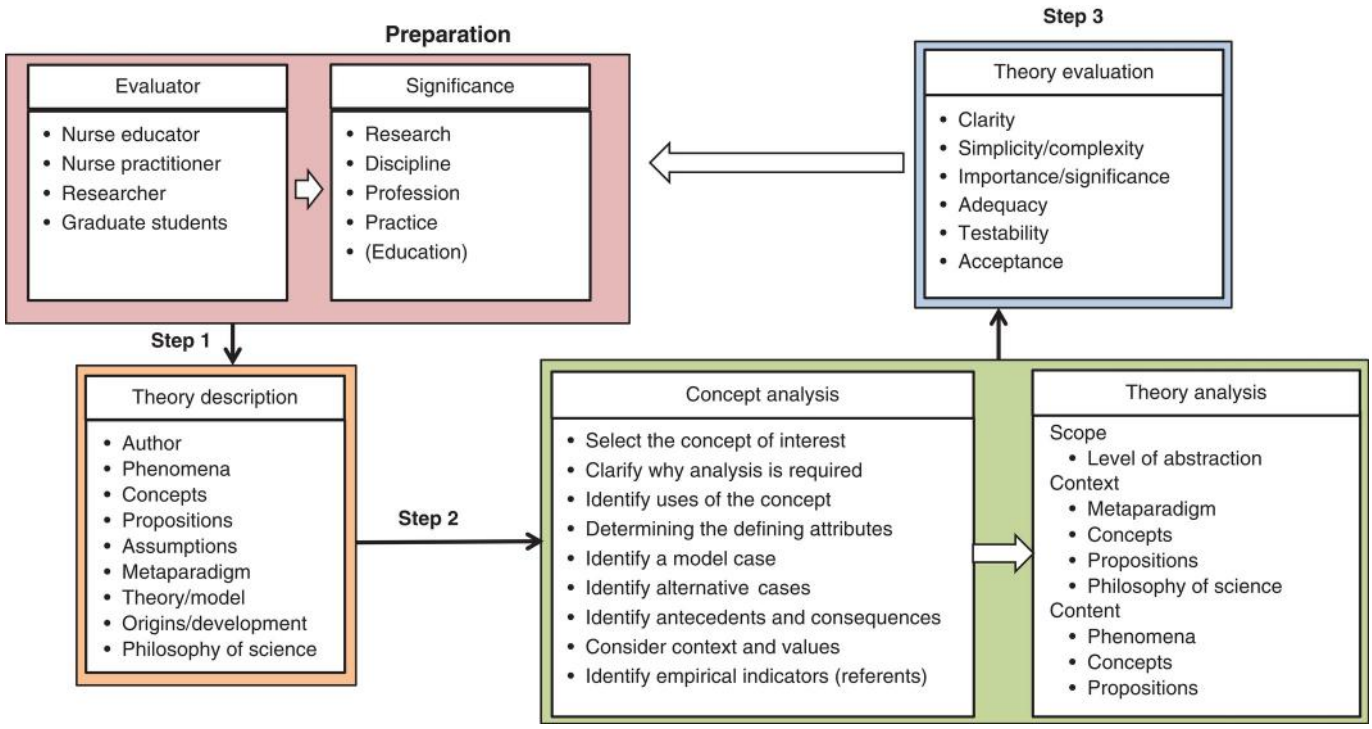

Figure 9.1 Theory description, analysis and evaluation.

a high degree of confidence when it is applied to practice. In evaluating theory, we will be concerned with whether the knowledge contained within the theory is accurate, or presents the best available knowledge under the circumstances, even though we accept that absolute truth or rightness are not always possible.

Stevens Barnum (1998) asserted that significance is concerned with whether the theory addresses essential issues of nursing and contributes to the development of nursing knowledge. More recently, Meleis (2012) asked whether the consequences of theory use will make a difference in the lives of people using it and the effect it has on the quality of care (McKenna 1997).

Key Concepts 9.1

Significance of a theory: a theory is significant if it addresses essential issues of nursing and contributes to the development of nursing knowledge

It is not enough to evaluate a theory only for it to be put aside. A theory has to be 'alive' in order to help with theory-based practice. Will it improve patients' situations so that they can retain their 'personality' with self-respect and dignity and improve their health and well-being? The theory needs to have the flexibility and ease of application to respond quickly to the changing demands of different health care systems.

Step 1: Theory description

It is vital that students have a basic understanding of nursing theory and the relationships between its concepts. Only then can they understand its most important features and its theoretical and practical utility.

The theory's author

Several writers (Parker 2006; Alligood & Marriner Tomey 2010) begin their description of a theory by introducing the author's personal, theoretical and practical background. Why did he or she develop the theory and for what purpose? This gives an evaluator first-hand information about the context in which the theory was developed.

Chinn and Kramer (2008) specifically emphasised the importance of settings, experience, societal trends and philosophical ideas that have influenced the theorist. Meleis (2012) added that the theorist's professional and academic surroundings are also important because this environmental context is affected by internal and external factors, which will have influenced the author. The evaluator needs to know who the author of the theory is and what the author's academic and practice experiences are.

For the evaluator it is very important to know the *phenomena*, *concepts*, *propositions* and *assumptions* of the theory, its core parts (see Reflective Exercise 9.1).

Reflective Exercise 9.1

Core parts of a theory

Take a blank sheet of paper and draw a diagram of the link between phenomena, concepts, propositions and assumptions. If you are having difficulty, refer back to Chapters 1 and 5 and refresh your memory about these concepts of a theory.

The identification of phenomena occupies the lowest point in the hierarchy of theoretical conception. A phenomenon is the foundation from which the theorist starts to develop or refine a theory. Therefore, an evaluator will think about how the phenomenon or phenomena are described in the theory. The evaluator should also check what the basic concepts are within a theory and understand their meanings. Remember from Chapter 1 that theorists use concepts to give a unique abstract name or label to the phenomenon or phenomena that are observed in everyday practice. It is generally accepted that concepts are the basic building blocks of the theory and need to be recognised and described within the content and context of the theory. Propositions are statements of relationships between concepts, and the nature of propositions depends on the nature of the concepts they link within the theory. For the evaluator it is also critically important to understand the assumptions that describe the values and beliefs underpinning the theory. McKenna (1997: 217) suggested asking yourself the question: Can the stated assumption be accepted as true?

In addition, it is very important to know what the theory says about the metaparadigm (see Chapter 5). Theorists should explicitly describe the four elements of the metaparadigm and make their relationship clear. McKenna (1997: 228) believed that the evaluator should examine closely the metaparadigm components within the theory. What does the theorist have to say about the nature of people, the environment, health and nursing? Are these components and the assumptions relating to them made explicit? Does the theorist emphasise one to the detriment of the others? Evaluators need to check whether the relationships between the metaparadigm elements of a theory are stated clearly and if there is a transparent presentation or explanation of the beliefs, values and goals associated with them (Pajnkihar 2003).

If a theorist refers to 'persons', is he or she referring to patients, potential patients, communities or societies at large? When 'nursing' is mentioned, is it the profession or the art or science of nursing that is being alluded to, or is it the nursing act? Does 'environment' mean external environment or internal environment (e.g. inside the body)? Is 'health' a state of well-being, a physical status or a psycho-social feeling? It is important that the evaluator is clear as to what theorists mean when they refer either implicitly or explicitly to the metaparadigm (McKenna 1997).

King's theory is very clear in how it describes the basic concepts and the metaparadigm elements (Pajnkihar 2009; Harih & Pajnkihar 2009). Watson (1985a) excluded 'nursing' in her metaparadigm and referred instead to 'transpersonal caring'. By contrast, while Swanson (1991) saw caring as a basic building block of her mid-range theory, she also described nursing, environment, health and person as elements of the metaparadigm.

Students usually have problems differentiating between basic concepts coming from the phenomena (content) and metaparadigm concepts (context) within the theory and their relationships. Furthermore, students often have problems identifying propositions that enable the theory to work. Hopefully, this will be an easier task once you have read this book.

In previous chapters we outlined how the level of abstraction and scope decrease as you move from grand theory to mid-range theory to practice theory. For evaluators, the level of abstraction and scope of the theory have to be clear (see Reflective Exercise 9.2).

Reflective Exercise 9.2

Levels of abstraction and scope

Open Google Earth on your computer. Zoom out until you can see the Earth. Consider this to represent grand theory. Zoom in to Spain. Consider this to represent a mid range theory. Zoom in further to the city of Madrid. Consider this to be a practice theory. You will agree that the view of the Earth is very general with a broad scope. As you zoom in, the view becomes more specific and the scope much narrower.

Origins and logical development of a theory

For Walker and Avant (2011) and McKenna (1997), a key question is: what was the origin of the theory? Walker and Avant (2011: 195) believe that the origins of a theory refer to its initial development, what prompted its development, whether it is inductive or deductive in form, and whether there is any evidence to support or refute it. These all need to be analysed. Further, McKenna (1997) wrote of the need of to take account of socio-cultural factors and political issues and uncover which philosophy the theorist prefers (see Reflective Exercise 9.3). Philosophies influencing theory development are described in Chapters 2 and 5.

Reflective Exercise 9.3

Philosophies and their influence on nurse theorists

Everyone's thoughts, attitudes and actions are influenced by their belief systems. Belief systems are influenced by different philosophies. The same goes for nursing theorists. They have beliefs about what is important for nurses and patients and their beliefs are influenced by various philosophies (e.g. rationalism, empiricism, historicism). Think about the philosophies that influence your views and behaviour. Write these down. If you need to, refer back to Chapters 2 and 5 to review philosophies and their influence on the development of nursing theories.

Step 2: Theory analysis

An evaluator should recognise the structure and meaning of a theory, its content and context, its concepts and their relationships, and be able to determine its strengths and weaknesses (see Key Concepts 9.2). Theofanidis and Fountouki (2008) believed that theory analysis 'aims to determine the theory's strengths and weaknesses in terms of its structure and is associated with deep understanding'. This should be an objective process where the evaluator tries to understand how concepts are related without judging them. This also involves putting aside our own beliefs and biases as much as possible so that we do not impose our own views of the world on the theory (remember *tabula rasa* in Chapter 2).

While this section is related to theory analysis, an important aspect of this is concept analysis. An inquiry into the meaning of concepts is a necessary first step in understanding the theory (Baldwin 2008). The strength of the theories that guide a discipline is dependent on the quality of the concept analysis (Botes 2002).

Key Concepts 9.2

Theory analysis: the process of recognising the content and context of a theory. Meleis (2012) defined analysis as a process of identifying parts and components and examining them against a number of criteria.

Concept analysis

Several authors have described the process of concept analysis (McKenna, 1997; McKenna & Cutcliffe 2005; Walker & Avant 2011; Meleis 2012) and there are similarities and differences in the steps and techniques. The approach of McKenna and Cutcliffe (2005) is used here.

It is generally accepted that concepts are mental constructions of the basic building blocks of the theory and need to be recognised and described within the content and context of the theory.

Walker and Avant (2011) suggested that concept analysis has to be rigorous and precise, but the end product is always tentative because knowledge changes very quickly.

The purpose of concept analysis can be described as follows (Walker & Avant 2011):

- a useful process in the cycle of theory development, as well as in theory evaluation (Meleis 2012);
- to make theory solid and strong, because concepts are the basic building blocks of theory;
- to determine a concept's structure;
- to refine ambiguous concepts within the theory;
- to distinguish one concept from another;
- to examine the language used, and to develop standardized language.

The procedure relevant to concept analysis used by McKenna (1997), Walker and Avant (2011), McKenna and Cutcliffe (2005) is as follows (see also Table 9.1):

- Select the concept of interest; the evaluator should be clear what the concept of interest is for practice or theory analysis.
- Clarify why a concept analysis is required. It is mostly to gain an in-depth understanding of a concept within a theory.
- Identify the uses of the concept: to search for the meanings until no more new meanings are uncovered.
- Determine the defining attributes; these attributes distinguish the concept from similar or related concepts.
- Identify a 'model case' that describes the concept perfectly. The best model cases should be drawn from real-life examples.
- Identify alternative cases that are not model cases. These include borderline cases, related cases, contrary cases, invented cases and illegitimate cases. These can all be used to enhance identification and clarification of the concept.
- Identify antecedents (the events or situations that prompt or stimulate a concept) and consequences (those that happen after as a result of a concept) (see Reflective Exercise 9.4).
- Consider context and values. Phenomena and concepts alter depending on the context within which they occur, and values have different meanings for different people in different settings (McKenna & Cutcliffe 2005).
- Identify empirical indicators (referents). These are for defining the attributes of the concept; they are a means by which it is possible to recognise or measure the defining characteristics or attributes (Walker & Avant 2011).

Reflective Exercise 9.4

Antecedents and consequences

Consider a concept that interests you – it could be 'hope', 'empathy', 'sorrow' or 'compassion'. Think of what led up to the concept or what happened before the concept appeared (its antecedents). Consider also what happened as a result of the concept (its consequences). For instance, if the concept was 'loss', the antecedents might be a death in the family or unemployment. The consequences of loss might be sadness or depression.

Think of three different concepts and identify antecedents and consequences.

Concept analysis advances the knowledge needed in practice and informs theory-based practice (see Reflective Exercise 9.5). Together with the phenomena, the main concepts within a theory may enhance and develop the constantly changing knowledge in health care and nursing.

Although theory analysis and theory evaluation will be treated separately in this chapter, in some books they are mentioned together. Table 9.2 offers an overview and comparison of different approaches to theory description, analysis and evaluation taken from McKenna (1997), Stevens Barnum (1998), Fawcett (2005a), Chinn and Kramer (2008), McKenna and Slevin (2008), Alligood (2010a), Walker and Avant (2011) and Meleis (2012). Only Fawcett

Table 9.1 Concept analysis.

	McKenna (1997)	Cutcliffe and McKenna (2005)	Walker and Avant (2011)
Select the concept of interest	✓	✓	✓
Clarify why analysis is required	✓	✓	✓
Identify uses of the concept	✓	✓	✓
Determine the defining attributes	✓	✓	✓
Identify a model case	✓	✓	✓
Identify alternative cases	✓	✓	✓
Identify antecedents and consequences	✓	✓	✓
Consider context and values	✓	✓	
Identify empirical indicators (referents)	✓	✓	✓

Reflective Exercise 9.5

Analysis of a concept

Concepts are the basic building blocks of a theory. Select a concept and use the criteria outlined to undertake concept analysis. If you need further help, refer to Chapter 1 in McKenna and Cutcliffe (2005) where the process and criteria for concept analysis are described and various concepts are analysed.

(2005a) has a set of criteria for analysis and evaluation of conceptual models (grand theories) and theories (mid-range theories). McKenna (1997) and Parse (1987) used criteria for evaluating theories that were developed from quantitative and qualitative research.

Internal and external criteria

Table 9.2 demonstrates that the criteria for theory analysis and evaluation can be broadly divided into internal and external factors.

Internal evaluative criteria refer to philosophical and theoretical issues. This means that they are concerned with the philosophical ideas of the theorist (his or her background, education, experience, world view, and reasons for developing a theory, i.e. his or her personal contribution to the development of a theory). They also include the characteristics of a theory, such as clarity, consistency, simplicity and adequacy.

Table 9.2 Analysis and evaluation of theories by various authors.

	Analysis and critique	Internal criticism	External criticism	Theory analysis	Evaluation	Description of theory	Critical reflection	Theory critique
McKenna (1997)	How the theory: – Was developed – is internally structured – may be used – influences knowledge development – stands up to testing							
Stevens Barnum (1998)		Clarity Consistency Adequacy Logic development Level of theory	Reality convergence Utility Significance discrimination Scope of theory Complexity					
Fawcett (2005a)				Scope Context Content	Significance Internal consistency Parsimony Testability Empirical adequacy Pragmatic adequacy			

(*Continued*)

Table 9.2 (*Continued*)

	Analysis and critique	Internal criticism	External criticism	Theory analysis	Evaluation	Description of theory	Critical reflection	Theory critique
Chinn & Kramer (2008)						Purpose Concepts Definitions Relationships Structure Assumptions	Clarity Simplicity Generalisability Accessibility Importance	
McKenna & Slevin (2008)				Parsimony and testability Defeasibility Evidence and justified true belief Coherence and consistency	Relevance and utility Prescriptive value Quality enhancement Meaningfulness Dynamism Originality Reflection of stakeholder interests Scope and range			
Alligood (2010a)				History of nursing theory Significance	Clarity Simplicity Generality Empirical precision Derivable consequences			

Walker & Avant (2011)				Origins Meaning	Logical adequacy Usefulness Generalisability/ transferability Parsimony Testability			
Meleis (2012)				The theorist Paradigmatic origins Internal dimensions				Relationship between structure and function Diagram of theory Circle of contagiousness Usefulness Personal values Congruence with other professional values Congruence with social values Social significance
Pajnkihar (2012)				Scope Context Content	Clarity Simplicity/ complexity Importance/ significance Adequacy Testability Acceptance			

External evaluative criteria refer to societal and practical issues. This means that they are concerned with social significance, social utility, social acceptance/congruence, simplicity, testability, and so on, i.e. those aspects of evaluative criteria that are connected with the cultural, political and environmental issues of a society.

McKenna (1997) referred to 'internal' and 'external' structures; Stevens-Barnun (1988) to 'internal' and 'external' criticism; and Meleis (2012) to 'internal' and 'external' dimensions'. Chinn and Kramer (2008), though not explicitly stating a difference, implicitly indicated the use of individual criteria. Alligood (2010a,b) used the criteria for theory analysis described by Chinn and Kramer (2008). Even Marriner Tomey (1998), although not actually giving any internal criteria apart from the description of the theory, represents the theories' authors in terms of their background, education, etc., thus implicitly including them as factors to consider.

Both internal and external criteria exert an influence on theorists. This is one reason why individual categories, though sometimes seemingly very similar, do not allow researchers to draw parallels among them. To do so would curtail or expand their original formulation, meaning and scope.

Other common evaluation criteria used by different authors are as follows:

- adequacy, empirical and pragmatic adequacy (McKenna 1997; Walker & Avant 2011);
- clarity (Stevens Barnum 1998; Chinn & Kramer 2008; Alligood 2010a);
- simplicity-complexity (Stevens Barnum 1998; Chinn & Kramer 2008; Alligood 2010a; Walker & Avant 2011);
- scope (Fawcett 2005a; Stevens Barnum 1998; Chinn & Kramer 2008 Alligood 2010a);
- significance (McKenna 1997; Stevens Barnum 1998; Fawcett 2005a; Chinn & Kramer 2008);
- testability (McKenna 1997; Fawcett 2005a; Walker & Avant 2011) (Table 9.3).

According to Fawcett (2012a), frameworks for theory evaluation and analysis are helpful because analysis involves the objective and non-judgmental description of theories. It needs to be explicitly pointed out that the theory has to be described and analysed in the words and terminology of the theory's author. Although this is difficult when translated into other languages, exotic words used by the author, such as 'holarchy,' or 'negatropic' can be learned and understood. Fawcett (2005a) pointed out that analysis is accomplished by a systematic examination of exactly what the author has written about the theory. Relying on references about what might have been meant or referring to other people's interpretations of the theory is not sufficient. When the author of the theory is not clear about a point or has not presented some information, it may be necessary to make inferences to or look up other reviews of the theory. That, however, must be noted explicitly, so that the distinction between the words of the theory's author and those of others is clear. Theory analysis follows a clear pattern and includes theory scope, theory context and theory content. Understanding theory and its role, as well as analysing, evaluating and taking a critical view of it, can help to develop a body of knowledge that nurses need for everyday work, for the competent and efficient implementation of their actions, and for the creative and significant further development of knowledge that encompasses real nursing situations (Pajnkihar 2003).

Meleis (2012) suggested that theory description consists of structural and functional components. Within the structural components of the theory, she described assumptions, concepts and propositions; as functional components she included focus, patient, nursing, health, nurse–patient interactions, environment, nursing problems and nursing therapeutics. Last of all, a critical examination of relations between structural and functional elements is needed.

Table 9.3 Theory evaluation.

	McKenna (1997)	Stevens Barnum (1998)	Fawcett (2005a)	Chinn and Kramer (2008)	Alligood (2010a)	Walker and Avant (2011)	Meleis (2012)
Adequacy	✓	✓				✓	
Clarity	✓	✓		✓	✓		✓
Consistency	✓	✓		✓			
Complexity/ simplicity	✓	✓		✓	✓		✓
Generality/ scope of theory	✓	✓		✓	✓	✓	
Significance		✓	✓	✓			
Usefulness	✓	✓					
Congruence	✓						
Testability	✓	✓	✓	✓	✓	✓	✓

For theory analysis, Meleis (2012: 190) suggested the following components established by theorists as external dimensions: 'references, citations, assumptions, concepts, propositions, hypotheses, laws'. For internal dimensions she suggested 'rationale, system of relations, content, beginnings, scope, goal, context, abstractness and method'. These topics have been addressed in previous chapters (see Chapter 5).

In the theory analysis of Fawcett (2005a), the structure is that of theory scope, theory context and theory content. These will now be explained.

Scope of the theory

The evaluator needs to determine the level and scope of the theory, i.e. if it is a grand theory, a mid-range theory or a practice theory (see Step 1).

Theory context

Theory context includes descriptions of:

- metaparadigms: concepts and propositions;
- philosophical claims on which a theory is based; the values and beliefs about nursing; and the world views of the relationships between human beings, health, and the environment;
- the contribution of knowledge from nursing and adjunctive disciplines (see Chapter 5).

Theory content

Theory content includes concepts and propositions of the theory (see Step 2, Figure 9.1).

Both Meleis (2012) and Fawcet (2005) introduced theory analysis and evaluation as a two-in-one step process. At the end of the theory analysis, the evaluator should know the scope and context of a theory, especially how it deals with the metaparadigm, concepts, propositions and description of the relationships between metaparadigm concepts. It is also important to determine the philosophy of science and paradigm (e.g. systems, interactional, developmental, behavioural) that influence the theory's development. It should also be clear if the theory was developed inductively, deductively or retroductively. Figure 9.2 shows the difference between induction and deduction.

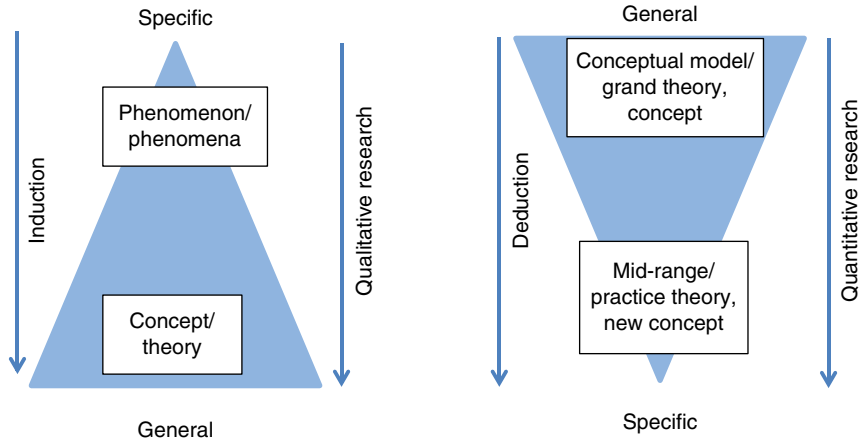

Figure 9.2 Difference between inductive and deductive development of theory.

Step 3: Theory evaluation

Clarity

The analysis of the criterion 'clarity' means that the selected theory is expressed simply and consistently. If the theory is also introduced in diagram form, this should make it even clearer and lead to a better understanding of its consequent usefulness in practice. Although the criterion simplicity is treated separately in the following section, it is also very important for clarity.

Meleis (2012: 195) asserted that clarity 'denotes precision of boundaries, a communication of a sense of orderliness, vividness of meaning and consistency'. Clarity is:

> demonstrated in assumptions, concepts and propositions as well as in domain concepts ... To have clarity in concepts is to have theoretical and operational definitions that are consistent throughout the theory, are represented in a parsimonious [simple, straightforward] way and are consistent with theory assumptions and propositions... Propositional clarity is manifested in a coherent and logical presentation of propositions and systematic linkages between theory concepts... The degree to which a congruency exists between the different components of a theory describes its consistency... The fit between different components of a theory describes its consistency. The fit between assumptions and concept definitions, between concepts as defined and their use in propositions, and between concepts and clinical exemplars can all be considered as consistency.

Clarity and consistency are often used as a single criterion. Alligood (2010a) also described clarity in respect of semantics and structure. Within the criterion of 'internal consistency' used by Fawcett (2005a: 443), she described evaluation of context and content of the theory where she included semantic clarity and consistency:

> This criterion requires all elements of the theorists' work, including the philosophical claims, ...and the theory concepts and propositions to be clear ... the semantic clarity requirement is more likely to be met when a constitutive definition is given for each concept than when no explicit definitions are given... the semantic consistency requirement is met when the same term and the same definition are used for each concept in all authors' discussions about the theory.

Both Alligood (2010a) and Chinn and Kramer (2008) included semantic clarity and semantic consistency. Walker and Avant (2011: 109) included semantic clarity and consistency to try to explain the theoretic meaning of the concept, whereas structural clarity and consistency focus on understanding the intended connections between concepts within the theory. McKenna (1997: 227) added that 'all components within a theory should support each other and be free from contradictions'. Stevens Barnum (1998: 172) mentioned that inconsistency can relate to expressions ('terms'), interpretation, principles and methods.

The clear link between components of the theory (concepts, their definitions, assumptions and propositions) focuses on structural clarity and consistency (congruency between the different components). They represent the functions of the theory and theoretical explanations. Semantic clarity and consistency (language, method and explanations) help in understanding the meaning of the concepts of the theory. They refer to the presentation of the theory to readers in an understandable way.

Simplicity and complexity

The criterion 'simplicity' demands that a theory is written in short affirmative sentences. Phenomena must be described in a concise, coherent and comprehensible manner. Simplicity and complexity complement each other in their interrelationships. Concepts that describe a particular phenomenon within a theory have features of complexity, but simplicity of expression clarifies the phenomenon. The simpler the explanation of the relationship between the concepts, the more understandable they are.

McKenna (1997) asserted that the theory should be simple and elegant and that the theoretical message should be in the simplest possible format. For Walker and Avant (2011: 195) 'parsimony refers to how simply and briefly a theory can be stated while still being complete in its explanation of the phenomenon in question'. In addition, Chinn and Kramer (2008) connected parsimony with theoretical simplicity and the idea of generality. This is similar to the principle of Occam's razor, which we came across in Chapter 8. The generality of the theory is based on the scope of its concepts and purposes. Broad concepts contain more ideas in fewer words than narrow concepts. Meleis (2012: 195) stated that the:

> ... simplicity of a theory is more desirable if it focuses on fewer concepts and a few relationships that may enhance its utility [and the] complexity of a theory may be a desirable criterion if the complexity enhances the number of explanations and predictions the theory offers.

Chinn and Kramer's (2008) evaluation criteria included the minimum number of elements within each descriptive category, particularly concepts and their interrelationships within propositions. Complexity implies many theoretical relationships between and among numerous concepts in a theory.

McKenna (1997) stated that the reason for simplicity is to gain the attention of practising nurses so as to create the link with practice. However, he accepts that due to the complexity of nursing, not all theories can be presented in a simple manner. Also, Walker and Avant (2011) suggested that theory can be simple and broad to guide practice or simple but more empirically accessible to guide research. Stevens Barnum (1998) noted that a narrower theory has more potential for guidance, and McKenna (1997) added that the narrower the scope of a theory, the higher its social utility. Similarly, he said that the broader the scope of a theory, the greater is the possibility that it will be more socially congruent. There is a possibility that broad theories have low social congruence because they are not easy to test (see Reflective Exercise 9.6).

Reflective Exercise 9.6

Clarity, simplicity and complexity

These three criteria are important in denoting harmonisation between the context and the content of the theory and the clarification of the phenomenon. The criteria complement each other in their relationships.

Describe in 200 words the importance of clarity and simplicity for practising nurses. Outline, too, why you think complexity is important in a nursing theory.

Importance and significance

Chinn and Kramer (2004: 116) asserted that the importance of a theory in nursing is closely tied to its clinical significance or practical value. More recently, Fawcett (2012a: 352) said that significance refers to the importance of the theory for the discipline of nursing. Ellis (1982, in Alligood 2010a) believed that the broader the scope of the theory, the higher is its significance. Significance is also achieved when the metaparadigmatic, philosophical, and conceptual origins of a theory are made explicit, and when earlier supportive nursing literature is cited (Levine 1988, in Fawcett 2012a), and when the special contributions of the theory are acknowledged.

Chinn and Kramer (2004: 116) considered that if a theory contains concepts, definitions, purposes and assumptions that are grounded in practice, it will have practical value for clinical nurses. If the underlying assumptions are unsound, the importance of the theory is minimised. However, a theory that has extremely broad purposes may have limited value in creating useful clinical outcomes.

The importance of a theory also depends on the personal and professional values contained within it. For evaluators, it is imperative to ask, as McKenna (1997) does, whether the theory leads to actions that make important differences for patients. This is a difficult question to answer, especially if the theory has not been tested or applied in practice. It can accomplish this if positive patient outcomes are achieved through the use of interventions suggested by the theory. This can include the effect the theory has on the quality and safety of patient care. Although this includes outcomes of the theory, it also includes the interventions carried out and the resources needed to undertake best practice.

As we have seen consistently throughout this textbook, theories can be used to guide practice, research, education and administration (Stevens Barnum 1998; Meleis 2012). But, most importantly, they need to prove their contributions to knowledge development and to patients' and nurses' benefits (see Reflective Exercise 9.7). It is important to remember that what is significant for one person may not be significant for another.

Reflective Exercise 9.7

The criteria of importance and significance

There is a very thin line between the importance and the significance of nursing theories for clinical practice. Select a nursing theory with which you are familiar and make a list of why it is important for nursing or why it is significant for nursing.

Adequacy

A theory needs to be useful in practice, to acknowledge the complexity of nursing practice, and to guide research on the basis of sound evidence and empirical adequacy. The complexity of a theory must correspond to the complexity of practice, thus increasing practical and empirical adequacy. However, Stevens Barnum (1998: 174) noted that 'a nursing theory is adequate if its prescriptions are extensive enough to cover the scope claimed by its author'. McKenna (1997) noted that most of the grand theories are not accessible, because they lack empirical indicators

that reflect their concepts. In this respect, Chinn and Kramer (2008) suggested that the theory that is used in practice for explaining some aspect of practice needs to have theoretic concepts linked to empirical indicators of practice (see Key Concepts 9.3). This can be achieved, according to Fawcett (2005a), by reviewing all descriptions of the use of the theory in practice and by means of a systematic review of the findings of all studies that have been guided by the theory.

Key Concepts 9.3

Empirical indicators

You were made aware in earlier chapters that concepts were really named phenomena and as such they were the building blocks of theory. Furthermore, concepts form relationships with each other to form propositions. Some of these propositions are written as hypotheses and so are testable. However, the concepts that make up hypotheses should be expressed in ways that can be measured. Such measurable concepts are called empirical indicators.

Fawcett (2005a) believed that evaluation of empirical adequacy helps to determine the degree of confidence, given the best empirical evidence. Research testing requires evidence of empiric accessibility because accessibility and adequacy for research and practice of a chosen theory should be considered in the widest possible context.

A point to consider is that the theory can have empirical accessibility and adequacy for practice, but the conditions in nursing do not allow for the theory to be successful because of an inadequate number of nurses to care for patients. As with Karl Popper's paper boat, there is no final or absolute theory because it is always possible that subsequent studies will yield different findings or that another theory will provide a better fit to the data (Fawcett 2005a).

McKenna (1997) gave the following example: if the theory is written specifically for the UK, and specifically for some nursing field, and the theorist claims that its propositions could apply transculturally to all nursing fields, this cannot represent adequacy. Draper (1990) noted that when British nurses in practice were forced to adopt American nursing models, there were considerable cultural and professional differences. Writing in a British context, he claimed that a theory must inductively emanate from the particular practice that explores, explains and enhances British nursing. Lundh et al. (1988) described the situation in Sweden as an example where nursing theories had been accepted relatively uncritically, especially in nursing education programmes. Botha (1989) believed that the uncritical acceptance of nursing theories can lead to a fundamental distortion of reality, and Stevens Barnum (1998: 174) added that sometimes a theory does not fit its purported scope and, as a result, can be easily criticised.

Testability

As we saw in Chapter 8, testing can be seen as the end or the beginning of a never-ending circle of development, use, redefining, improvement and use of theory. The following authors suggest that theory testing should focus on concepts, propositions and empirical indicators. Meleis (1997: 269) pointed out that theory testing 'presumes the complete cyclical relationship between theory, research, and theory' (Figure 9.3). Assessing the empirical validity of the theory can be impeded by lack of clarity about what constitutes sound theory-testing research.

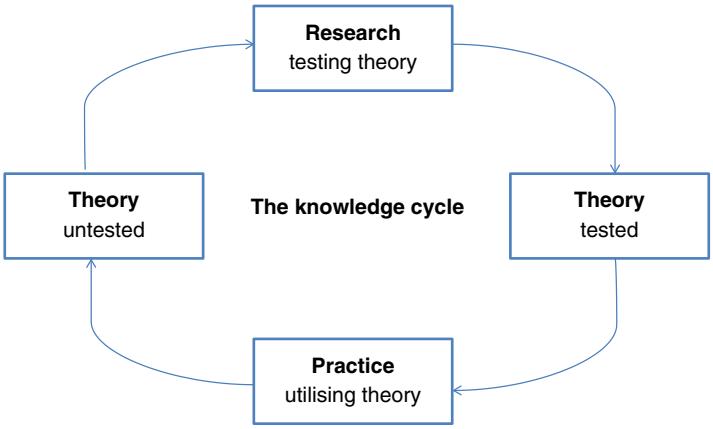

Figure 9.3 Testing theory.

Fawcett (2005a) described that the evaluation of a grand theory, which is abstract and general in nature, can lack operational definitions, the concepts may not be measurable, and their propositions may not be easily amenable to direct empirical testing. Evaluating the testability of grand theory includes determining its mid-range theory-generating capacity. However, Walker and Avant (2011: 205) suggested that a valid theory must be testable at least in principle, which means that hypotheses can be generated from the theory, research can be carried out, and the theory is supported by the evidence or is modified because of it. When testing propositional statements (hypotheses), Walker and Avant (2011: 205) suggested that the measures and indicators of concepts should be selected with great care because conclusions can be drawn about the credibility of a hypothesis or the validity of measures when these are still in the testing process. Theories that generate hypotheses are useful to scientists and add to the body of knowledge. A theory that by its nature is untestable in its entirety may yet yield testable hypotheses and statements that lend support to the total theory.

The final goal of theory development in any professional discipline is empirical testing of interventions that are specified in the form of prescriptive mid-range theories. The testability of descriptive, explanatory and prescriptive mid-range theories means that they should have operational definitions and their propositions must be amenable to empirical testing. Fawcett (2005a: 444) described traditional empiricism as an approach to test mid-range theories that requires the concepts to be observable and the propositions measurable:

> Concepts are empirically observable when operational definitions identify the empirical indicators that are used to measure the concepts. Propositions are measurable when empirical indicators can be substituted for concepts named in each proposition and when statistical procedures can provide evidence regarding the assertions made.

Specific instruments or experimental protocols are needed to observe the theory concepts and statistical techniques to measure the propositions. As (Fawcett 2005a: 445) wrote:

> The evaluation or testability for a middle-range theory is therefore facilitated by a thorough review of the research methodology literature associated with the theory,

including descriptions of questionnaires and other instruments designed to measure concepts, research designs that will elicit the required data, and statistical or other data management techniques that yield evidence about the theory.

Acceptance

When nurses are asked what theory would be appropriate for their specific practice, they should be aware of the fact that there is no simple and straightforward answer, and that an answer, to a great extent, depends on the nature and characteristics of their work and circumstances. You saw in Chapter 8 that the acceptance of a theory is greatest when the basic principles of the theory match the values and beliefs of nurses, their wishes and abilities. In the research carried out by Pajnkihar (2003) and Pajnkihar and Butterworth (2005), nurses recognised the essential need for theory in practice and they acknowledged that nursing theories currently applied in education offered little help in this respect. The study respondents suggested that the theories were widely incomprehensible and hard to apply; therefore, the workforce did not accept them. However, the respondents called for a theory that is clear and simple to apply and use (see Key Concepts 9.4).

Key Concepts 9.4

Set or model of criteria for evaluation

We can examine the chosen theory according to its clarity, simplicity/complexity, importance/significance, adequacy, testability and acceptance.

Conclusion

In theory-based practice, nursing science and nursing art come together. Therefore, for theory-based practice, nurses need robust and reliable knowledge and skills to be able to describe, analyse and evaluate a theory and justify its application to enhance practice and patient care.

Essentially, a theory must be simple and useful, and have connection to real practice. Students need a simple description of theoretical knowledge that is understandable and connects with everyday practice and life.

Revision Points

- Theory, which needs to be useful in practice, needs to be analysed and evaluated.
- Concept analysis is important because concepts are basic building blocks of a theory.
- Theory analysis is undertaken in relation of scope, context and content of a theory.
- We can examine the chosen theory according to its clarity, simplicity/complexity, importance/significance, adequacy, testability and acceptance.
- The process of theory evaluation should be rigorous and objective.

Additional reading

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