

# The Discipline of Nursing

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What is a discipline? Is nursing a distinct discipline? If yes, what is the distinct knowledge base that characterizes the discipline of nursing? These questions have been addressed throughout the nursing literature, most thoroughly since the 1970s, as nursing advanced within the university settings, as schools for university prepared nurses, and research doctoral programs in nursing were expanded. Nurse leaders had carved out their role in academe, and there was a concomitant need to describe and define the discipline of nursing to provide legitimacy within the academy. A discipline is a branch of knowledge with a distinct set of rules of conduct for developing that knowledge and methods of practice for expanding the knowledge. And so it was that nurse leaders began an exploration of the discipline of nursing, using a range of means for debate, delineation, description, and refinement.

But in retrospect, we now trace these disciplinary longings to the founder of modern nursing, Florence Nightingale, who is often acknowledged by contemporary nurse scholars as a preeminent nurse theorist. As such, Nightingale set the stage for further development of the discipline of nursing, with its own boundaries and rules of conduct for its scientific deliberations and professional practice. Nightingale's theoretical works are referred to as the "laws of health" and as an environmental theory. In 1859 Nightingale wrote *Notes on Nursing* (1860), a book that created the foundation for the profession of nursing and the curricula at the Nightingale School as well as other nursing schools. Throughout her work, Nightingale emphasized the importance of knowledge for the practicing nurse. Nightingale postulated that knowledge of health laws (expertise that she considered nursing) would aid the nurse in putting a person in a state so that there would be no disease, or so that the person could recover from disease. She believed that this basic knowledge should assume a high place in the overall understanding of health and illness.

For Nightingale, the environment was a key concept because she placed much emphasis on putting the patient in the best environment in order to stay healthy or to regain health. Nightingale instructed nurses to provide fresh air, pure water, sufficient food, light (particularly direct sunlight), and sanitary living conditions. She believed that nurses should focus on altering the environment so that the patient's body could heal itself.

Aside from the writings of Nightingale (now considered theoretical contributions), theory development literature in nursing is relatively recent, more recent than the development of nursing research. In the 1960s and early 1970s in the United States, a national debate was occurring about the nature of, and the need for, nursing theory to firmly establish the nursing discipline as an academic department—one that warranted the future development of PhD programs in nursing. Questions were raised by nursing leaders that were very basic to the understanding of the disciplinary context, such as the nature of nursing, the nature of nursing theory and research, and the nature of the profession, the practice of nursing. National nursing theory conferences were held—forums in which leaders expressed views about both the process and the content that should characterize the nursing discipline—with specific attention to the theoretical dimension of scientific development of nursing (Norris, 1969–1970).

Schlotfeldt and Rogers, two national nursing leaders of the time, were key movers in the educational reform in nursing, even though they proposed different means for advancing nursing knowledge. Their works substantially influenced nursing education. Schlotfeldt became the architect of the first professional doctorate in nursing, established at Case Western Reserve University in 1979 (Schlotfeldt, 1978). In designing this new educational approach, modeled after professional doctorates in other health disciplines (MD and DDS programs), Schlotfeldt was ahead of her time. She firmly believed that there was something to know in nursing and that through continued knowledge development nurses could make significant contributions to an exemplary health care system. Further, she believed that this was the way for nursing to emerge as a full-fledged profession (Schlotfeldt, 1978, 1988). Whereas Schlotfeldt focused on the entry level of nursing education, Rogers placed her energies on PhD-level nursing education, developing the largest and most prestigious PhD program in nursing at the time. This New York University PhD in nursing program was focused almost exclusively on the development of nursing science, particularly theory and research that emanated from the Science of Unitary Human Beings, the conceptualization developed by Rogers (1970). Rogers's strategy for influencing the disciplinary development was to recruit and prepare large numbers of nurse scholars. Several of the Rogerian scholars contributed significantly to the ongoing deliberations of nursing science as basic science (e.g., Barrett, Cowling, Fawcett, Fitzpatrick, Fry, Malinski, Newman, and Smith). Another distinction between Schlotfeldt and Rogers was their views on the nature of the discipline; Rogers considered nursing a basic science, whereas Schlotfeldt viewed nursing as an applied science, one more closely modeled after medical science.

One of the classic papers of the time that led to considerable debate at the first National Theory Conference was the seminal work of the nurse philosopher Rosemary Ellis (1968), "Characteristics of Significant Theories," in which she raised the issues of theories *for* nursing, theories *of* nursing, or *nursing* theories, crystalizing the elements of a debate that centered on questions of the nature of science in nursing—basic or applied. Ellis believed in the combination of applied and basic knowledge in nursing, with more emphasis on the applied dimension of knowledge development. According to Ellis, nursing knowledge should be obtained through various means, and she identified four different types of information for nursing inquiry: scientific knowledge (e.g., biology and anatomy), historical knowledge (the context of illness and the difference between disease and wellness), nursing philosophy (ethics and empathy), and nursing technology (apparatuses and their effectiveness). Scientific research provided a way for the nurse to draw upon fields such as anatomy and

biology to understand the internal physiological processes within the patient. Historical study enabled the nurse to understand the context of illness and its treatment, such as the distinction between a disease and a health-based approach to wellness. Philosophical exploration humanized the nurse through the study of ethics and taught empathy in patient care. Finally, technological investigation included studies of various nursing apparatuses and how effective they were in interactions with the patient.

Nursing as basic science would require PhD programs in the discipline, creating disciplinary knowledge that had a distinctive focus (to other “ologies” on academic campuses, such as biology, psychology, sociology, etc.). During this period of debate regarding the nature of the scientific discipline, there were proposals for naming the science of nursing *nursology*. Nurse theorists Paterson and Zderad, developers of a theory called Humanistic Nursing (1976), are often credited with introducing this recommendation. In the introduction to their book outlining their theory, these authors describe their conceptual developments and challenges in a manner that might be used to describe a theory class in doctoral programs today. In the preface to their first edition, Paterson and Zderad describe their work and their conceptual ideas about the nature of nursing theory development. Through dialogue and reflection they were able to consolidate their thinking about nursing theory as Humanistic Nursing (Paterson & Zderad, 1976, p. 1).

The term *nursology* also appeared in the European nursing literature in the mid-1970s. Roper, a nurse theorist from Scotland, argued for the development of a science of nursing labeled *nursology*, so that nursing as a discipline might best describe its characteristic mode of thinking. She asserted that this label would help the scientific nursing community to think *nursologically*, thus distinguishing between the practice of nursing, the professional doing of the work of nursing, and the science of nursing, or the study of nursing practice (Roper, 1976).

Although the labeling of the science of nursing as *nursology* did not receive support from the wider academic nursing community, remnants of this minor movement appear today. Students in current doctoral-level nursing theory classes often express interest in the term as a way to legitimize the scientific enterprise and distinguish nursing science from other disciplines, particularly health disciplines. A definition of *nursology* appears in the current literature as follows:

*Nursology: a conceptual framework for the study and practice of nursing. It requires the nurse to interact with the patient in an “authentic” way, . . . the nurse must take the risk of caring. . . . Nursology is intended to provide a model for nursing methods and research . . . and the science of nursing may emerge. . . . (Mosby’s Medical Dictionary, 2009)*

In contrast to understandings of nursing as basic science, nursing as applied science would be similar to medicine, in which professional practitioners studied for the PhDs in related disciplines and applied that knowledge to the understanding of diseases, as well as their treatment and cure. This view provided both conceptual and practical support for the Nurse Scientist movement. As a result of the intellectual turmoil among the nurse leaders, the debates about the best way forward for development of disciplinary knowledge, and the paucity of nurses prepared with doctorates in nursing, knowledge development in the mid-1970s—during the rapid expansion of research doctoral programs in nursing—often underscored the applied

science dimension. Nurse researchers who were prepared as psychologists, sociologists, and anthropologists applied theories from these disciplines to clinical problems in nursing. Often, this application of knowledge was devoid of reformulation of the data from a nursing philosophical perspective. Thus, much of this early research in nursing enhanced theory development in other disciplines while adding considerable knowledge to guide the professional practice of nursing.

Additional concerted focus on nursing theory development can be directly traced to the expansion of research doctoral programs in nursing, first in the United States in the mid-1970s and more recently globally, including in Europe and Asia in particular. In the post-World War II period, when university programs to prepare nurses were expanding, most nurse faculty received their doctoral preparation in other related disciplines, such as psychology, sociology, anthropology, physiology, and, most often, education. There was even federal support through the Nurse Scientist Program to prepare nurses with doctorates in other related disciplines. Many leaders in nursing were products of the Nurse Scientist Program. They were thus socialized into these related disciplines, adopting (and at times adapting) the theoretical knowledge and the research methods to nursing research and scholarly inquiry. Prior to 1975 there were only seven nursing doctoral programs in the United States; three of these were PhD programs, one granted a doctorate in nursing education (an EdD), and the other three were doctor of nursing science programs.

According to Risjord (2010), a philosopher who has studied the nursing discipline, three seminal works appeared in 1978 that crystallized the nature of nursing as basic science. In their classic paper "The Discipline of Nursing," Donaldson and Crowley (1978) distinguished nursing as a professional discipline, with a value orientation that required theoretical guidance for the professional practice of nursing. Further, they described three disciplinary themes for the development of nursing knowledge:

1. Concern with the principles and laws that govern the life processes, well-being, and optimal functioning of human beings—sick or well.
2. Concern with the patterning of human behavior in interaction with the environment in critical life situations.
3. Concern with the processes by which positive changes in health status are affected (p. 113).

Carper (1978) described four fundamental patterns of knowing in nursing: empirics, ethics, esthetics, and personal knowing. Carper isolated scientific knowledge in the empiric way of knowing and argued that there was a distinction between scientific knowledge and knowing what to do (professional practice).

Fawcett (1978), in describing the double helix of nursing science, detailed the necessary relationship between theory and research, viewing these two components as intertwined. Whereas this perspective is often interpreted as necessitating a deductive approach to science development, other methods of developing science could be included. There are compelling arguments in the literature for using other theory development approaches (e.g., grounded theory), or for developing theory and research from questions generated through clinical practice.

Yet, as the debates continued, those who were prepared in other more established disciplines outnumbered those prepared in nursing science. Those with PhD degrees

in nursing, particularly those with an emphasis on nursing science and nursing theory, were in the minority. Although there was demand for their expertise in new PhD programs in nursing, these scientists were often marginalized within the scientific nursing community. And, as other minorities often do, they formed their own groups; however, these groups were often perceived by the dominant group as fringe organizations. Margaret Newman, a prominent nurse theorist who taught nursing theory to many doctoral students at New York University, initiated a Nursing Theory Think Tank, which held its first meeting at Pennsylvania State University in 1978. This informal group met once a year, for more than a decade, to discuss and debate current issues in development of disciplinary nursing knowledge. Participants included leading authors of nursing theory papers and books (e.g., Kay Avant, Barbara Carper, Peggy Chinn, Rosemary Ellis, Jacqueline Fawcett, Joyce Fitzpatrick, Margaret Hardy, Rosemarie Parse, Callista Roy, Lorraine Walker, and Ann Whall). Although no formal record of the work of this organization appears in the literature, its existence is an important factor in the history of nursing knowledge development. These were the thought leaders in nursing theory development and their subsequent publications regarding nursing theory provide testament to their leadership (e.g., Carper, 1978; Chinn & Kramer, 1983; Ellis, 1982; Fawcett, 1980, 1984; Fitzpatrick & Whall, 1983; Walker & Avant, 1983).

## LINKING NURSING THEORY AND NURSING RESEARCH

There is considerable literature on the need for, and nature of, nursing research. The history of nursing research can be traced to the mid-1940s, when it was supported at the federal level through the Division of Nursing within the Office of the Surgeon General, Public Health Service. In 1955, the first extramural research funding was provided through the Division of Nursing (NINR, 2013a). Yet, throughout the next several decades, growth in nursing research was painfully slow. According to the NINR 25th-anniversary history report, there were approximately 4,000 nurses with doctoral degrees in 1980 and more than half of them held PhDs, yet only 6% reported their primary function as research. There had been limited funding for nursing research and most of the scientific community, including NIH (National Institutes of Health), did not understand or appreciate nursing research (NINR, 2010). The fact that the nursing community in the 1980s was divided on the definition of nursing research contributed to the biomedical community's lack of understanding.

The year 1985 marked the formal establishment of the National Center for Nursing Research (NCNR) at the NIH. In 1993, the NCNR was elevated to an institute at NIH and renamed the National Institute of Nursing Research (NINR). The impetus for establishing NINR came from the findings of two federal studies: (a) a 1983 report by the Institute of Medicine (IOM) recommended that nursing research should be included in the mainstream of biomedical and behavioral science; and (b) a 1984 NIH Task Force study found nursing research activities to be relevant to the NIH mission (NINR, 2013a).

Nursing research often was not connected directly to nursing theory, and the value of nursing theory was not always recognized. It can be interpreted that the 1983 IOM report, in characterizing nursing research as part of biomedical and/or behavioral science, implied that nursing was an applied science. There is mention only of one aspect of science, that of research, without the concomitant focusing on nursing science as an entity (i.e., as including both nursing theory and research).

The 2011 NINR mission statement includes attention to both basic and applied (i.e., clinical) research and is as follows: "...to promote and improve the health of individuals, families, communities, and populations." The institute supports and conducts clinical and basic research and research training on health and illness across the life span to build the scientific foundation for clinical practice, prevent disease and disability, manage and eliminate symptoms caused by illness, and improve palliative and end-of-life care (NINR, 2013b). Because of its positioning within the NIH, an institution that has a firm commitment to biomedical research, particularly quantitative biomedical research, and because of the value for extramural research funding, the scientific emphasis in nursing has been consistent with the dominant paradigm of NIH.

## THE BASIC STRUCTURE OF NURSING KNOWLEDGE

Throughout the nursing knowledge literature there is general agreement that nursing knowledge has developed from the abstract to the specific, from the broad theoretical propositional statements to the specific testable hypotheses. Nursing science has thus included several levels: the philosophical positions within the discipline (including the ethics and values statements defining nursing moral positions); the conceptual models (or grand theories) of nursing, sometimes also referred to as conceptual frameworks; the middle range theories, derived from conceptual models of nursing or from theories from other disciplines, reformulated within nursing's philosophical view; and situation-specific theories that have been generated to explain a particular occurrence or phenomenon.

Conceptual models of nursing were generated early in the efforts to define the discipline, yet received widespread dissemination in the latter half of the 1970s through the 1990s. Students at all levels of university-based education, from the baccalaureate to the doctoral level, were introduced to nursing theory primarily through these grand theories. However, with the translation of the theories to professional practice not yet having occurred, a subsequent theory–practice gap was noted. Students were not always aware of the relevance of the theories, and the theorists were not always eager to translate their scholarship in ways meaningful to the clinicians. Critiques of this theory–practice gap were found in the literature, and often the debates centered around the type of research that was being used to test the theories, namely the emphasis on the scientific method of logical positivism.

Shortly after the widespread adoption of the nursing conceptual models in nursing education, a number of nurse scholars published books that included comparisons of these models (Alligood, 1986; Fawcett, 1984; Fitzpatrick & Whall, 1983; George, 1980; Parker, 1990). Whereas different models for theory analysis and evaluation were used across the publications, there also was some consistency in inclusion of the following dimensions: basic concepts included in the theories/models, relationships among the core concepts as outlined by the theorist, and the internal (e.g., parsimony, logical consistency) and external (e.g., significance, usefulness in research, education and practice) validity of the theory. Components of theory analysis and evaluation that had first been introduced to nursing by Hardy (1974) have most often served as the structure for these evaluations.

In the mid-1980s, theorists such as Watson (1985) and Benner (1984) developed knowledge models designed to address this theory–practice gap. Each was interested in describing the doing of nursing. Watson provided insights on the caring

role of nurses, and Benner delineated the development of the professional practice role in her novice-to-expert description of how nurses gain expertise as they gain clinical knowledge. Both of these perspectives have received much attention in the clinical practice arena, particularly among nurses practicing in acute care settings. More recent derivations of Watson's focus on caring include Swanson's (1991) middle range caring theory and the model of Relationship-Based Care (Koloroutis et al., 2004) that is used in several major hospitals as a professional practice model.

Another attempt to close the theory–practice gap was the deliberate development of middle range theory. Although there had been several middle range theories derived from the more abstract conceptual models of nursing, attention to middle range theory development was highlighted in 2003 with the publication of two collections of developed and developing middle range nursing theories (Peterson & Bredow, 2003; Smith & Liehr, 2003). This attention to middle range theory development was consistent with the expansion of nursing research developments. In addition, students in professional doctoral programs are expected to apply theory to the practice. These middle range theories have been translated into practice, often by the theorists themselves, but also by others who have studied the theory. Thus, there is evidence of their relevance to practice and use by both researchers and expert practitioners. For example, Reed's (2003) middle range theory of self-transcendence has been applied in a number of practice settings and patient groups (e.g., Hunnibell, Reed, Quinn Griffin, & Fitzpatrick, 2008; Palmer, Quinn Griffin, Reed, & Fitzpatrick, 2010; Ramer, Johnson, Chan, & Barrett, 2006; Reed, 2009; Sharpnack, Quinn Griffin, Bender, & Fitzpatrick, 2011; Thomas, Burton, Quinn Griffin, & Fitzpatrick, 2010). Several middle range theory applications from nursing theories as well as from theories derived within related disciplines are included in subsequent chapters in this book.

Another development that was focused on bridging the theory–practice gap has been the emphasis on situation-specific theories. Im and Meleis (1999) described this approach to theory development as a way to link theory to both practice and research. Situation-specific theories are characterized by a low level of abstraction, are related to specific nursing phenomena, are contextualized (e.g., within the specific environment of care or within a certain country), and therefore have limited generalizability. More recently, Meleis has provided several situation-specific theories related to the middle range theory of transitions (Meleis, 2010). Included are transitions that are based on developmental stages and situational transitions such as discharge, relocation, immigration, and education.

## WHERE ARE WE NOW?

Middle range theories now serve as the core focus for graduate-level nursing theory courses. Both the Peterson and Bredow (2012) and the Smith and Liehr (2013) books have recently appeared in their third editions; both collections have added new middle range theories over the years since the first edition publications.

Also, several nursing theories in use today have been derived from knowledge originally developed by scholars from other disciplines. Examples of these include Roy's (1976) Adaptation Model derived from understandings of stress, and adaptation derived primarily from physiology, Leininger's (1978) transcultural nursing model derived from anthropology; Pender's (1997) model of health

promotion and Resnick's (2003) middle range nursing Theory of Self-Efficacy derived from the social psychological self-efficacy theory; and Meleis's (2010) transitions theory came from the sociological theory of role supplementation. It is important to note that although these theories from other disciplines were originally borrowed, they have been reformulated from the nursing perspective and applied to research, education, and professional practice within the nursing discipline. At times, the basic concepts are used in combination with other concepts more directly related to nursing knowledge and the nursing metaparadigm. There are several other examples in the nursing literature of research based on theories from other disciplines. At times these theories have been applied to nursing phenomena without theoretical reformulation. An example of research in nursing using theories from other disciplines includes that based on the stress and coping model of Lazarus and Folkman (1984).

## THE WAY FORWARD

The number of doctoral programs in nursing has greatly expanded in the past decade, particularly with the introduction of the professional doctorate. In the United States there are now 111 research-based doctoral programs (PhD programs) and 153 professional doctoral programs (Doctor of Nursing Practice [DNP] programs) (American Association of Colleges of Nursing, 2013). There also are a few new doctoral programs in nursing that award the EdD degree, and thus focus on the preparation of nurse educators. This overall doctoral program expansion is mirrored globally; as demand for nurse scientists and faculty grows, doctoral programs are expected to continue to expand.

In 2010 in the United States, approximately 1,669 students graduated from nursing doctoral degree programs; this represents approximately 0.9% of graduates in the field graduating at the doctoral level. The number of graduates has grown over the past 4 years, almost exclusively due to the expansion of professional doctoral (DNP) programs. In 2006, 414 doctoral degrees in nursing were earned. Thus, the number of program graduates has increased by an estimated 303% from 2006 to 2010 (Education Index, 2013). In other countries, such as Ireland, the professional doctorate that has been developed, the Doctor of Nursing (DN) degree program, is considered a research degree, much like the PhD in nursing in Ireland, but with a taught component. Thus, this preparation will contribute to the need for both nurse scientists and nurse faculty. In the United States there is much diversity among DNP programs; some of the existing programs have a strong research emphasis and others are exclusively focused on preparation of advanced nurse practitioners. Yet, even with the emphasis on advanced practice, there is attention to the need for theory-based practice within the curricula in DNP programs. For example, many expert nurse clinicians are interested in theories of health behavior change, including those theories from nursing such as the health promotion theory of Pender (1997) or the stages of change model of Prochaska and DiClemente (1984) reformulated to consistency with the nursing metaparadigm.

There also is diversity in the nature and quality of doctoral education in nursing within PhD degree programs. A wide range of topics are included in programs of research among faculty, and thus among their students. Hence, as in other disciplines, it is not only the degree that matters, but also the content of the preparation.



Importantly, there is increased inclusion of nursing knowledge development, both theory and research, at all levels of graduate nursing education. Doctoral students in nursing are eager to advance the disciplinary knowledge and contribute insights that guide professional practice. The scientific content of their scholarly deliberations are most often embedded in the early descriptions of nursing as basic science, most notably consistent with the themes identified by Donaldson and Crowley (1978), although not losing sight of the need for other ways of knowing as practicing professionals. In particular, the discipline has experienced an increased emphasis on understanding the ethics that undergird health care delivery and practice. Topics such as health care disparities, moral distress, and ethical decision making among professionals faced with complex questions in end-of-life care are among those that have received considerable attention by nurse scholars. And it is significant to note that the value for science development has been enhanced throughout the discipline. This value augurs well for the future of nursing.

Nurse scholars continue to develop theoretical, empirical, and expert clinical knowledge for the nursing discipline. Throughout this journey it is important to consider the model of scholarship proposed by Boyer (1990) who challenged all disciplines to fully embrace four key areas of scholarship in their academic work: the scholarship of discovery (the generation of new and unique knowledge through theory development and research); the scholarship of teaching; the scholarship of application (to societal issues or, in the case of nursing, to the clinical issues in health care); and the scholarship of integration (crossing disciplinary boundaries) (Boyer, 1990). In 1999, the American Association of Colleges of Nursing (AACN) provided numerous examples of how each of these components of scholarship could be actualized within the discipline of nursing. Key to the AACN delineation of standards of the scholarship of discovery was inclusion of the process of theory development along with research development (including empirical and historical research, methodological studies, and philosophical inquiry). This value of theory development also augurs well for the future.

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